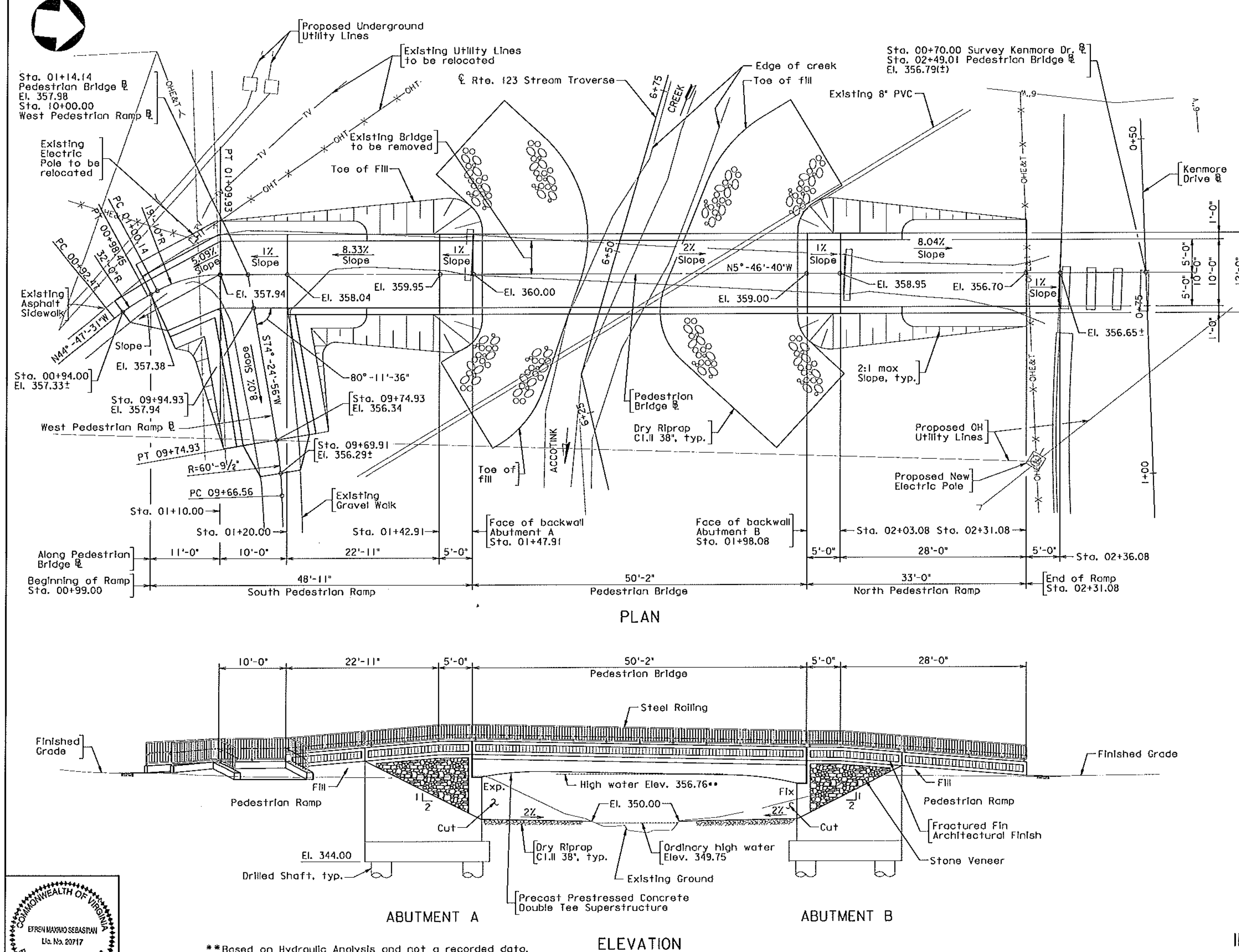
STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	1

NBIS Number:	UPC No. 89891
Federal Oversight Code: NFO	FHWA Construction and Scour Code: X981-S5



**Based on Hydraulic Analysis and not a recorded data.

DESIGN EXCEPTIONS:

None.

GENERAL NOTES:

The original approved sheet, including original signatures, is filed in the VDOT Central Office. Any misuse of electronic files is illegal. Violators will be prosecuted to the full extent of the applicable laws.

Width: 10'-0" face-to-face of curbs.

Span layout: 50'-2" simple prestressed concrete beam span.

Capacity: 90 psf pedestrian live load.

Drainage area: 1.15 sq. mi.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007 and current revisions.

Design: AASHTO LRFD Bridge Design Specifications, 5th Edition, 2010; 2010 Interim Specifications; and VDOT Modifications.

LRFD Guide Specifications for Design of Pedestrian Bridges, 2nd Edition, 2009.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

This project is to be constructed in accordance with the Virginia Department of Transportation Work Area Protection Manual, June 2011 and latest revisions.

Concrete in superstructure including rails and terminal walls, and in drilled shafts shall be Class A4; in abutments and ramp walls, Class A3.

Prestressed concrete in prestressed concrete beam shall be Class A5 having a minimum compressive cylinder strength at 28 days equal to 8,000 psi and a minimum compressive cylinder strength at time of release of strands equal to 6,500 psi.

Low permeability concrete shall be used in this project.

All reinforcing steel shall be deformed and shall conform to ASTM A615 Grade 60 except for reinforcing steel noted as CRR (corrosion resistant reinforcement) which shall conform to the applicable specifications noted in the special provision. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

Corrosion resistant reinforcing (CRR) steels shall conform to low carbon/chromium listed in the special provision. The minimum yield strength shall be: 100 ksi for low carbon/chromium steel. The type of CRR steel required on this project is noted on plan sheets and in the reinforcing steel schedule.

Prestressing strands shall be uncoated, seven-wire, low-relaxation steel strands conforming to ASTM A416 Grade 270.

See Sheet 2 for continuation of General Notes.

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED PEDESTRIAN BRIDGE REPLACEMENT

OVER ACCOTINK CREEK
CITY OF FAIRFAX - 0.013 MI. E.
INTERSECTION OF RTE. 236 AND KENMORE DRIVE
PROJ. 0123-151-139, B605

Recommended for Approval: ______________ District Planning and Investment Manager ______ Date

Recommended for Approval: ______________ District Project Development Engineer ______ Date

Approved: ______________ District Administrator ______ Date

COMMONWEALTH OF VIRGINIA
EFREN MAXIMO SEBASTIAN
Lic. No. 20717
PROFESSIONAL ENGINEER

Efren M Sebastian
2013.02.04 10:16:04 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

PLANS BY:	Consultant
COORDINATED:	SAS
SUPERVISED:	KB
DESIGNED:	GMK
DRAWN:	MH
CHECKED:	EMS

Scale: 1/8" = 1'-0"

No.	Description	Date

REVISIONS

For Table of Revisions, see Sheet 2.

Date: January 31, 2013

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	2

ESTIMATED QUANTITIES - SUBSTRUCTURE ONLY

		Concrete Class A3 CY	Reinforcing Steel LB	Corrosion Resistant Reinf. Steel Low Carbon/ Chromium LB	Regular Excavation CY ⊗	Structure Excavation CY ⊗	Dry Riprap Class II 38" TON	Porous Backfill CY ⊗	Select Material Type I (Min CBR 30) TON	Drilled Shaft, 36" Standard Excavation and Installation LF	Drilled Shaft, 36" Special Excavation and Installation LF	Crosshole Sonic Logging Testing EA.	6" Pipe Underdrain LF	Railing 4'-6" LF ⊗	Steel Railing 3'-6" LF ⊗	Stone Veneer SF
Abutment A	Neat	30.3	—	3,460	—	—	—	—	—	—	—	—	—	32	—	—
	Footing	25.3	2,870	—	332	254	180	27	171	62	80	4	60	—	—	125
Abutment B	Neat	25.9	—	2,990	—	—	—	—	—	—	—	—	—	29	—	—
	Footing	23.3	2,670	—	163	235	221	23	158	62	80	4	53	—	—	96
South & West Ramp	Neat	12.2	1,080	—	—	—	—	—	—	—	—	—	—	24	—	—
	Footing	12.6	1,460	—	—	166	—	—	213	—	—	—	—	—	69	—
North Ramp	Neat	4.0	180	—	—	—	—	—	—	—	—	—	—	38	—	—
	Footing	4.9	550	—	—	46	—	—	84	—	—	—	—	—	—	—
Total		138.5	8,810	6,450	495	701	401	50	625	124	160	8	113	123	69	221

⊗ Denotes items to be paid for on the basis of plan quantities in accordance with current Road and Bridge Specifications.

GENERAL NOTES (Continued):

Drilled shafts for abutments are required to provide a minimum axial design capacity of 150 tons per shaft and a minimum lateral design capacity of 15 tons per shaft. Drilled shafts shall be installed to the minimum tip elevations shown on the plans, unless otherwise directed or authorized by the Engineer.

Footings for grade walls shall bear on firm material. Bearing capacity of foundation shall be 1.35 tons/sq. ft. min.

No construction equipment shall be placed in the stream area during construction.

Prior to commencement of any work Contractor shall field verify all dimensions, stations, and elevations of the existing structure and report to the Engineer any discrepancies between field measurements and dimensions/stations shown on the contract documents.

B.M.: TRV #103, Pipe with Cap, Elev. 356.15

INDEX OF SHEETS

LUMP SUM BID ITEMS

Mobilization	LS
Construction Surveying	LS
Dismantle and Remove Existing Structure	LS
Bridge Lighting System	LS

MISCELLANEOUS / ROAD ITEMS

Item	Units	Quantity
Aggregate Base Material No. 21B	CY	13
Asphalt Concrete Surface Course Ty. SM-9.5A	TON	16
Soil Stabilization Mat EC-3 Type B	SY	50
Embankment	CY	144

⊗ Denotes items to be paid for on the basis of plan quantities in accordance with current Road and Bridge Specifications.

ESTIMATED QUANTITIES - SUPERSTRUCTURE ONLY

Item	Units	Quantity
Prestressed Concrete Double Tee Beam (50')	EA	1
Asphalt Concrete Ty. SM-9.5D	TON	7
Waterproofing	SY	60
Railing 4'-6" ⊗	LF	100
Rapid Cure Silicone Joint	LF	24

⊗ Denotes items to be paid for on the basis of plan quantities in accordance with current Road and Bridge Specifications.

Rev. No.	Sheets Revised	Date

TABLE OF REVISIONS

COMMONWEALTH OF VIRGINIA
EFREN MAXANO SEBASTIAN
Lic. No. 20717
PROFESSIONAL ENGINEER

Efren M Sebastian
2013.02.11 17:56:25 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

Scale: 1" = 5'-0"

No.	Description	Date
Revisions		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

ESTIMATED QUANTITIES & INDEX OF SHEETS

Designed: GWK	Date	Plan No.	Sheet No.
Drawn: MH			
Checked: RM/EMS	Jan. 2013		2 of 30

DGN

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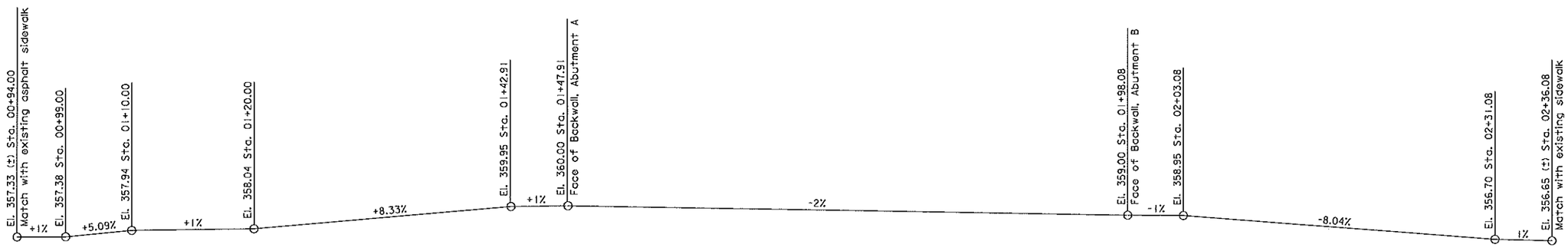
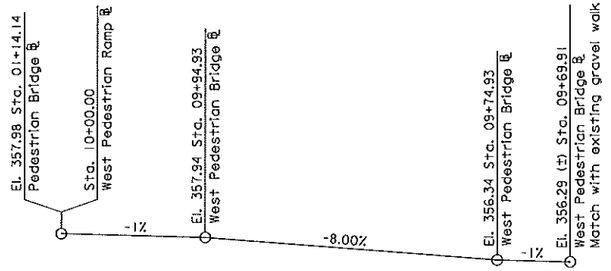
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	3



PROFILE GRADE - PEDESTRIAN BRIDGE



PROFILE GRADE - WEST PEDESTRIAN RAMP

COMMONWEALTH OF VIRGINIA
EFREN MAXIMO SEBASTIAN
No. 20717
PROFESSIONAL ENGINEER

Efren M Sebastian
2013.02.04 10:19:23 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

Scale: 1" = 5'-0"

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

PROFILE GRADE

Designed: EMS	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		3 of 30
Checked: EMS			

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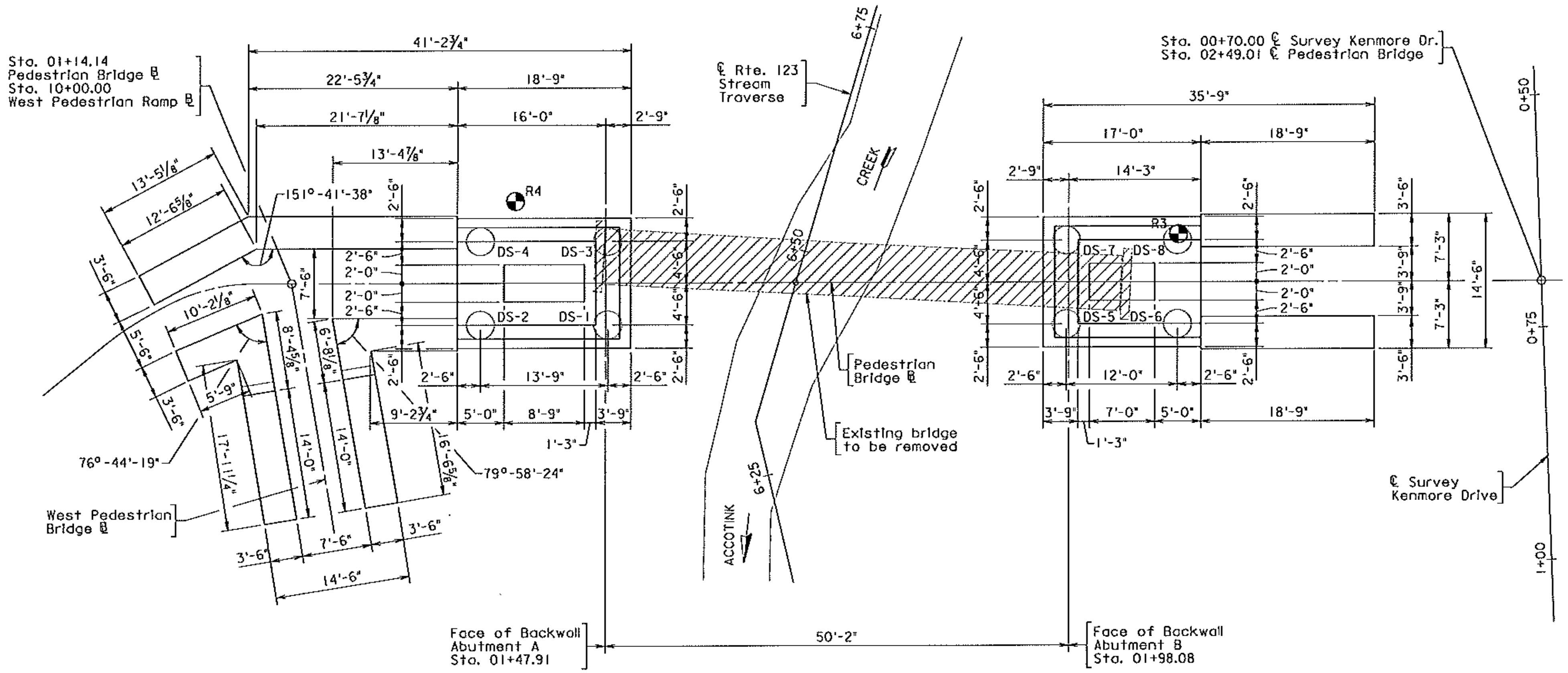
STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	4

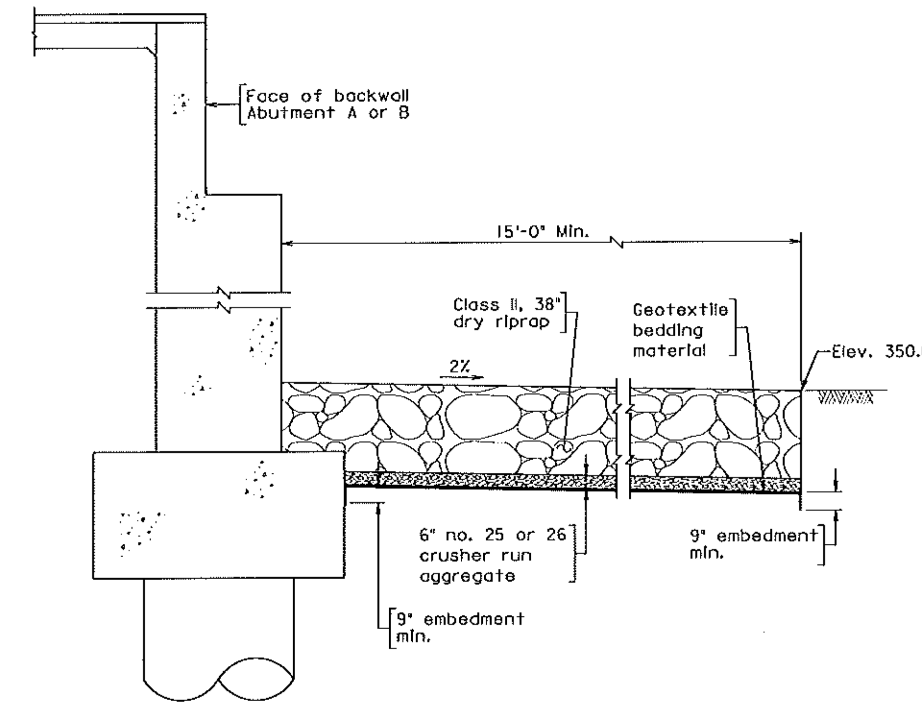


SUBSTRUCTURE LAYOUT

Scale: ⅛" = 1'-0"

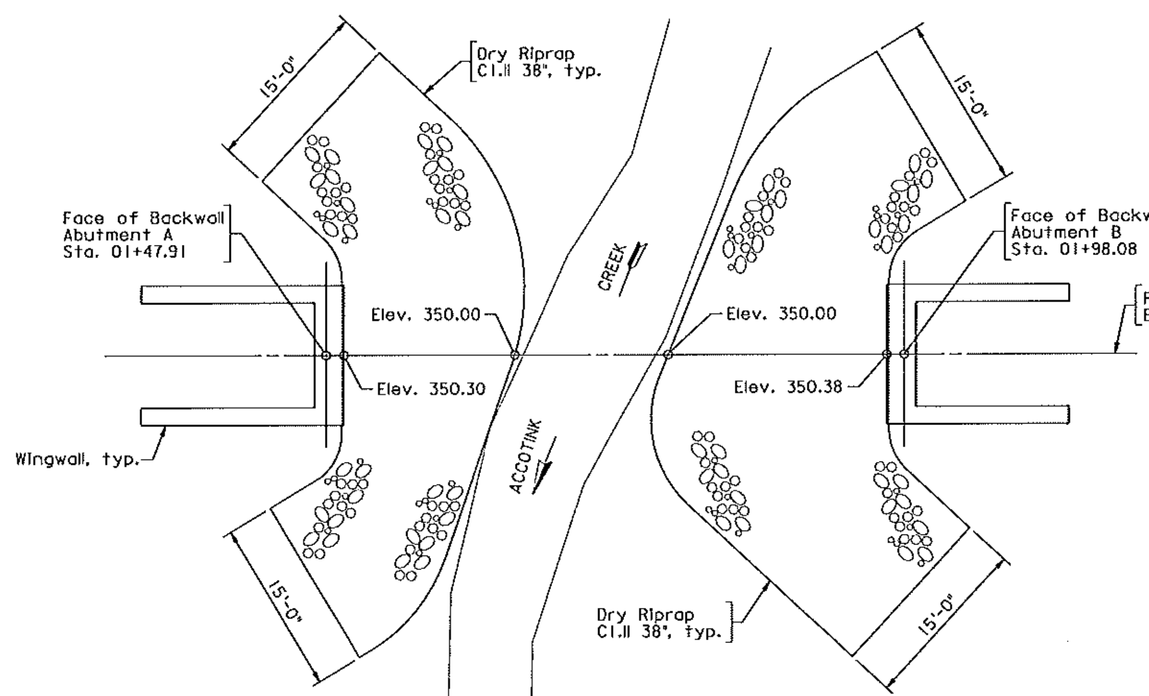
Note:

This layout is to be used only for locating fill slope and footings of abutments. For detail of neatwork, see Abutment and Ramp Details.



TYPICAL SECTION - SLOPE PROTECTION

Not to Scale



SLOPE PROTECTION PLAN

Scale: ⅛" = 1'-0"

Legend:

Denotes existing bridge to be removed

Denotes soil boring location

COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER
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FALLS CHURCH, VA
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Scale: As shown

No.	Description	Date
	Revisions	

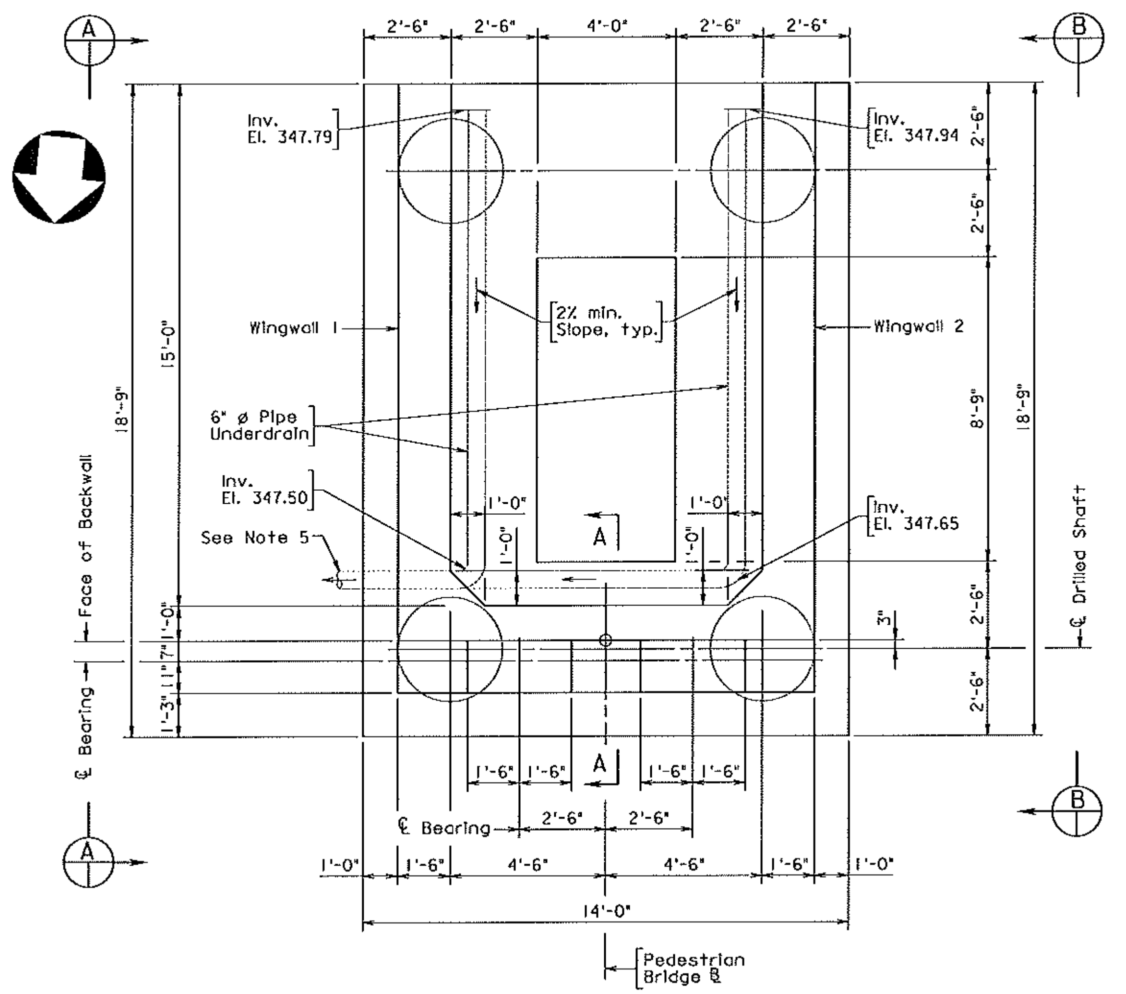
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

SUBSTRUCTURE LAYOUT AND SLOPE PROTECTION DETAILS

Designed: GVK / Drawn: MH / Checked: EMS	Date	Plan No.	Sheet No.
	Jan. 2013		4 of 30

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	5



PLAN
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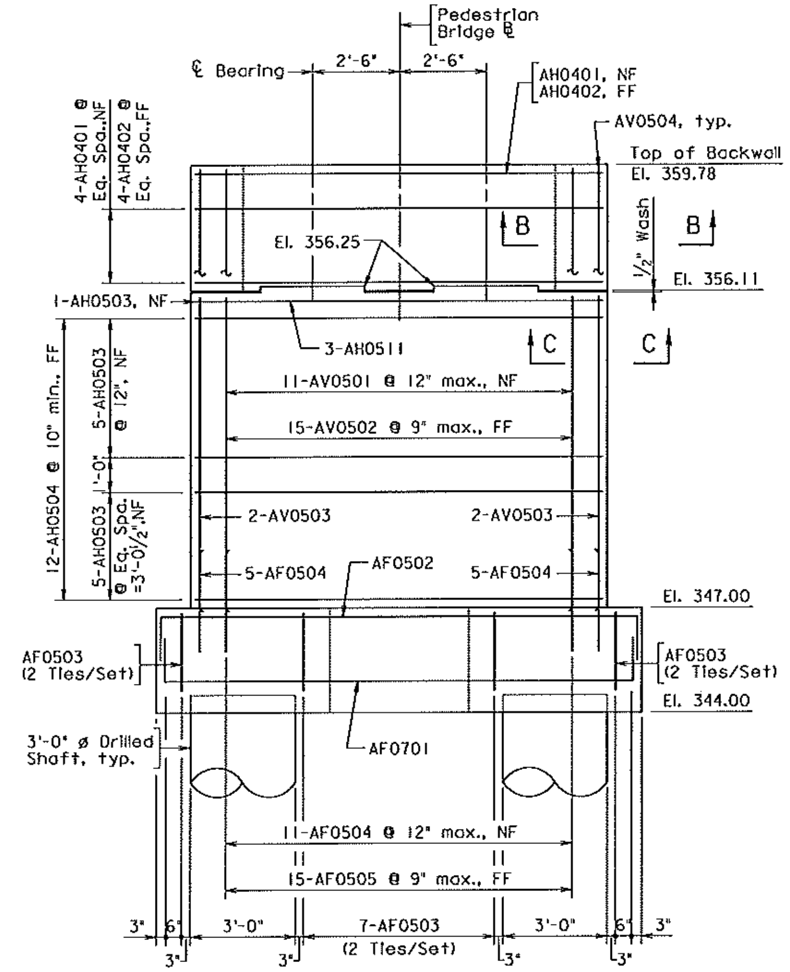

ELEVATION
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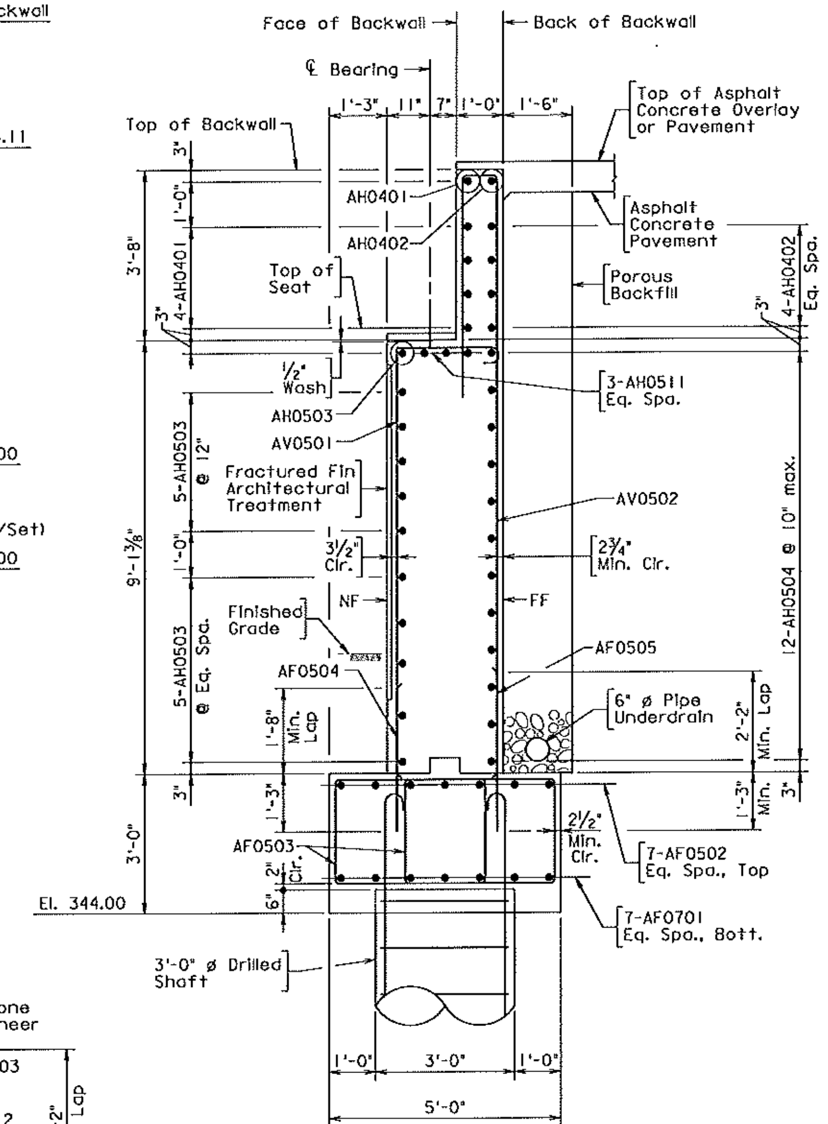

SECTION A-A
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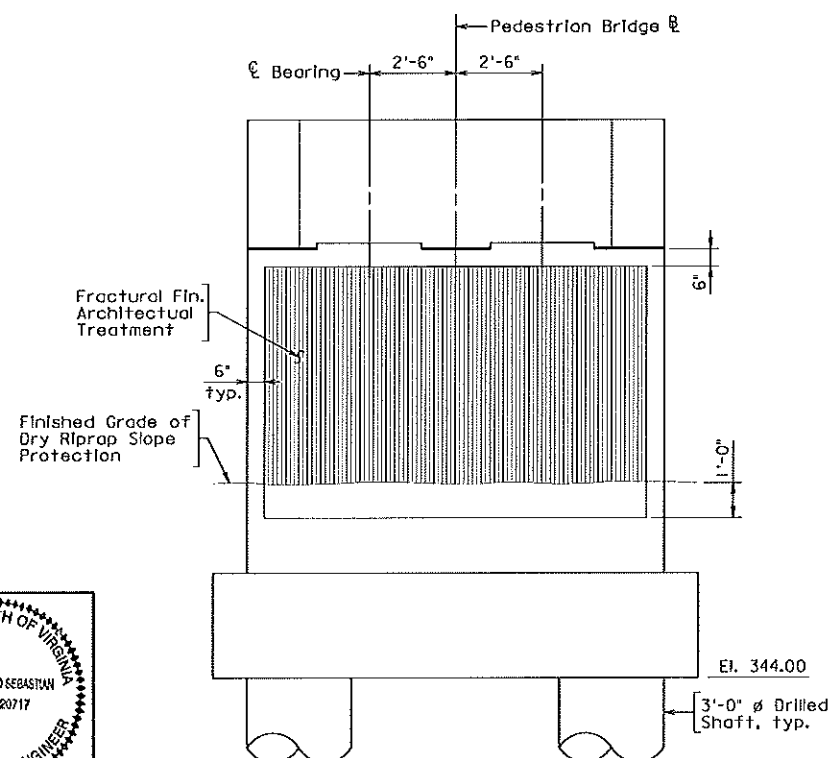

ELEVATION - ARCHITECTURAL TREATMENT
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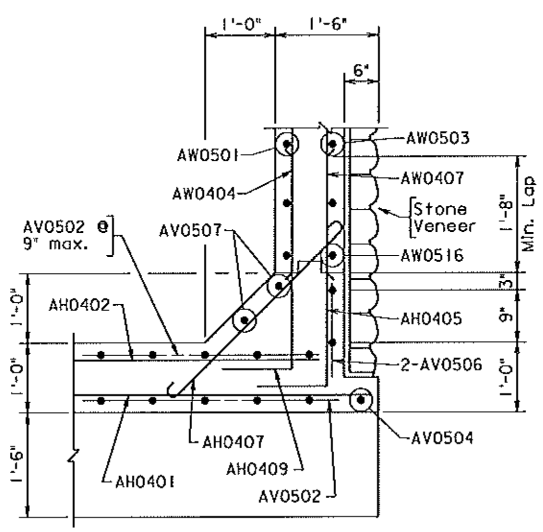
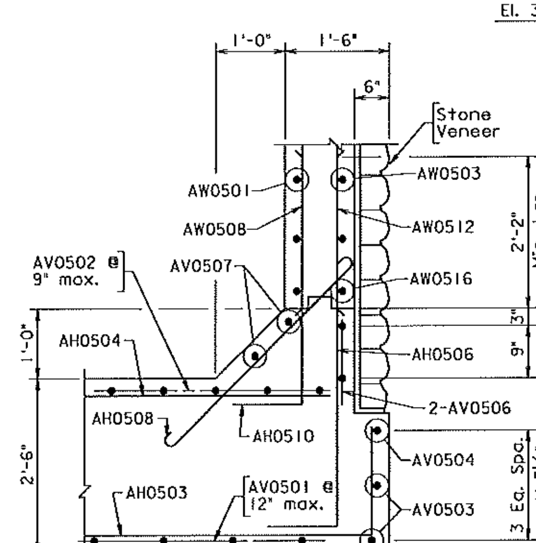


SECTION B-B
Scale: 3/4" = 1'-0"



SECTION C-C
Scale: 3/4" = 1'-0"

Notes:

1. For Views A-A, B-B, Stone Veneer and Wingwall Details, see Sheet 7.
2. For Drilled Shaft and Wall Architectural Treatment Details, see Sheet 6.
3. For Anchor Bolt Layout and Bridge Seat Reinforcement Details, see Sheet 9.
4. For Reinforcing Steel Schedule, see Sheet 24.
5. Extend 6" ø non-perforated pipe through wingwall to surface of fill.

Legend:

NF	Denotes Near Face
FF	Denotes Far Face
EF	Denotes Each Face

Scale: As shown

COMMONWEALTH OF VIRGINIA
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PROFESSIONAL ENGINEER
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2013.02.04 10:23:28 -05'00'
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FALLS CHURCH, VA
STRUCTURAL ENGINEER

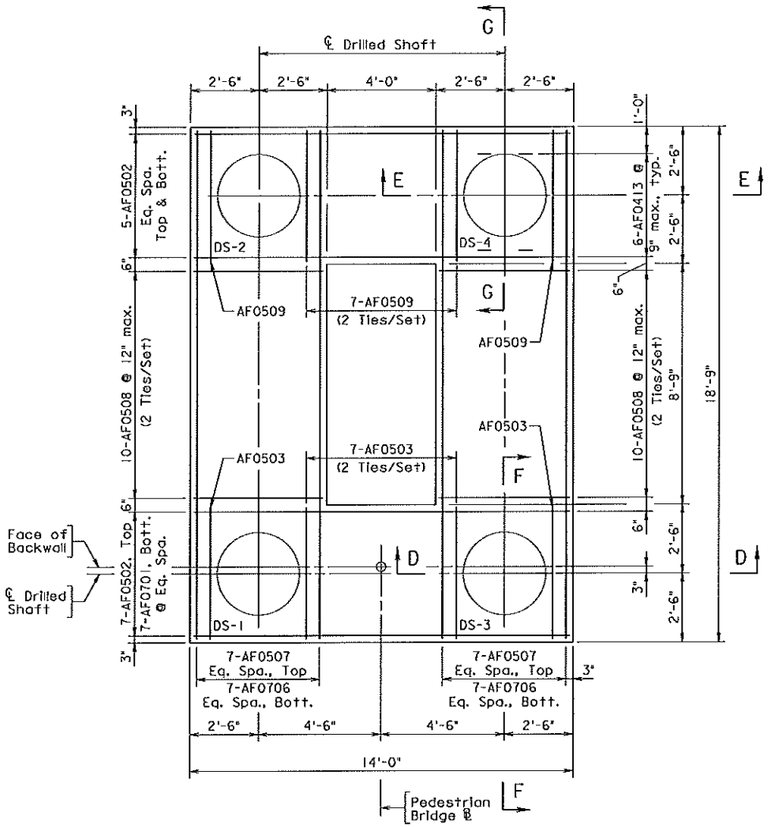
No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

ABUTMENT A PLAN, ELEVATION AND SECTIONS

Designed: GMK / Drawn: VH / Checked: EMS	Date	Plan No.	Sheet No.
	Jan. 2013		5 of 30

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	6



FOOTING PLAN
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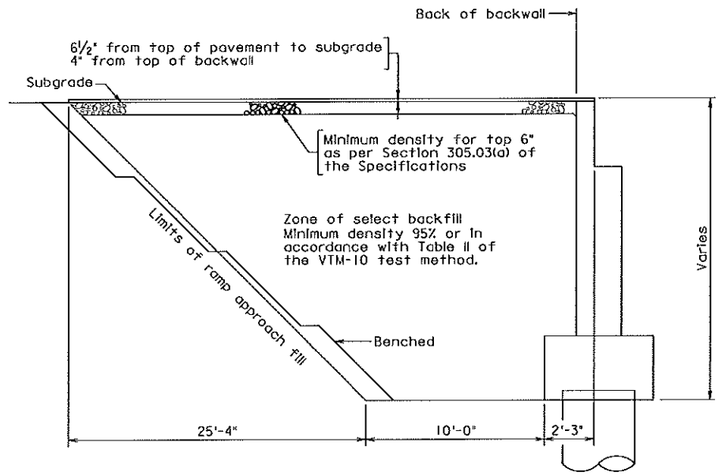
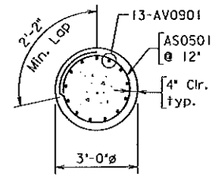


SECTION THROUGH ABUTMENT A
Abutment drainage not shown
Not to scale

Material in the abutment select backfill zone shall be Select Material Type I, minimum CBR 30 and shall be compacted in accordance with Sections 303 and 305 of the Specifications.

In cut situations, material with strength characteristics greater than the select backfill may be left in place.



SECTION A-A
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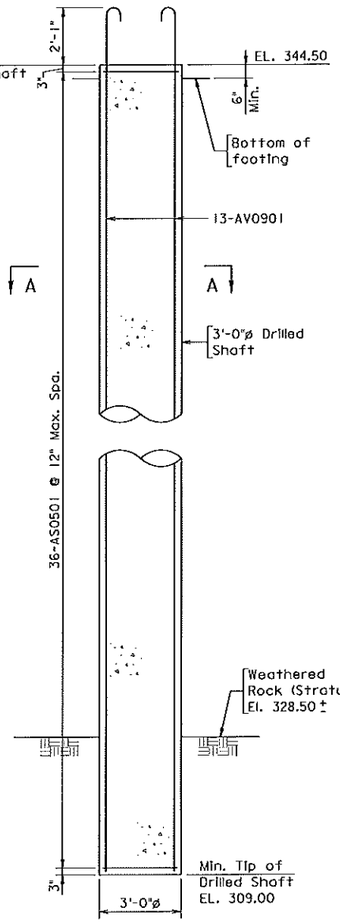
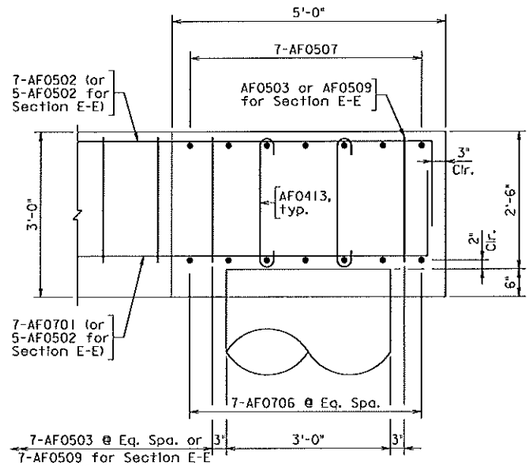


DRILLED SHAFT DETAIL
Scale: 3/8" = 1'-0"



SECTION D-D, E-E (Similar)
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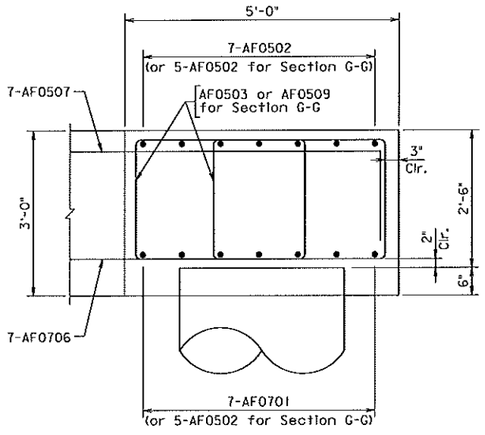

SECTION F-F, G-G (Similar)
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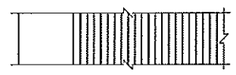
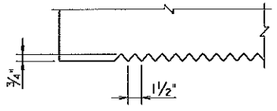


ELEVATION



WALL SECTION

FRACTURED-FIN ARCHITECTURAL TREATMENT
Scale: 1½" = 1'-0"

Note:
The cost of architectural treatment shall be included in the corresponding concrete pay items.

Scale: As shown

COMMONWEALTH OF VIRGINIA
EFREN MASSIMO SEBASTIAN
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PROFESSIONAL ENGINEER

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2013.02.04 10:24:44 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

No.	Description	Date
	Revisions	

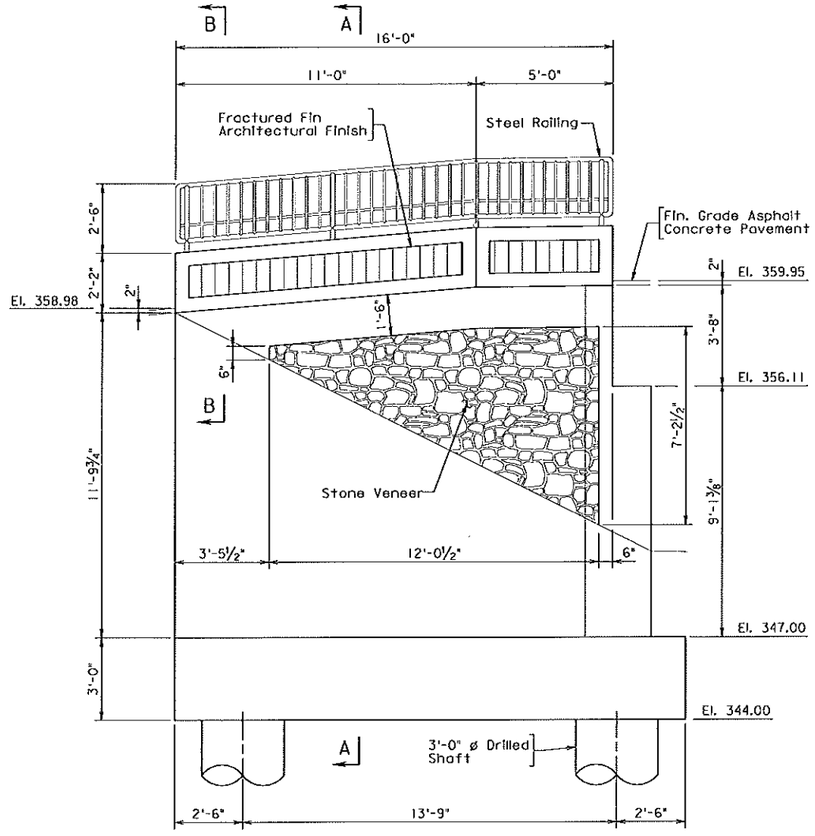
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

ABUTMENT A FOOTING PLAN AND DETAILS

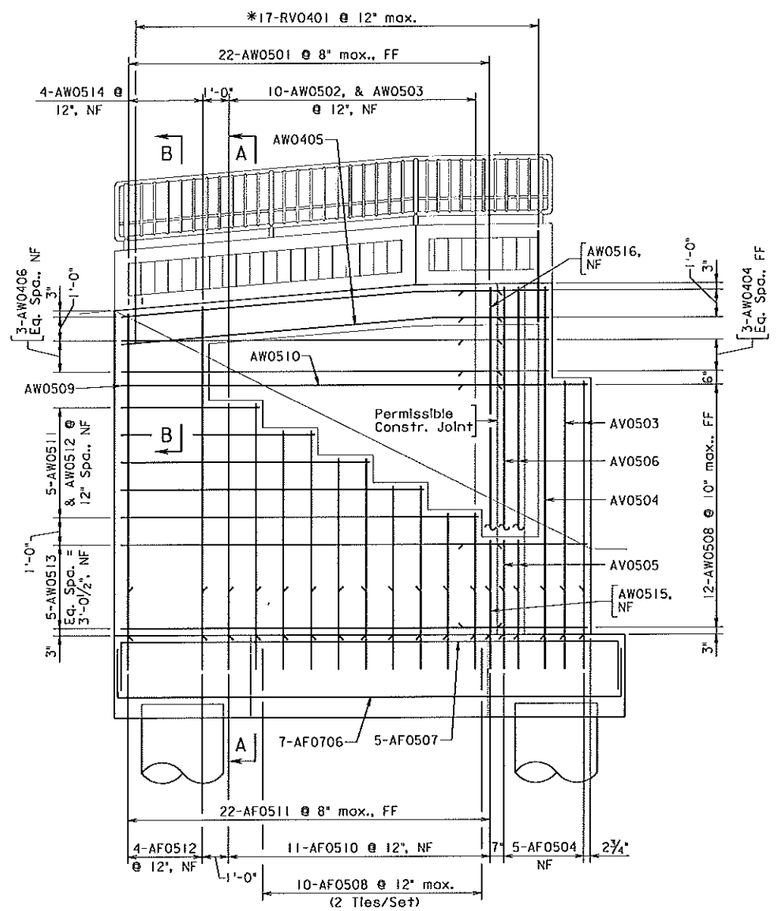
Designed: GMK	Date	Plan No.	Sheet No.
Drawn: WH			
Checked: EMS	Jan. 2013		6 of 30

DGN: B1006

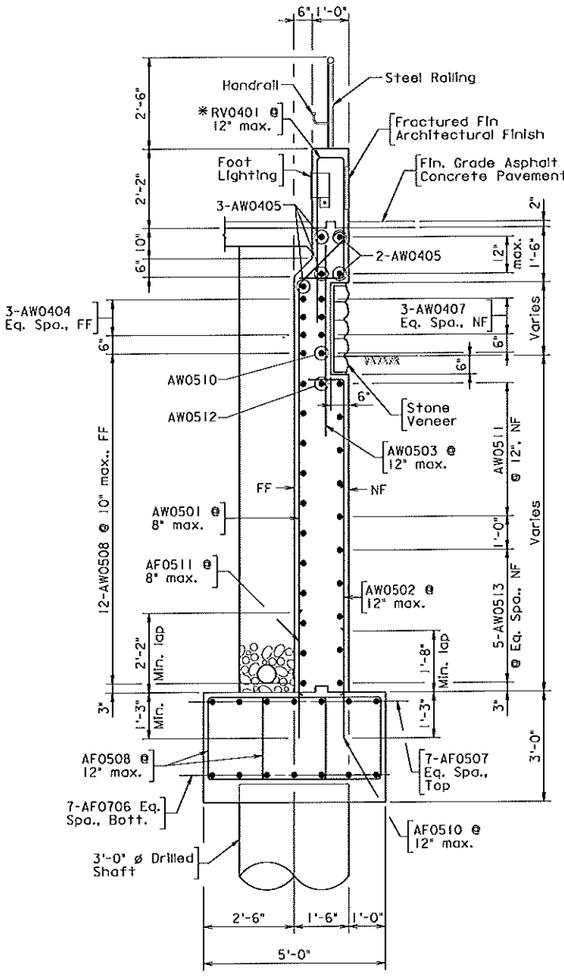
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	7



VIEW A-A, VIEW B-B (Opposite Hand)
Scale: ⅜" = 1'-0"



WINGWALL ELEVATION
Scale: ⅜" = 1'-0"



SECTION A-A
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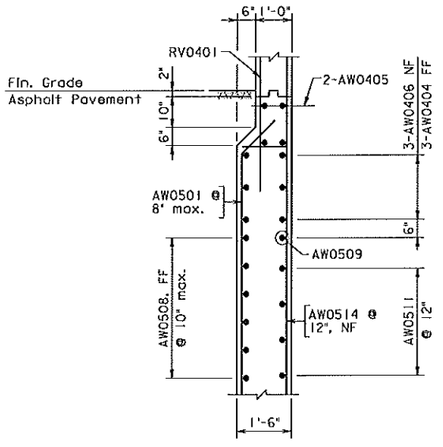

SECTION B-B
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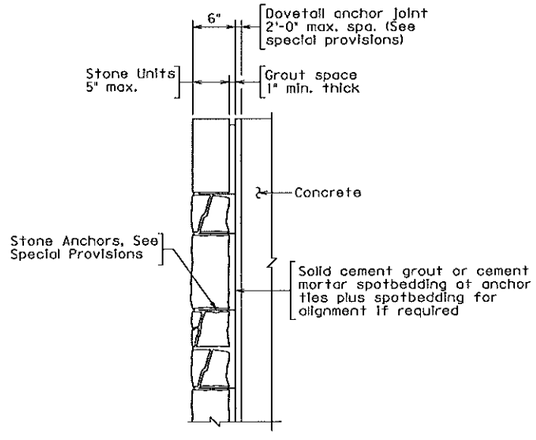

STONE VENEER DETAIL
Scale: 1" = 1'-0"

Notes:

1. For Abutment A Plan, Legend and other notes, see Sheet 5.
2. For Pedestrian Railing Details, see Sheet 20.
*3. Reinforcing steel RV0401 are included in the pay item Railing.

COMMONWEALTH OF VIRGINIA
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2013.02.04 10:28:50 -05'00'

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FALLS CHURCH, VA
STRUCTURAL ENGINEER

Scale: As shown

No.	Description	Date
Revisions		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

ABUTMENT A WINGWALL DETAILS

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		7 of 30
Checked: EMS			

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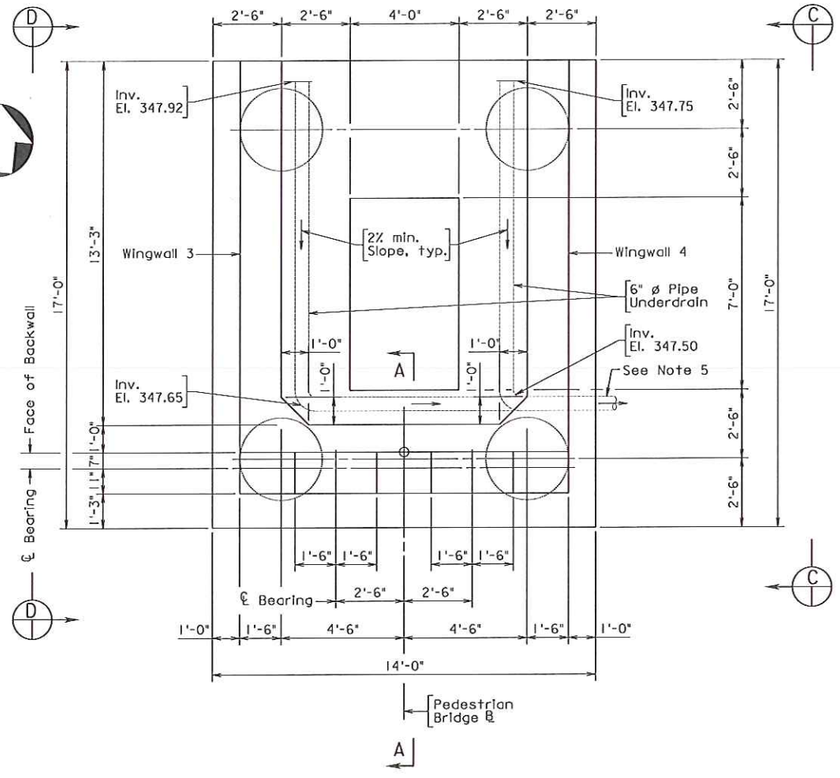
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	8



PLAN
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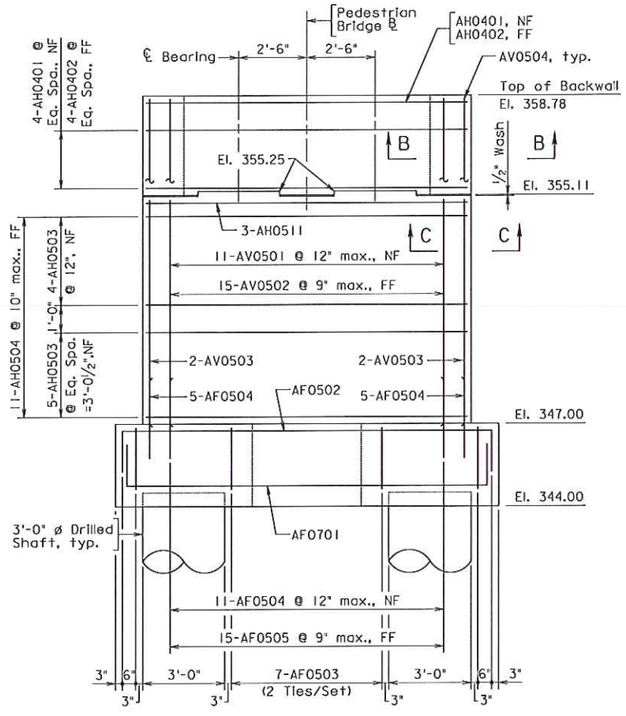

ELEVATION
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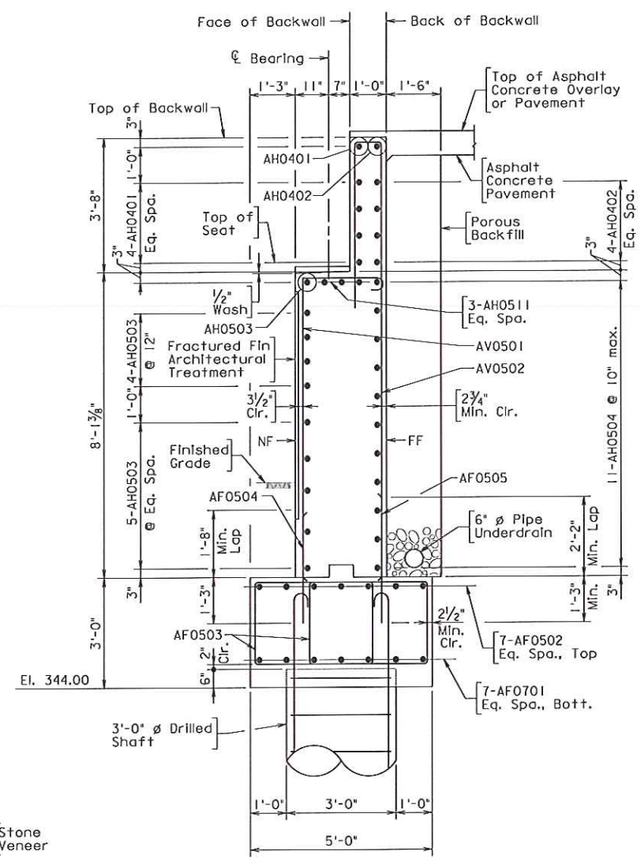

SECTION A-A
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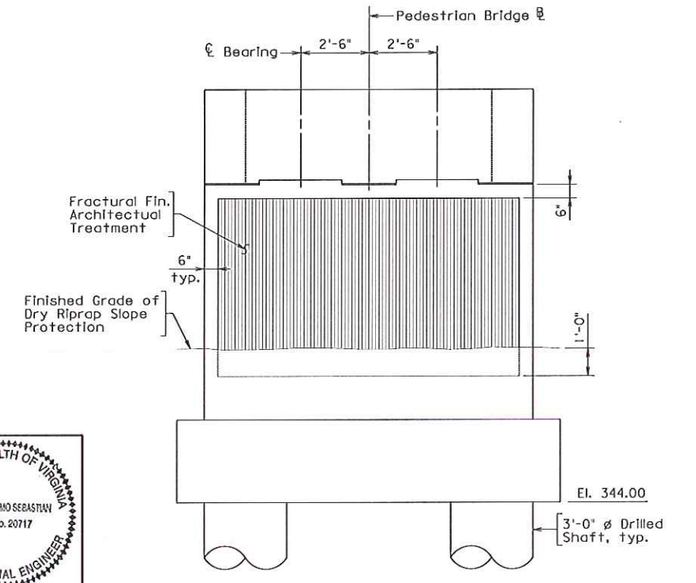
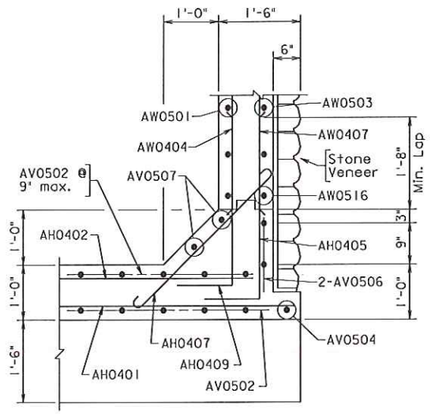
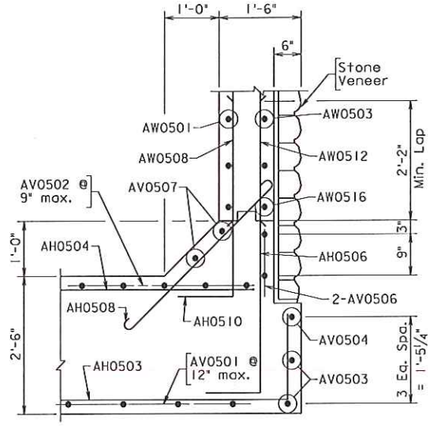


ELEVATION - ARCHITECTURAL TREATMENT
Scale: 3/8" = 1'-0"



SECTION B-B
Scale: ¾" = 1'-0"



SECTION C-C
Scale: ¾" = 1'-0"

Notes:

1. For View C-C, D-D, and Wingwall Details, see Sheet 10.
2. For Drilled Shaft and Wall Architectural Treatment Details, see Sheet 6.
3. For Anchor Bolt Layout and Bridge Seat Reinforcement Details, see Sheet 9.
4. For Reinforcing Steel Schedule, see Sheet 25.
5. Extend 6" ø non-perforated pipe through wingwall to surface of fill.

Legend:

NF Denotes Near Face

FF Denotes Far Face

Scale: As shown

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2013.02.04 10:30:19 -05'00'

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STRUCTURAL ENGINEER

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

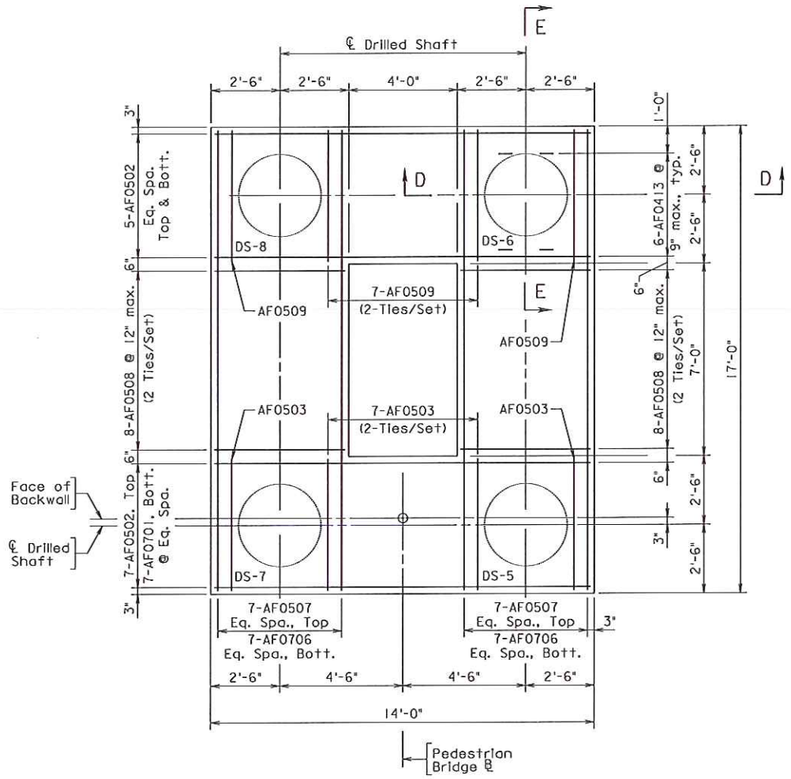
STRUCTURE AND BRIDGE DIVISION

ABUTMENT B
PLAN, ELEVATION AND SECTION

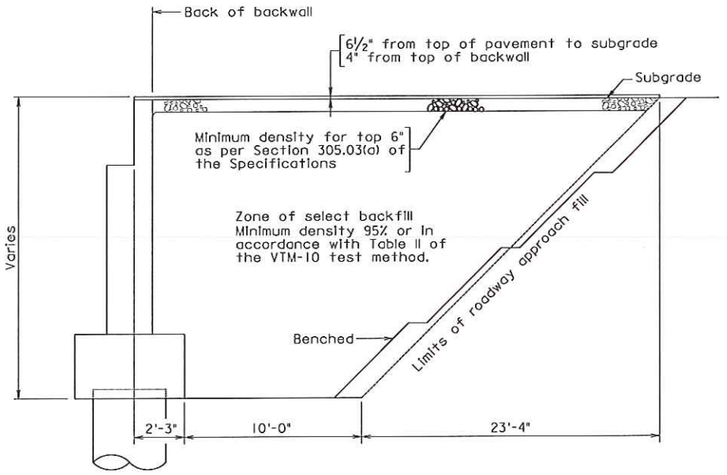
Designed: GVK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		8 of 30
Checked: EMS			

DGN# b1008

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	9



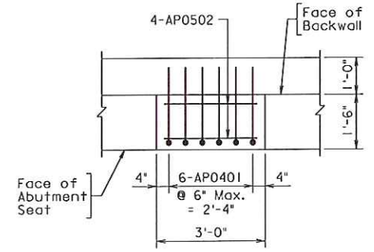
FOOTING PLAN
Scale: ⅜" = 1'-0"



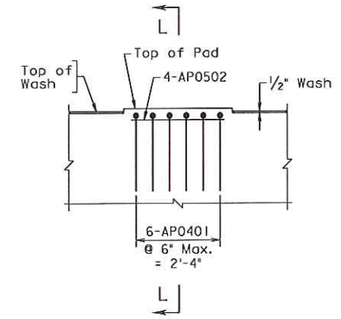
SECTION THROUGH ABUTMENT B
Abutment drainage not shown
Not to scale

Material in the abutment select backfill zone shall be Select Material Type I, minimum CBR 30 and shall be compacted in accordance with Sections 303 and 305 of the Specifications.

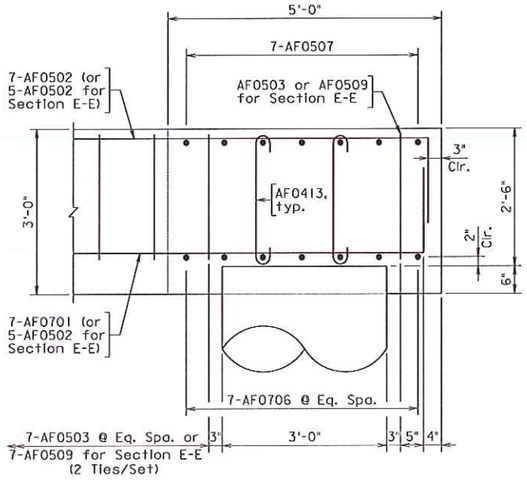
In cut situations, material with strength characteristics greater than the select backfill may be left in place.



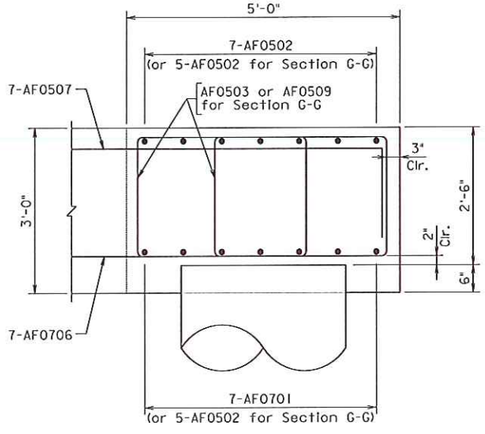
PLAN



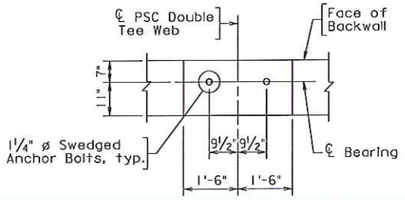
BRIDGE SEAT REINFORCEMENT DETAIL
Scale: ½" = 1'-0"



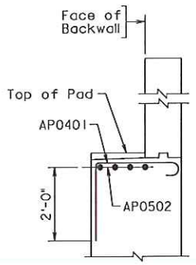
SECTION D-D, E-E (Similar)
Scale: ¾" = 1'-0"



SECTION F-F, G-G (Similar)
Scale: ¾" = 1'-0"



TYPICAL ANCHOR BOLT LAYOUT
Scale: ½" = 1'-0"



SECTION L-L
Scale: ½" = 1'-0"

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Scale: As shown

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	Revisions	

COMMONWEALTH OF VIRGINIA
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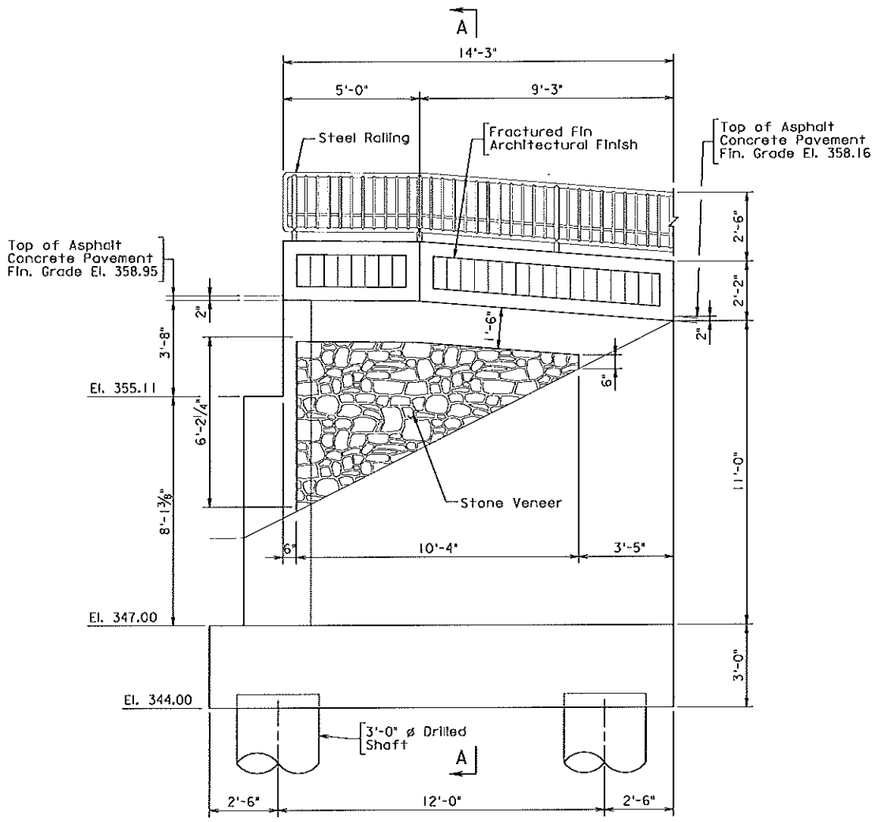
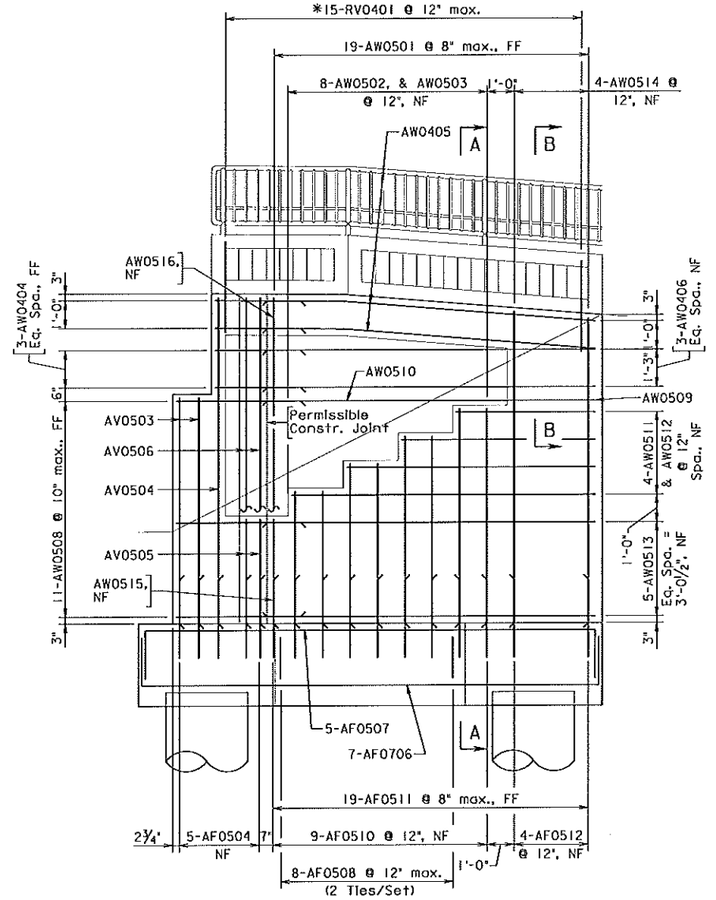
ABUTMENT B FOOTING PLAN AND DETAILS

Designed: GVK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		9 of 30
Checked: EMS			

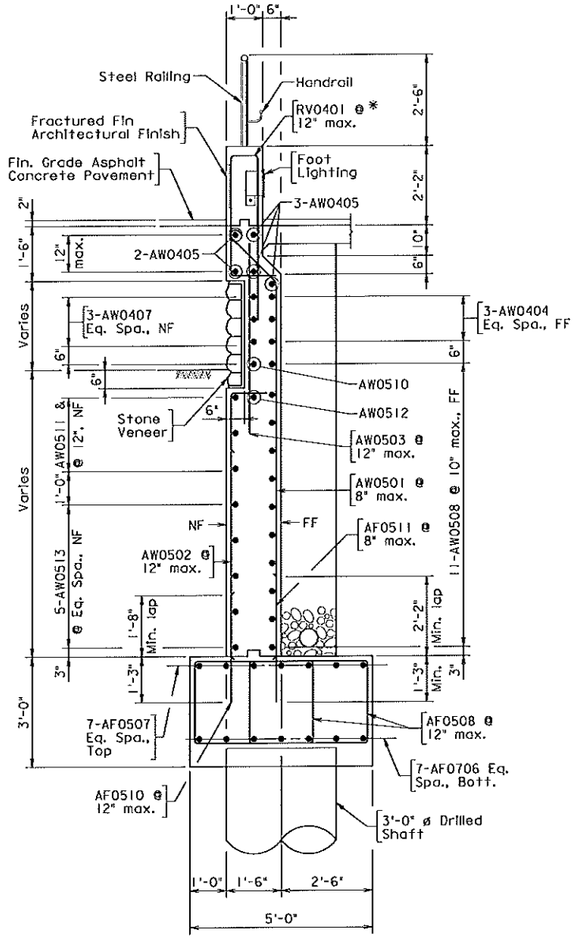
STATE	FEDERAL AID		STATE		SHEET NO.
STATE	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	——	RSTP-5401 (944)	123	0123-151-139, B605	10



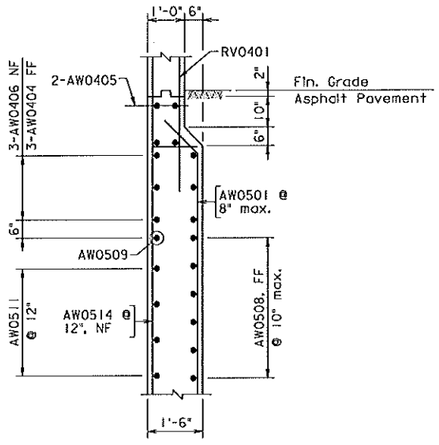
VIEW C-C, VIEW D-D (Opposite Hand)
Scale: ⅜" = 1'-0"



WINGWALL ELEVATION
Scale: ⅜" = 1'-0"



SECTION A-A
Scale: ½" = 1'-0"



SECTION B-B
Scale: ½" = 1'-0"

Notes:

1. For Abutment B Plan, Legend and other notes, see Sheet 8.
2. For Pedestrian Railing Details, see Sheet 20.
3. For Stone Veneer Detail, see Sheet 7.
*4. Reinforcing steel RV0401 are included in the pay item Railing.

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COMMONWEALTH OF VIRGINIA
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ABUTMENT B WINGWALL DETAILS

Designed: GVK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		10 of 30
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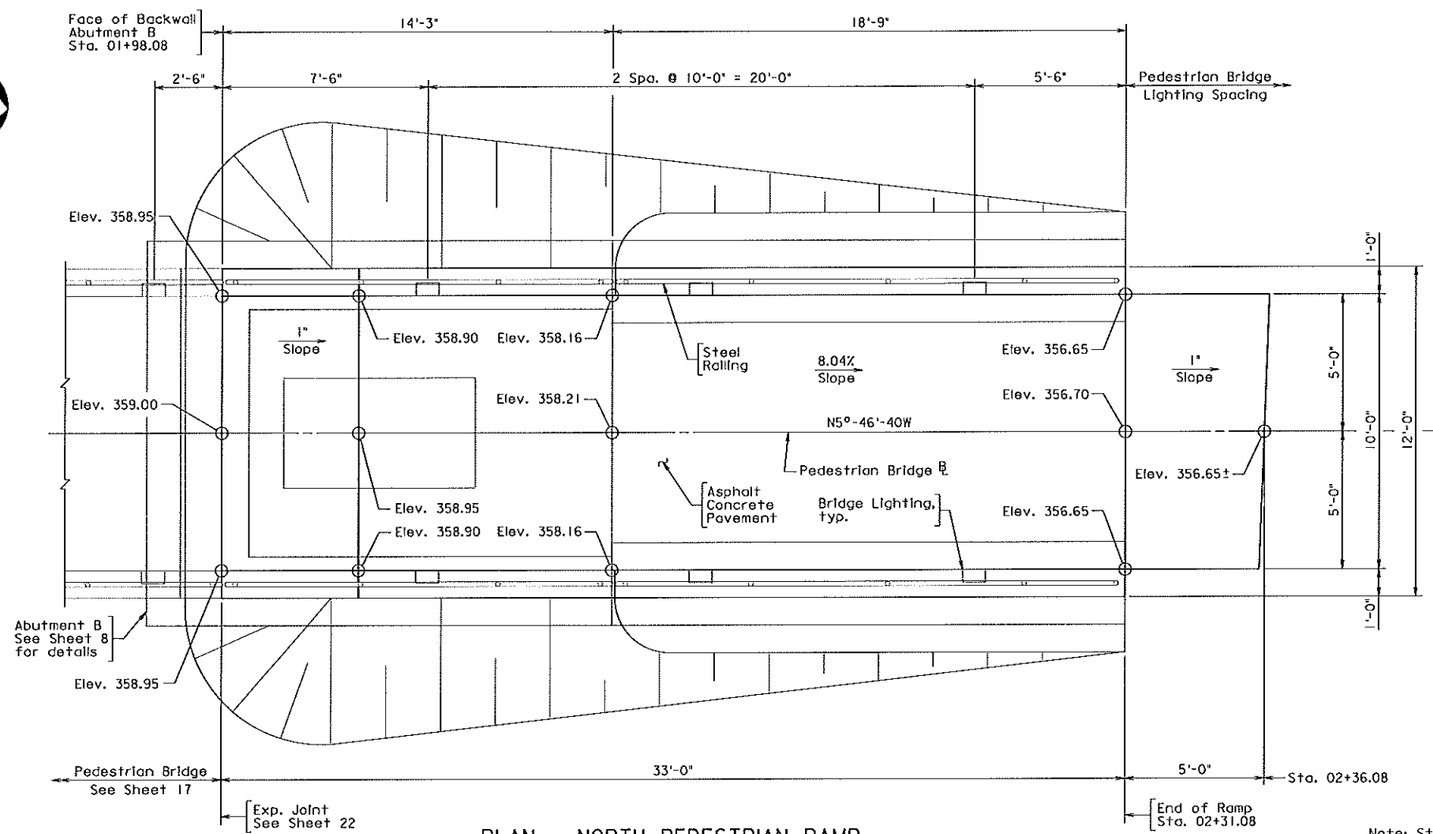
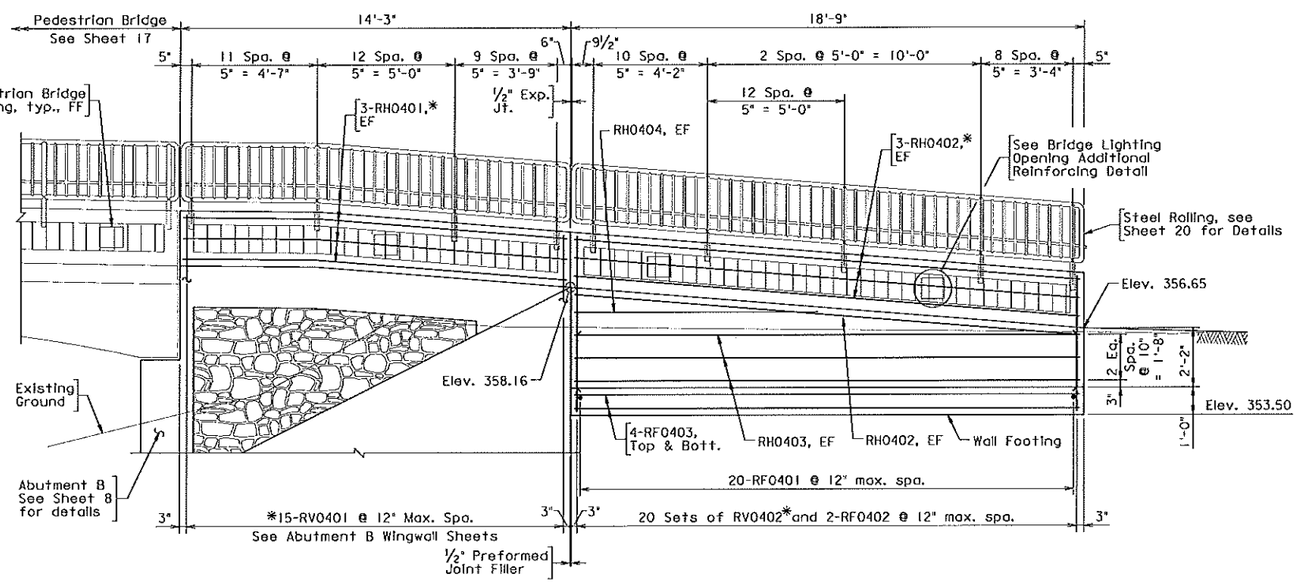
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	11



PLAN - NORTH PEDESTRIAN RAMP

Scale: 3/8" = 1'-0"



RAILING ELEVATION

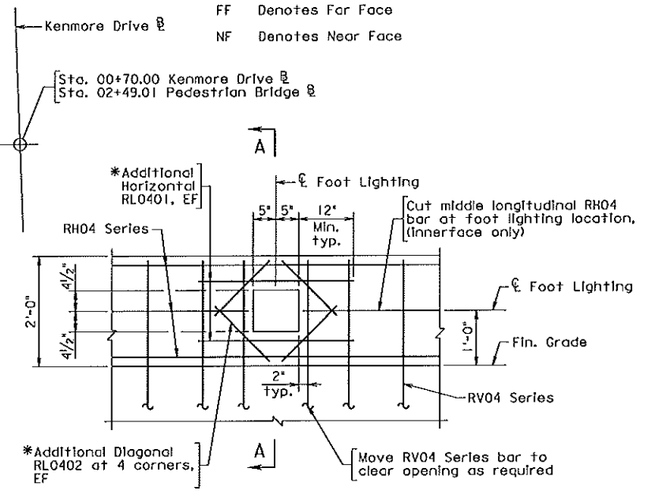
Scale: 3/8" = 1'-0"

Notes:

1. For Pedestrian Ramp Section, see Sheet 16.
2. For Pedestrian Railing Details, see Sheet 20.
3. For Reinforcing Steel Schedule, see Sheet 26.
* 4. Reinforcing steel RV0401, RV0402, RL04 Series, RH0401 and RH0402 are included in the pay item Railings.

Legend:

EF Denotes Each Face
FF Denotes Far Face
NF Denotes Near Face

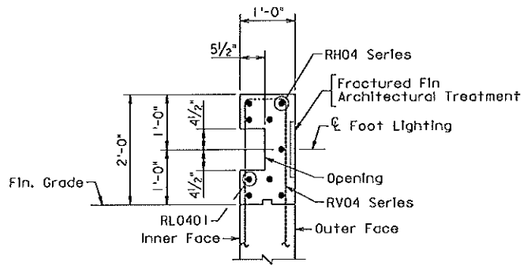


PLAN

Note: Steel railing not shown for clarity. Concrete block-out shown is based on 'Philips Gardco 944 square aisle lights' and shall be adjusted accordingly if different light fixture will be used.

BRIDGE LIGHTING OPENING ADDITIONAL REINFORCING DETAIL

Scale: 3/4" = 1'-0"



SECTION A-A

Scale: 3/4" = 1'-0"

Note: East railing shown, West railing is opposite hand.

Scale: As shown

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No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

NORTH PEDESTRIAN RAMP PLAN, RAILING ELEVATION AND DETAILS

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		11 of 30
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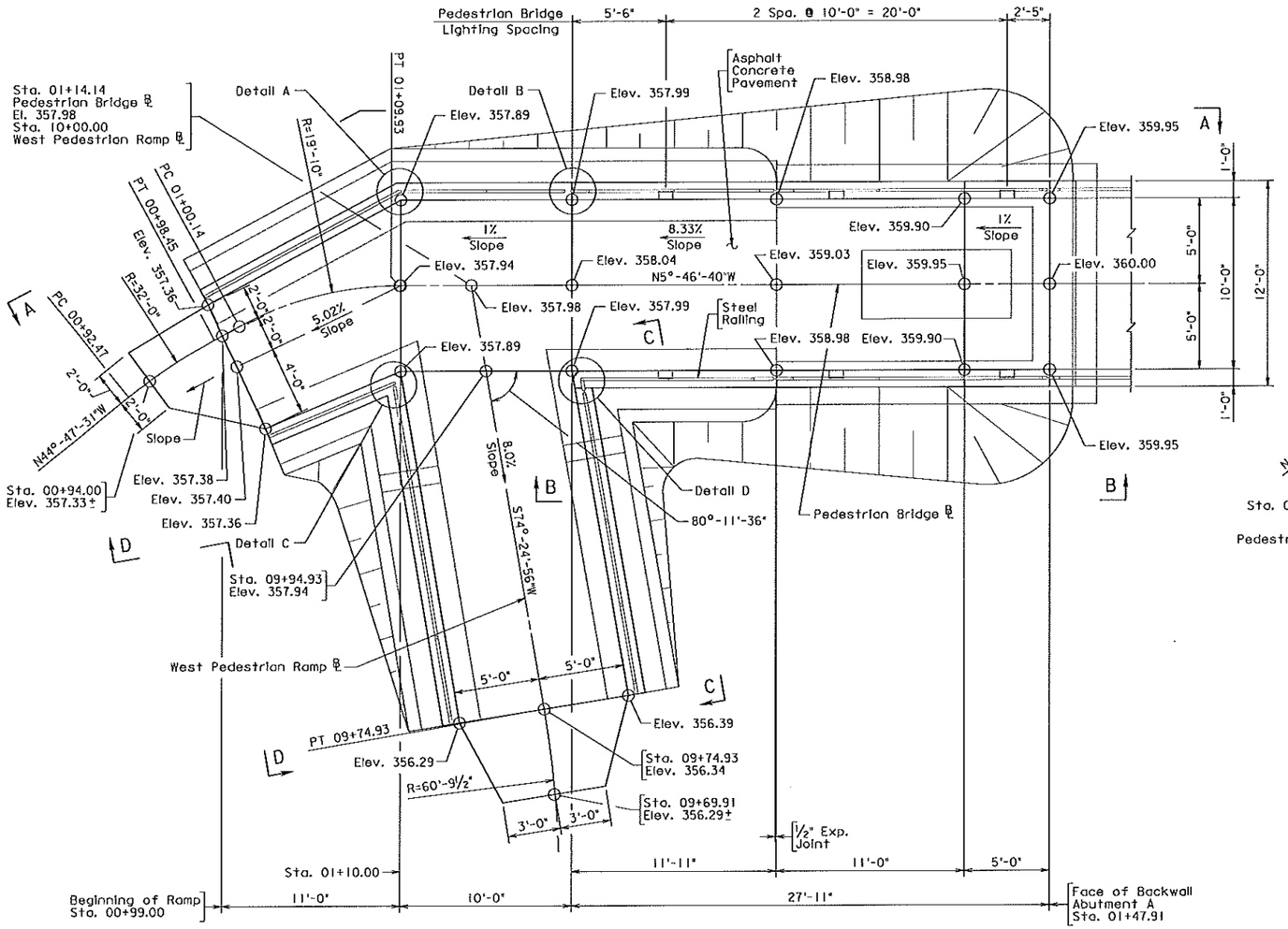
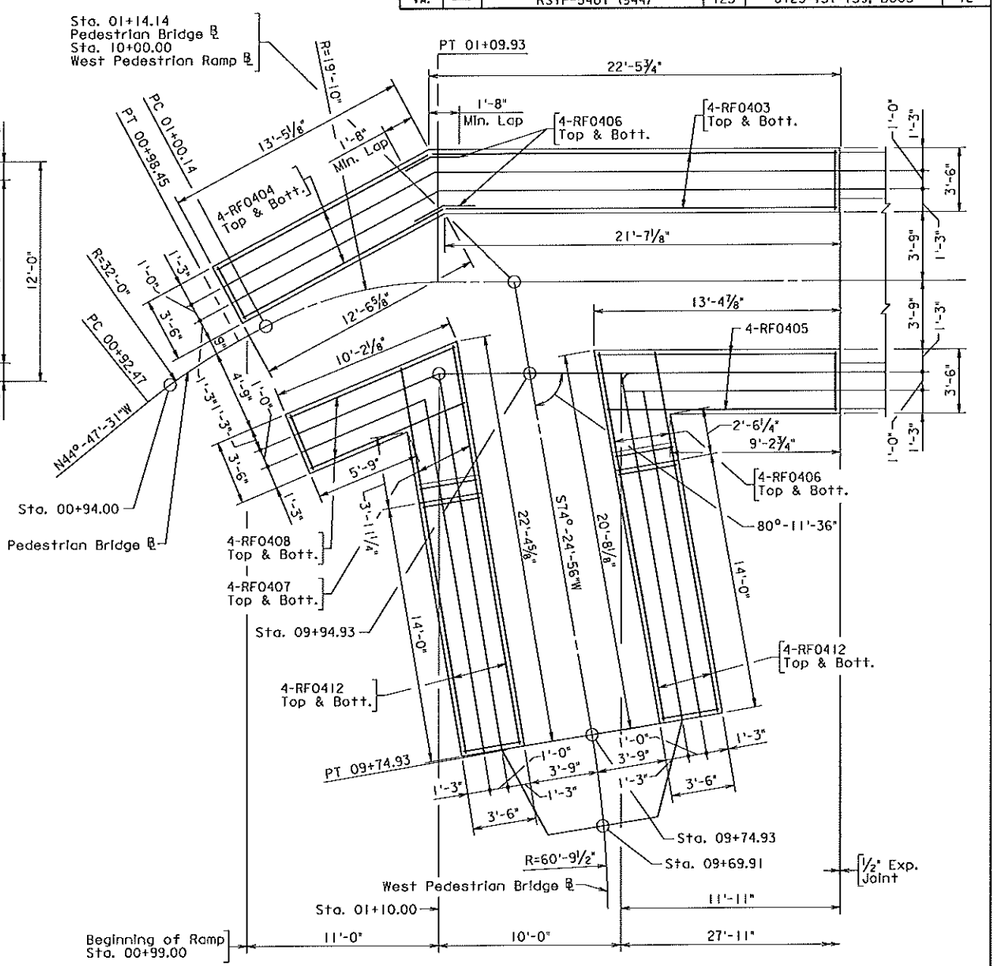
b1011

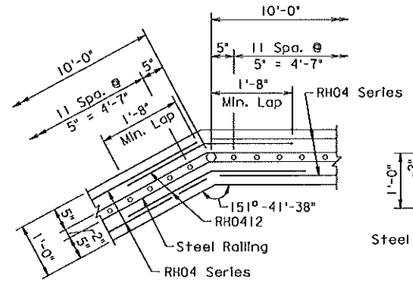
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	12



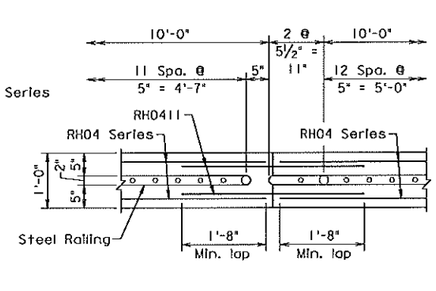
PLAN - SOUTH AND WEST PEDESTRIAN RAMP
Scale: 1/4" = 1'-0"



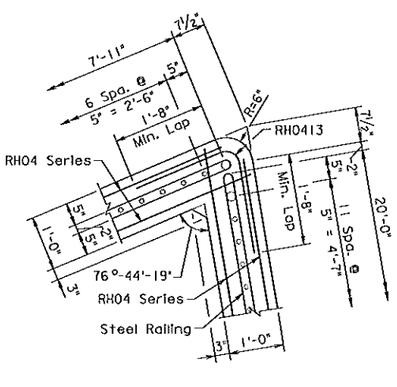
FOOTING PLAN
Scale: 1/4" = 1'-0"



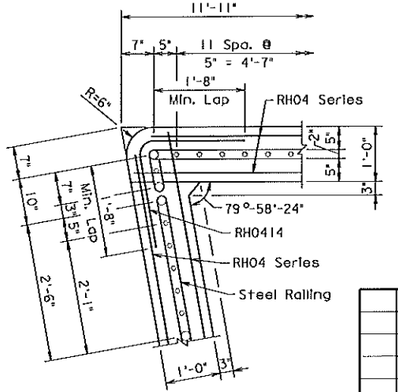
DETAIL A
Scale: 3/4" = 1'-0"



DETAIL B
Scale: 3/4" = 1'-0"



DETAIL C
Scale: 3/4" = 1'-0"



DETAIL D
Scale: 3/4" = 1'-0"

Notes:

1. For Views A-A and B-B, see Sheet 13.
2. For Views C-C and D-D, see Sheet 14.
3. For Pedestrian Railing Details, see Sheet 20 and 21.
4. For Typical Ramp Sections, see Sheet 14 and 16.

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Scale: As shown

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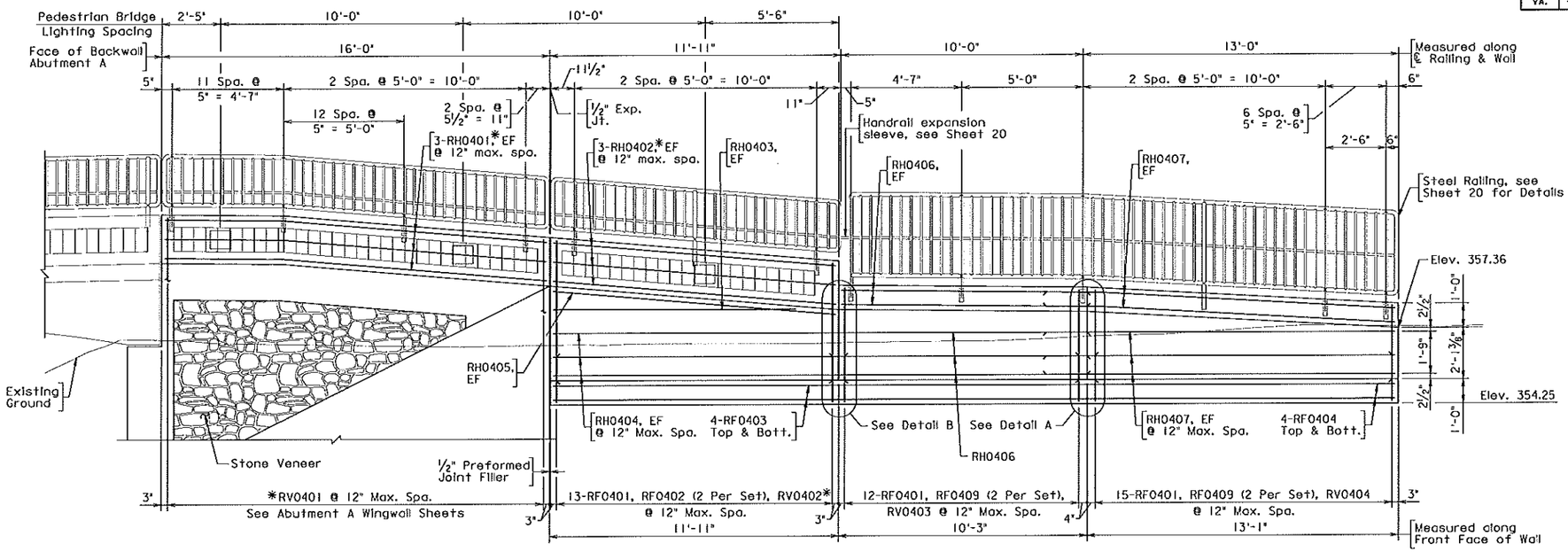
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

SOUTH PEDESTRIAN RAMP PLAN AND DETAILS

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: MH			
Checked: EMS	Jan. 2013		12 of 30

DGN#
b1012

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	13



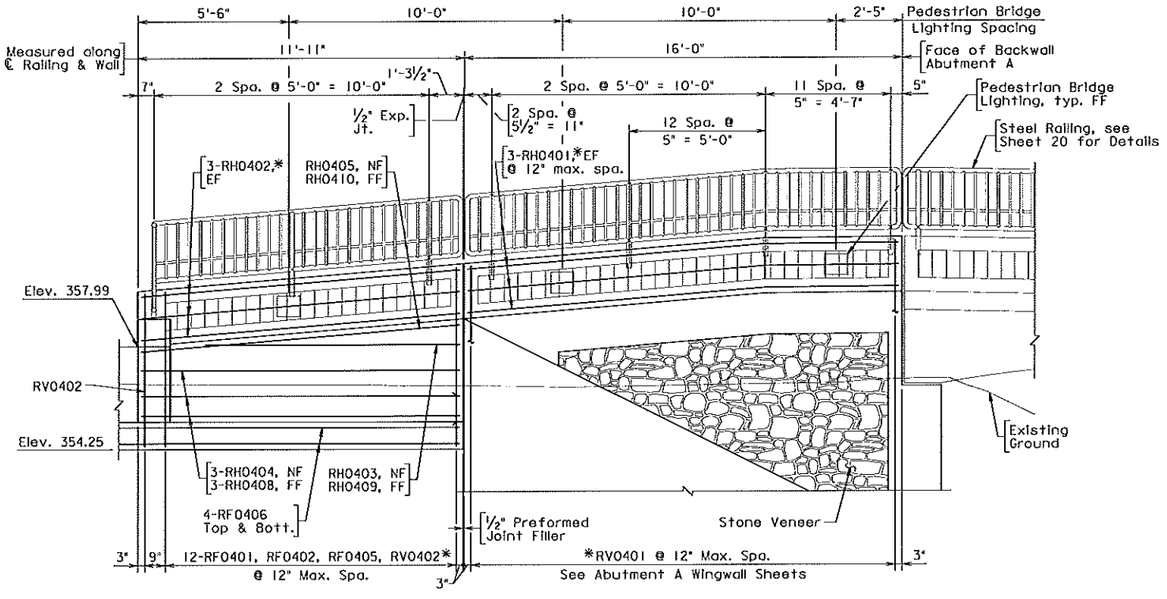
SOUTH PEDESTRIAN RAMP - VIEW A-A
Scale: ⅜" = 1'-0"

Notes:

1. For Views A-A and B-B locations, see Sheet 12.
2. For Pedestrian Ramp Section, see Sheet 16.
3. For Pedestrian Railing Details, see Sheet 20 and 21.
4. For Reinforcing Steel Schedule, see Sheet 27.
5. For Bridge Lighting Opening Reinforcing Detail, see Sheet 11.
*6. Reinforcing steel RV041, RH0401 and RH0402 are included in the pay item Railings.

Legend:

EF Denotes Each Face
FF Denotes Far face
NF Denotes Near face



SOUTH PEDESTRIAN RAMP - VIEW B-B
Scale: ¼" = 1'-0"

No.	Description	Date
Revisions		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

SOUTH PEDESTRIAN RAMP RAILING ELEVATION AND DETAILS

Designed: GVK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2012		13 of 30
Checked: EMS			

Scale: As shown

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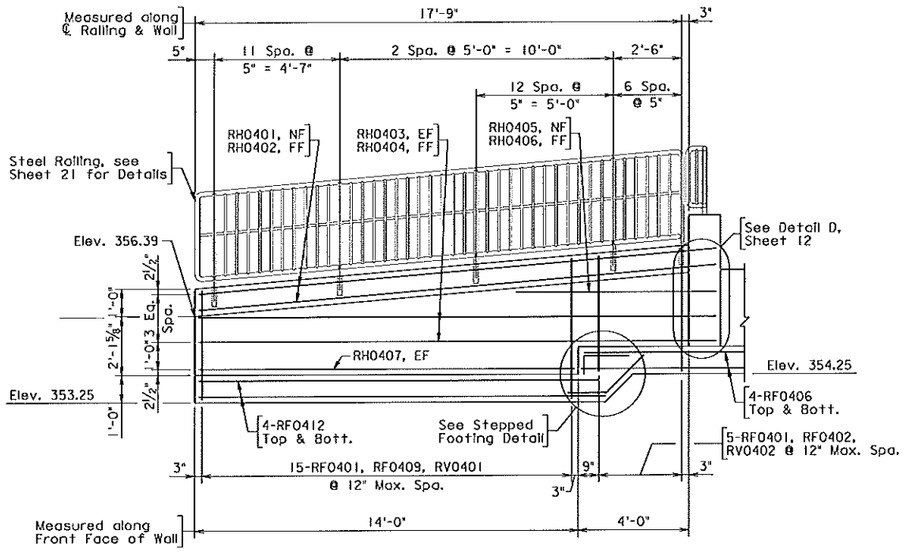
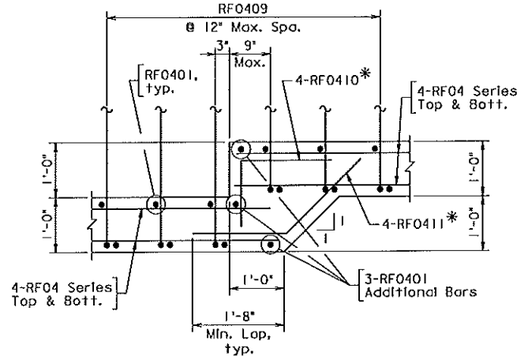
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	14



WEST PEDESTRIAN RAMP - VIEW C-C
Scale: ⅜" = 1'-0"

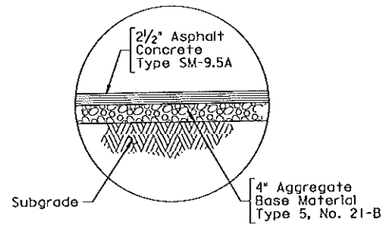


TYPICAL STEPPED FOOTING DETAIL
Scale: ¾" = 1'-0"

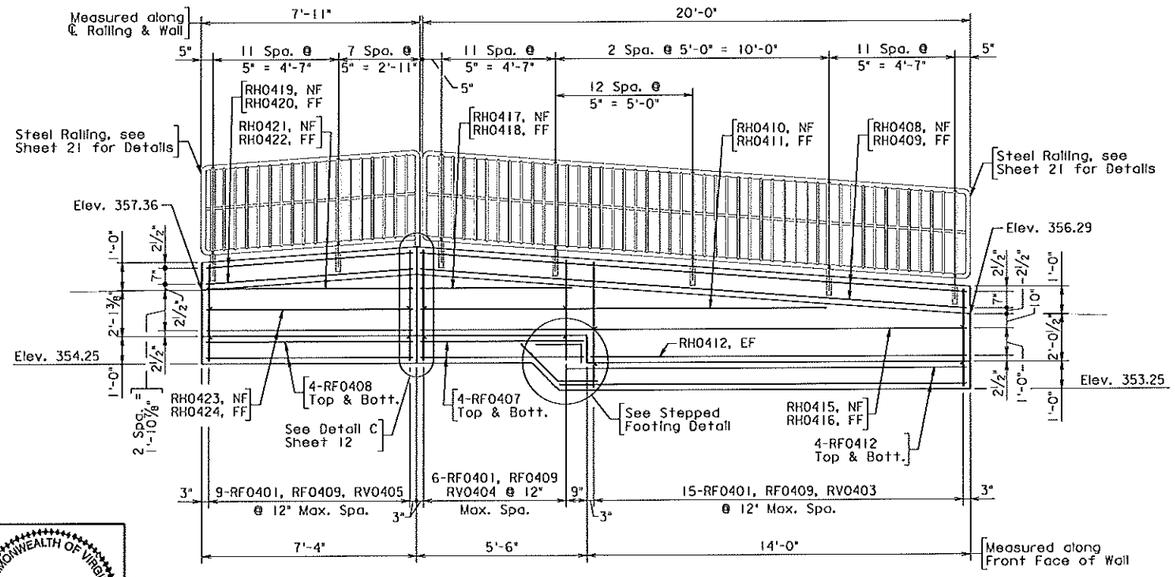
Note: * RF0410 and RF0411 to be lapped with longitudinal RF04 Series bars.

NOTES:

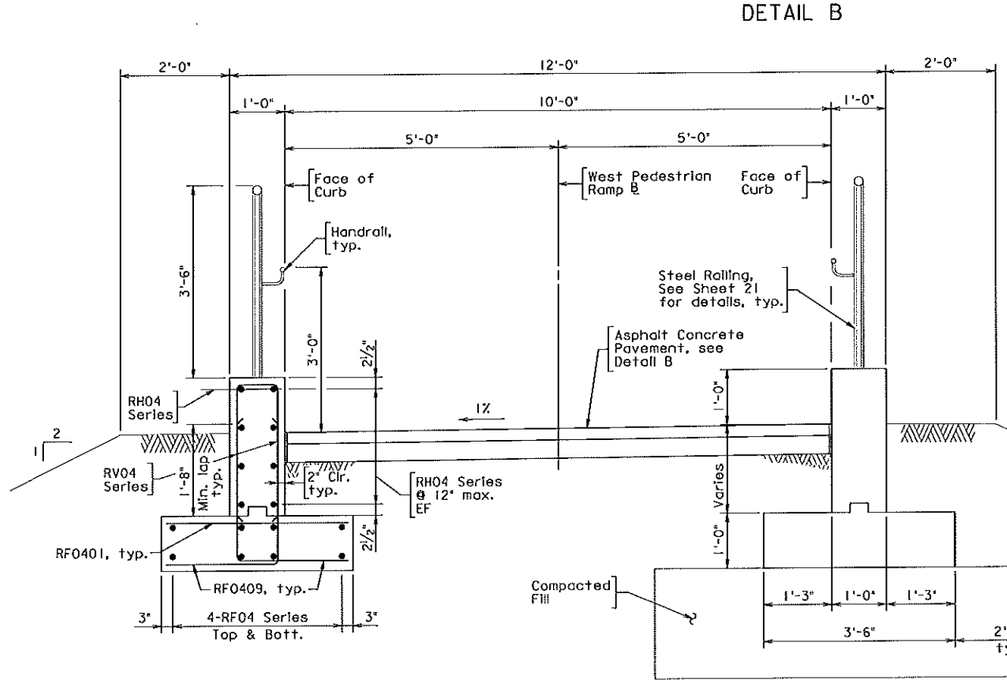
1. For Views A-A and B-B location, see Sheet 12.
2. For Pedestrian Railing Details, see Sheet 21.
3. For Reinforcing Steel Schedule, see Sheet 28.
4. Footings for pedestrian ramps shall bear on natural soils of Stratum B or on a minimum two (2) feet of compacted fill.



DETAIL B



WEST PEDESTRIAN RAMP - VIEW D-D
Scale: ⅜" = 1'-0"



TRANSVERSE SECTION - WEST PEDESTRIAN RAMP (AT GRAVEL WALK)
Scale: ¾" = 1'-0"

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COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

WEST PEDESTRIAN RAMP RAILING ELEVATION AND DETAILS

Designed: CVK	Date	Plan No.	Sheet No.
Drawn: VH	Jan. 2013		14 of 30
Checked: EMS			

Scale: As shown

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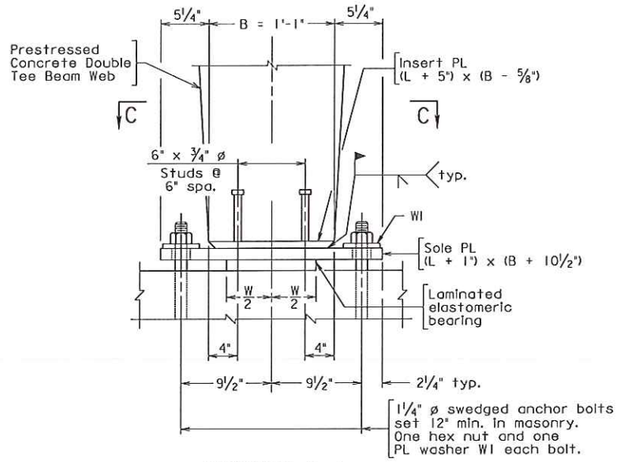
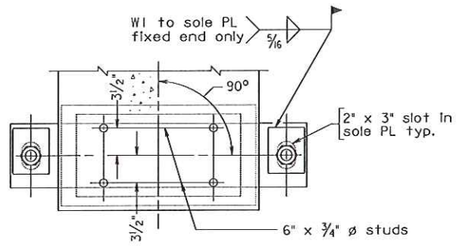
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	15



SECTION A-A



SECTION C-C

Notes:

Material: Elastomer - 50 durometer hardness.
Shim - ASTM A36 or A1011 mild steel.

Elastomeric bearings shall be molded as a single unit.

Bevel sole plates to grade shown in table. Minimum ¾" thickness.

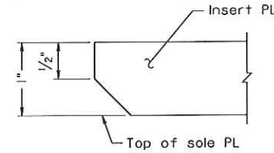
Insert plate shall provide uniform bearing over its entire contact area.

In welding insert plate to sole plate, ample time shall be allowed between weld passes to prevent heat damage to the concrete, sole plate and elastomeric pad. Elastomer shall not be subjected to temperatures higher than 400°F.

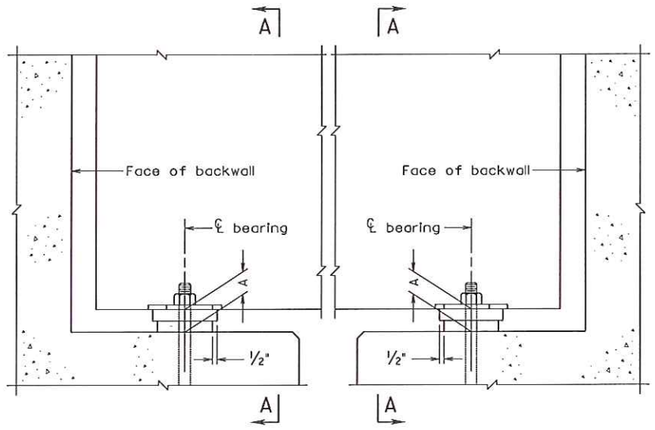
For beam details, see sheets 18 and 19.

For designation of fixed or expansion bearings, see elevation view on title sheet(s).

The sole plate shall be galvanized.

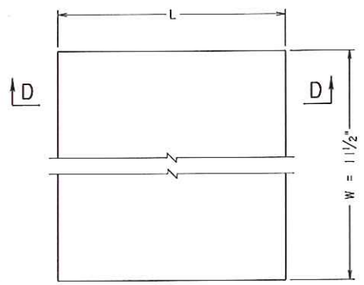


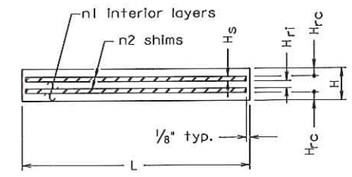
INSERT PLATE CHAMFER DETAIL



ABUTMENT A ELEVATION
EXPANSION BEARING

ABUTMENT B ELEVATION
FIXED BEARING



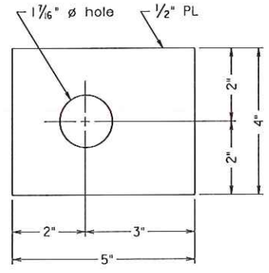


SECTION D-D

LAMINATED ELASTOMERIC BEARING

Abut.	A	Laminated Elastomeric Bearing						Grade %	Total Load (kips)
		W	L	H	H_{rc}	n1 @ H_{ri}	n2 @ H_s		
A	2⅜"	11½"	7"	1⅜"	¼"	1 @ ½"	2 @ 3/16"	2%	50
B	2⅜"	11½"	7"	1⅜"	¼"	1 @ ½"	2 @ 3/16"	2%	50

All dimensions in table are in inches.



WASHER W1

Not to scale

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
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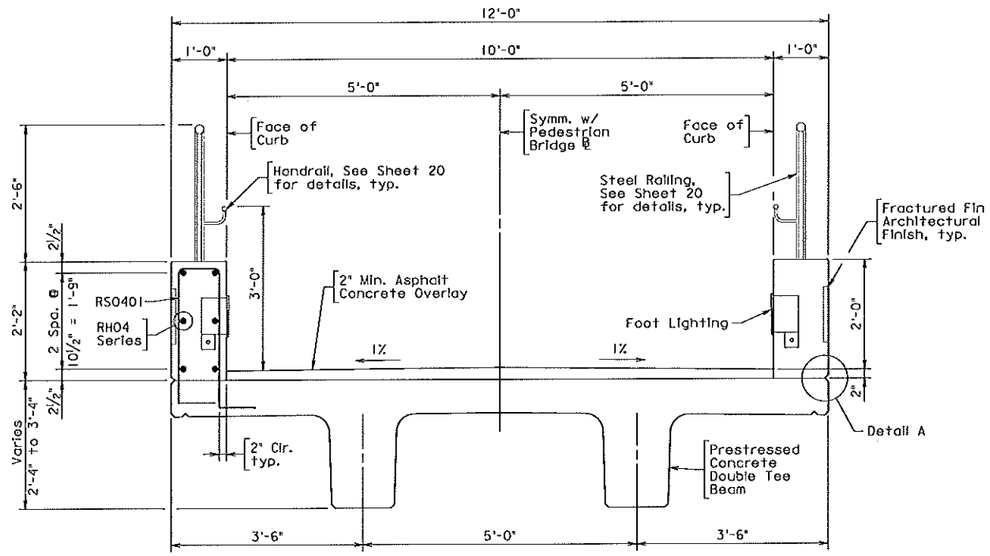
STRUCTURE AND BRIDGE DIVISION

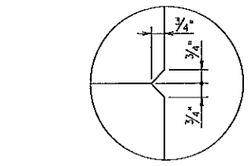
PRESTRESSED BEAM BEARING DETAILS

Designed: CMS	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		15 of 30
Checked: CMS			

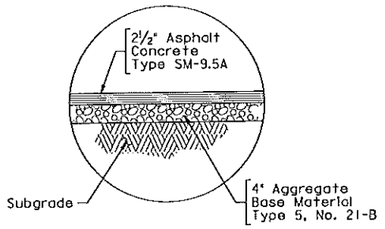
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	16



TRANSVERSE SECTION - PEDESTRIAN BRIDGE



DETAIL A
Scale: 3" = 1'-0"



DETAIL B

NOTES:

1. Asphalt concrete overlay shall be Type SM-9.5D for the top 2" thickness and Type IM-19A for the remaining portion. Payment for the entire overlay shall be made at the unit prices for asphalt concrete Type SM-9.5D.

2. Concrete in prestressed members shall be Class A5 having a minimum compressive cylinder strength at 28 days equal to 8000 psi. All other concrete including parapets shall be Class A4.

3. All prestressed strands shall be Grade 270 low-relaxation strands and shall be uncoated unless otherwise noted.

4. Reinforcing steel for prestressed concrete double tee beams and parapets/railings shall be deformed and shall be low carbon/chromium reinforcing steel bars conforming to ASTM A1035.

5. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

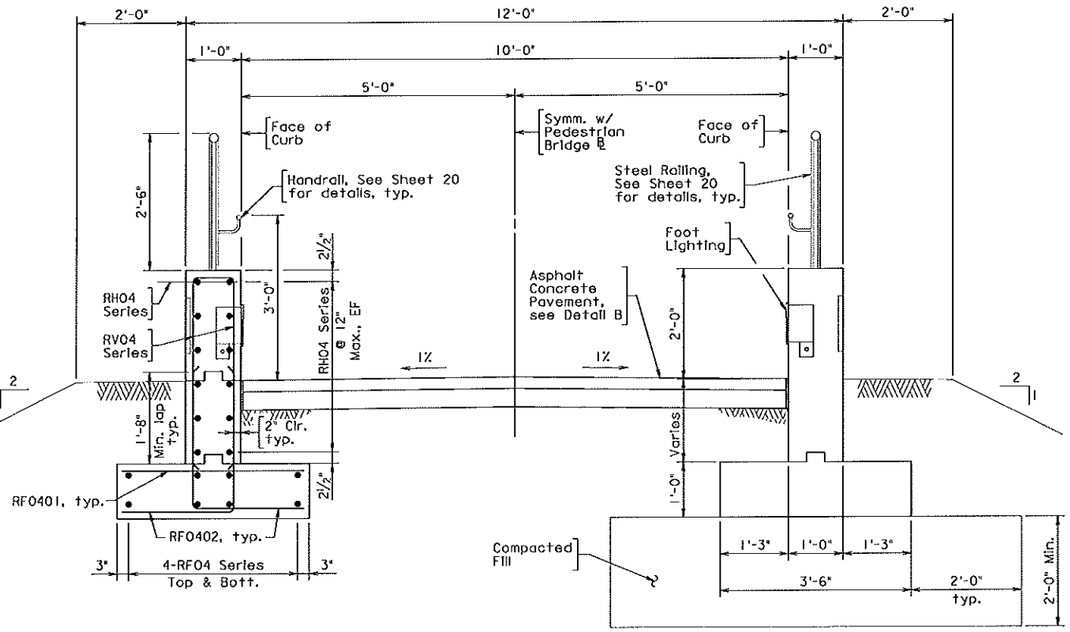
6. Entire deck shall be waterproofed in accordance with the requirements of Section 405 and Section 416 of the Specifications.

7. Cost of deck and joint waterproofing shall be included in the price of prestressed concrete beams.

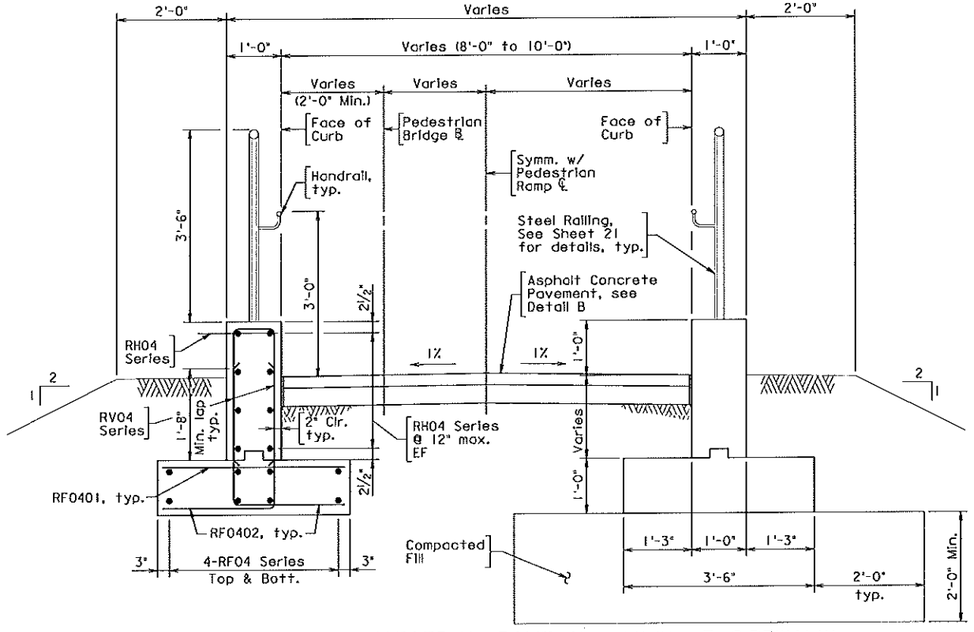
8. For North Pedestrian Ramp Plan, see Sheet 11.

9. For South Pedestrian Ramp Plan, see Sheet 12.

10. For Pedestrian Bridge Plan, see Sheet 17.



TRANSVERSE SECTION - PEDESTRIAN RAMP



TRANSVERSE SECTION - PEDESTRIAN RAMP (AT ASPHALT SIDEWALK)

No.	Description	Date
	Revisions	

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TRANSVERSE SECTIONS AND DETAILS

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		16 of 30
Checked: EMS			

Scale: ¾" = 1'-0"

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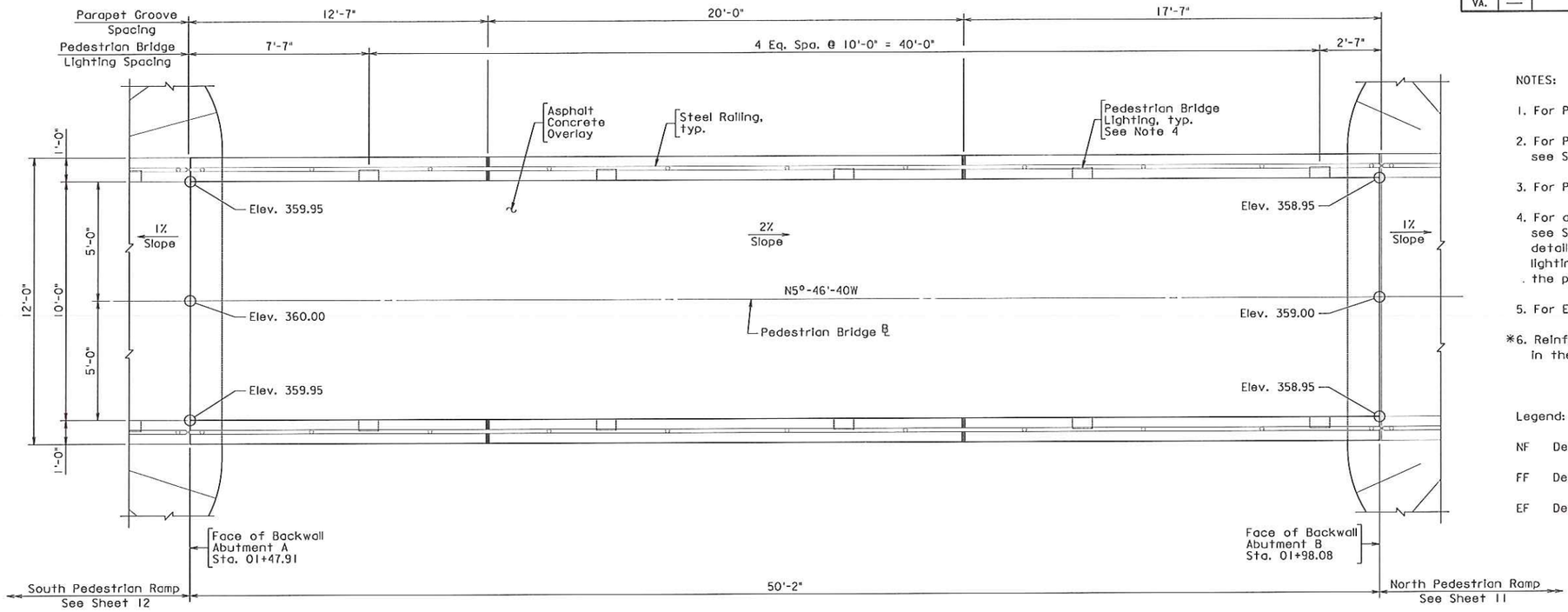
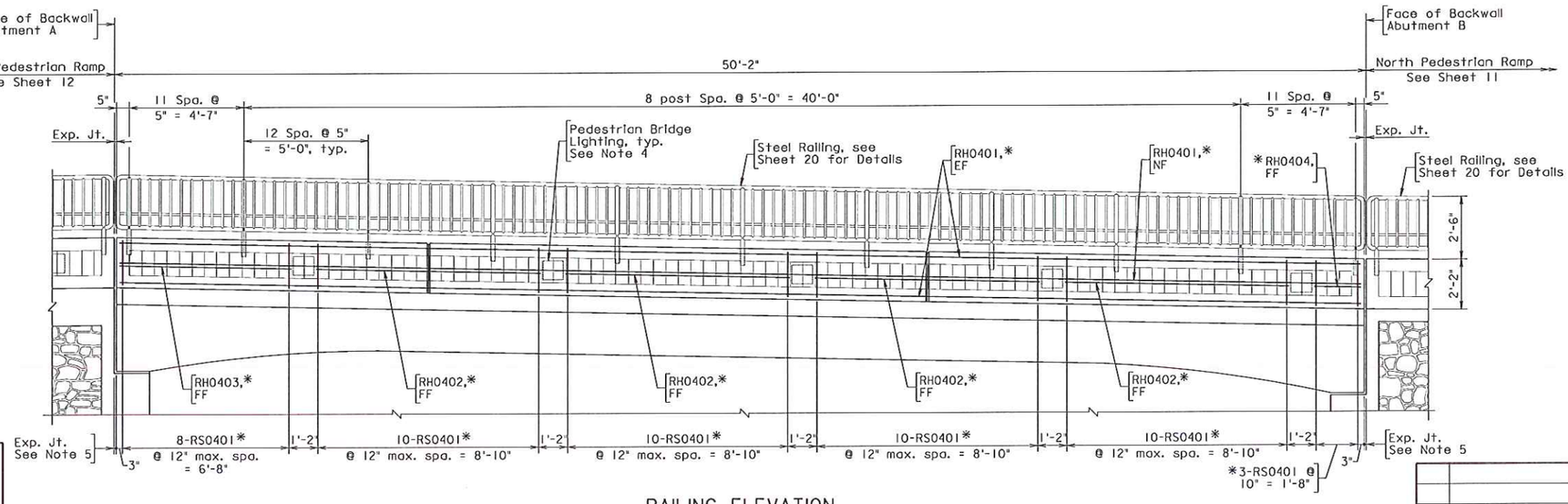
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	17



PLAN - PEDESTRIAN BRIDGE



RAILING ELEVATION

Note: East railing shown, West railing is opposite hand.

NOTES:

1. For Pedestrian Bridge Typical Section, see Sheet 16.
2. For Prestressed Concrete Double Tee Beam Details, see Sheets 18 and 19.
3. For Pedestrian Railing Details, see Sheet 20.
4. For additional reinforcing at bridge lighting opening, see Sheet 11. Refer to bridge lighting plans for lighting details. Contractor to inform the Engineer if the actual lighting fixture dimensions are different from detailed on the plans.
5. For Expansion Joint Details, see Sheet 22.

*6. Reinforcing steel RS0401 and RH04 Series are included in the pay item Railing.

Legend:

NF Denotes Near Face

FF Denotes Far Face

EF Denotes Each Face

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Scale: 3/8" = 1'-0"

No.	Description	Date
Revisions		

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PEDESTRIAN BRIDGE PLAN, RAILING ELEVATION AND DETAILS

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		17 of 30
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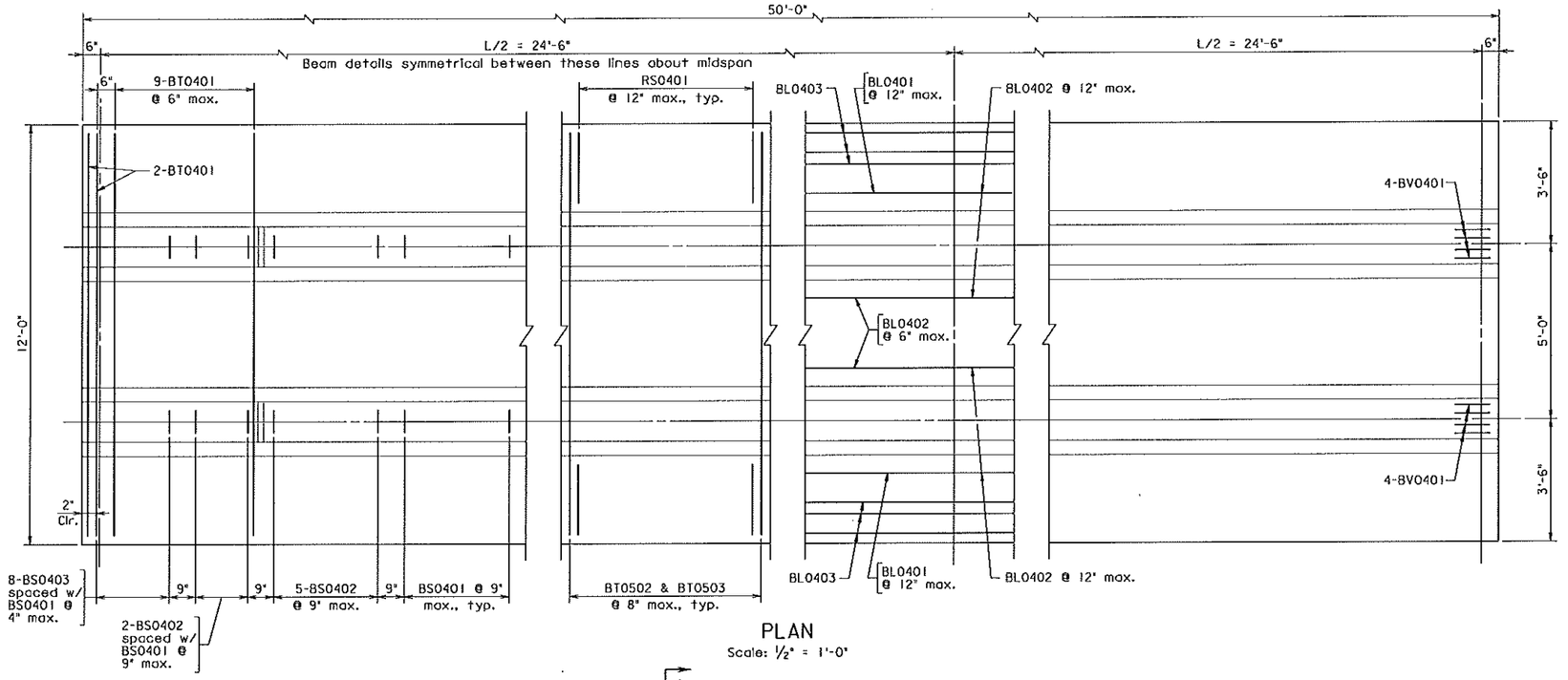
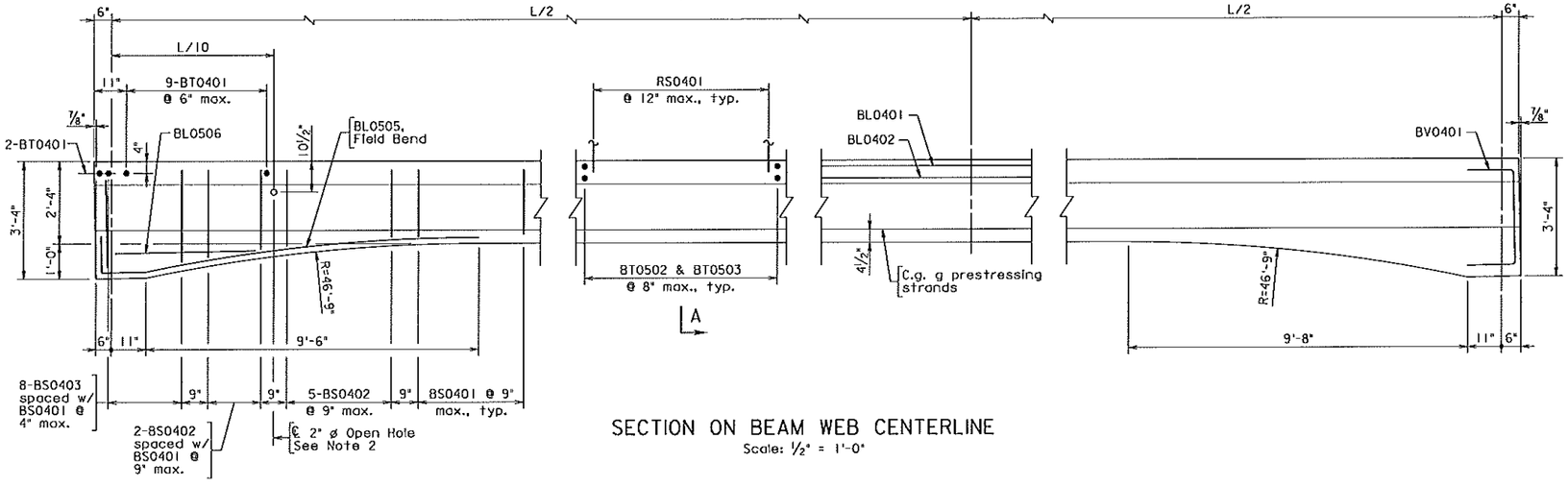
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	18



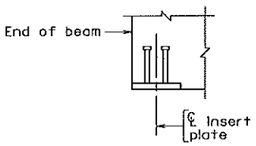
PLAN
Scale: ½" = 1'-0"



SECTION ON BEAM WEB CENTERLINE
Scale: ½" = 1'-0"

NOTES:

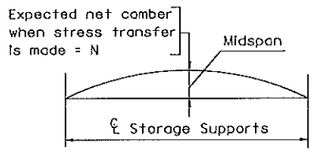
1. At beam ends use 1" deep recesses around local strand groups with 2" minimum edge clearances and fill with pneumatically applied mortar immediately after clipping strands. An approved epoxy mortar covering the ends of strands with a minimum thickness of ⅛" may be used as an alternate. Strands should be cool before mortar is applied. After mortar is allowed to cure, the entire end of beam shall be covered with epoxy type EP-3T.
2. Beams shall have 2" ø open holes formed with nonrigid tubing only on stream crossings. Holes may be slightly shifted to clear reinforcing bars and strands.
3. All prestressing strands shall be low-relaxation, grade 270k and uncoated.
4. For beam sections and details, see sheet 19.
5. For details of insert plate, see Sheet 15.
6. The Contractor, after written approval from the Engineer, may use different prestressing strand arrangement provided that the total prestressing force and c.g. are the same as shown on the plans.
7. 4 - ½" ø strands stressed to 1,000 lbs. may be substituted for 4 - BL0504 bars.
8. All reinforcing bars shall be low carbon chromium reinforcing steel conforming to ASTM A1035.



TYPICAL BOTTOM FLANGE EDGE DETAIL
Not to Scale

PRESTRESSING STEEL DATA TABLE

Strand Type	Web	No. of Strands Row 1	Row 2	Row 3	Y1 in.	Y2 in.	Y3 in.	Total Number of Strands per Web	Prestressing Force per Strand-lbs.	Net Camber N in.
0.6" ø Low-Relaxation Strands	1	3	5	3	2½"	4½"	6½"	11	43,900	¾"
	2	3	5	3	2½"	4½"	6½"	11		



CAMBER DIAGRAM

Scale: As shown

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COMMONWEALTH OF VIRGINIA
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STRUCTURE AND BRIDGE DIVISION

PRESTRESSED CONCRETE DOUBLE TEE BEAM - 1

Designed: CMK	Date	Plan No.	Sheet No.
Drawn: WH	Jan. 2013		18 of 30
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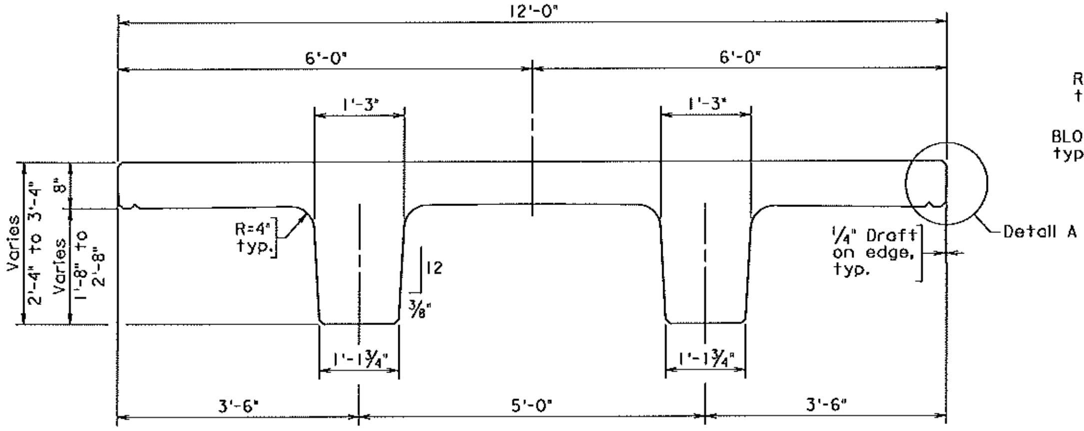
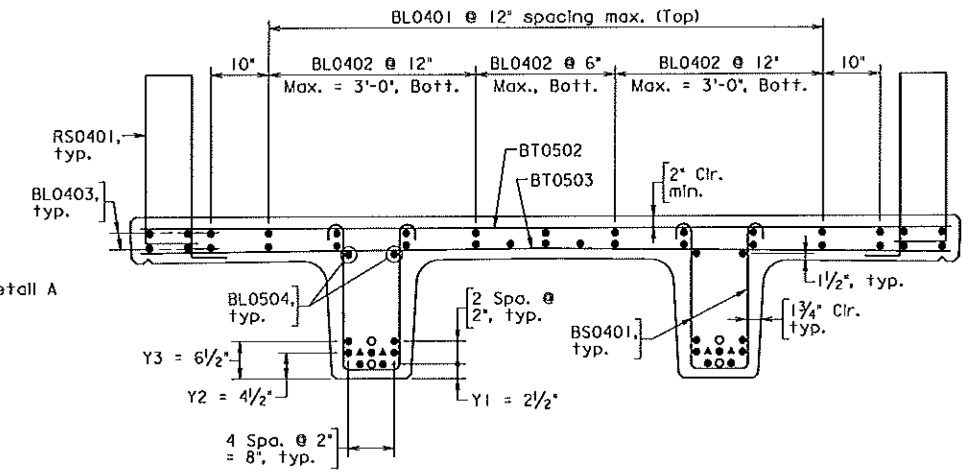
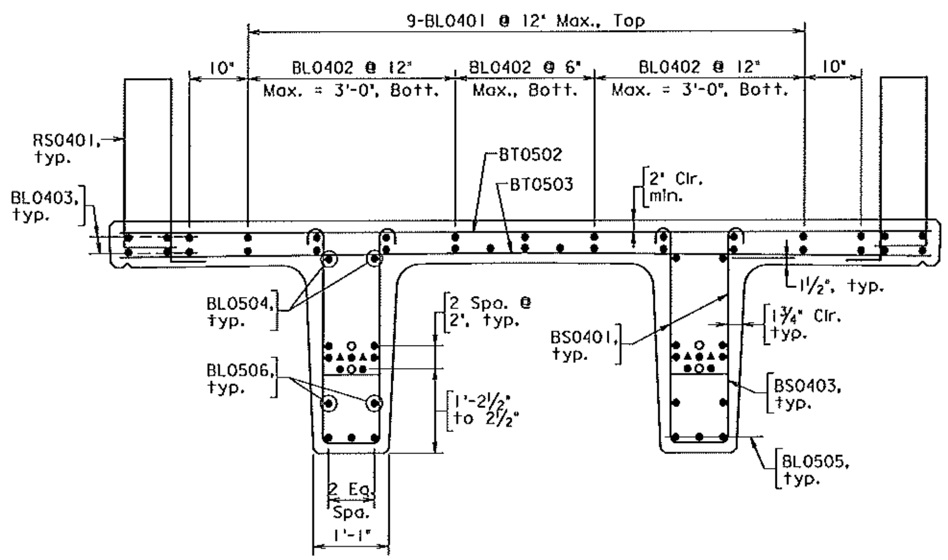
STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	19



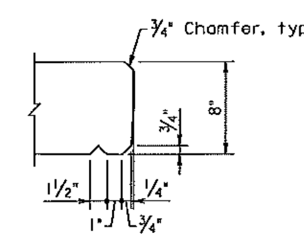
TYPICAL BEAM SECTION
Scale: ¾" = 1'-0"



SECTION A-A
Scale: ¾" = 1'-0"



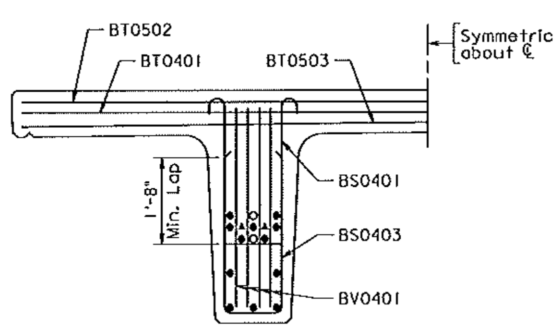
END VIEW
Scale: ¾" = 1'-0"



DETAIL A
Scale: 1½" = 1'-0"

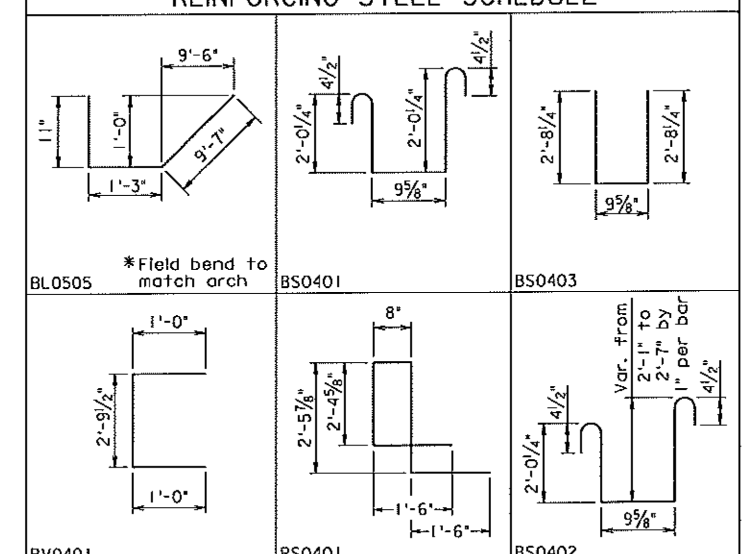
Prestressing Strand Legend:

- • Fully Bonded
- o Debonded 0.5 ft.
- ▲ Debonded 2 ft.



TYPICAL END VIEW
Scale: ¾" = 1'-0"
(Showing additional end zone vertical reinforcing)

REINFORCING STEEL SCHEDULE



Mark	Size	No.	Length	Pin ø	Location
BL0401	#4	9	49'-8"	—	Double Tee Beam
BL0402	#4	11	49'-8"	—	Double Tee Beam
BL0403	#4	12	49'-8"	—	Double Tee Beam
BL0504	#5	4	49'-8"	—	Double Tee Beam
BL0505	#5	12	7'-10½"	3¾"	Double Tee Beam
BL0506	#5	8	3'-4"	—	Double Tee Beam
BT0401	#4	22	11'-8"	—	Double Tee Beam
BT0502	#5	76	11'-8"	—	Double Tee Beam
BT0503	#5	76	11'-8"	—	Double Tee Beam
BS0401	#4	130	5'-3"	3"	Double Tee Beam
BS0402	#4	28	Varies	3"	Double Tee Beam
BS0403	#4	32	6'-0"	3"	Double Tee Beam
BV0401	#4	16	4'-8½"	3"	Double Tee Beam
RS0401	#4	102	8'-2"	3"	Double Tee Beam

Dimensions in bending diagram are out-to-out of bars.

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	Revisions	

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DEPARTMENT OF TRANSPORTATION
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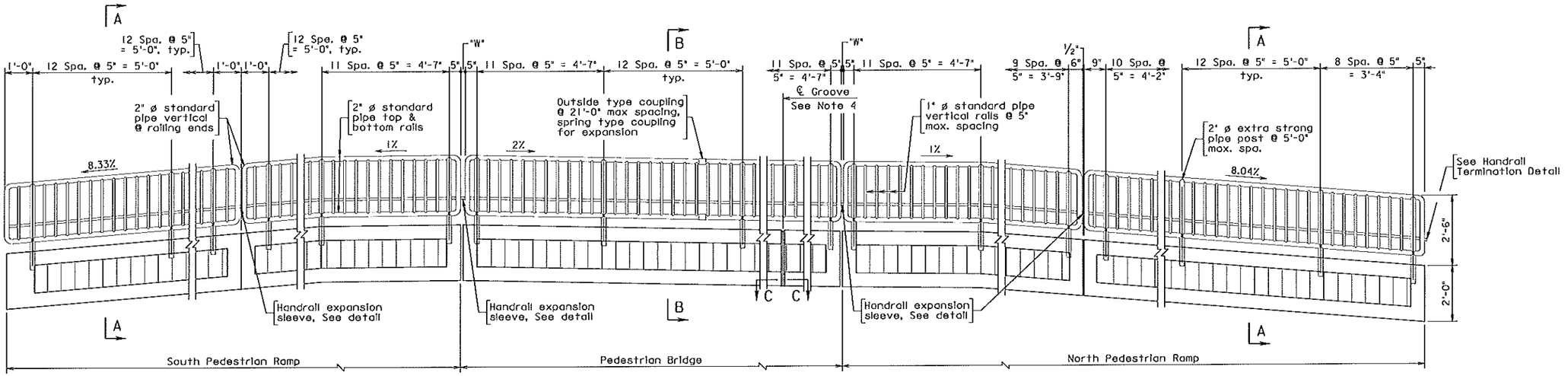
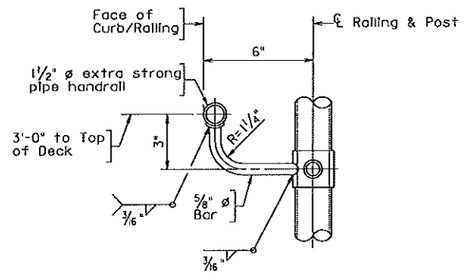
PRESTRESSED CONCRETE DOUBLE TEE BEAM - 2

Designed: SMK / Drawn: VH / Checked: EMS	Date	Plan No.	Sheet No.
	Jan. 2013		19 of 30

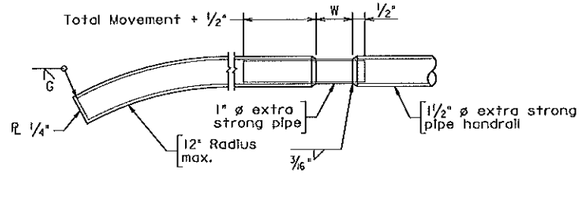
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	20



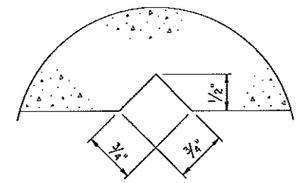
ELEVATION
Scale: ½" = 1'-0"



HANDRAIL DETAIL
Scale: 1" = 1'-0"

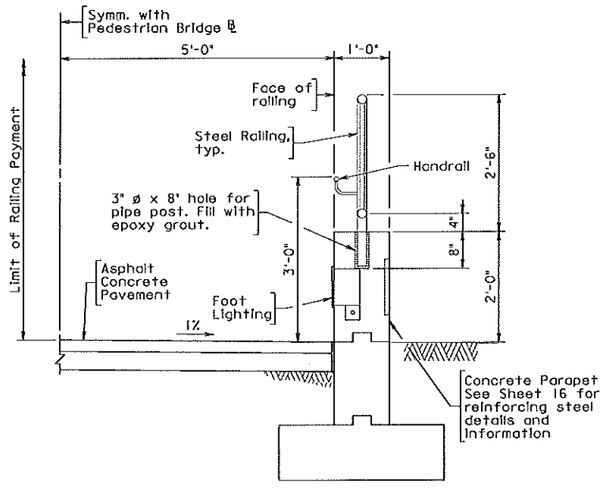


HANDRAIL TERMINATION AND EXPANSION SLEEVE ELEVATION
Not to Scale

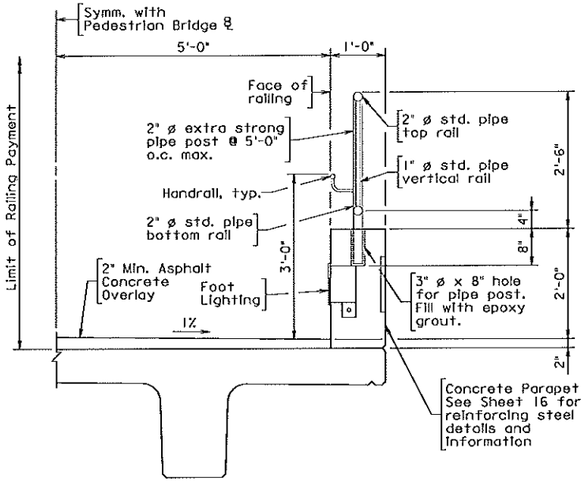


SECTION C-C
Full scale

Groove detail for both sides of rail



SECTION A-A - PEDESTRIAN RAMP
Scale: ¾" = 1'-0"



SECTION B-B - PEDESTRIAN BRIDGE
Scale: ¾" = 1'-0"

Notes:

1. All concrete shall be Class A4.
2. Posts, rails and other pipe members shall be ASTM A53 Grade B.
3. For Post Spacings, see Sheet 11, 13 and 17.
4. Maximum spacing of grooves in parapet shall be 20'-0" and shall be centered between posts.
5. For other notes and Reinforcing Steel Schedule, see Sheet 21.
6. Railing will be measured in Linear Feet. It will be paid for the contact unit price per linear foot, which shall be full compensation for all materials, labor, tools, equipment and incidentals, necessary to complete the work. It shall include rails, rail posts, anchor assemblies, sleeves, grounding materials, bridge conduit system, and other associated metal parts as shown on the plans. Also included in bid items are concrete noted in plans and reinforcing steel noted in plans and included in Reinforcing Steel Schedule.

Scale: As shown

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COMMONWEALTH OF VIRGINIA
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STRUCTURE AND BRIDGE DIVISION

PEDESTRIAN RAILING DETAILS - 1

Designed: EMS	Date	Plan No.	Sheet No.
Drawn: VAI	Jan. 2013		20 of 30
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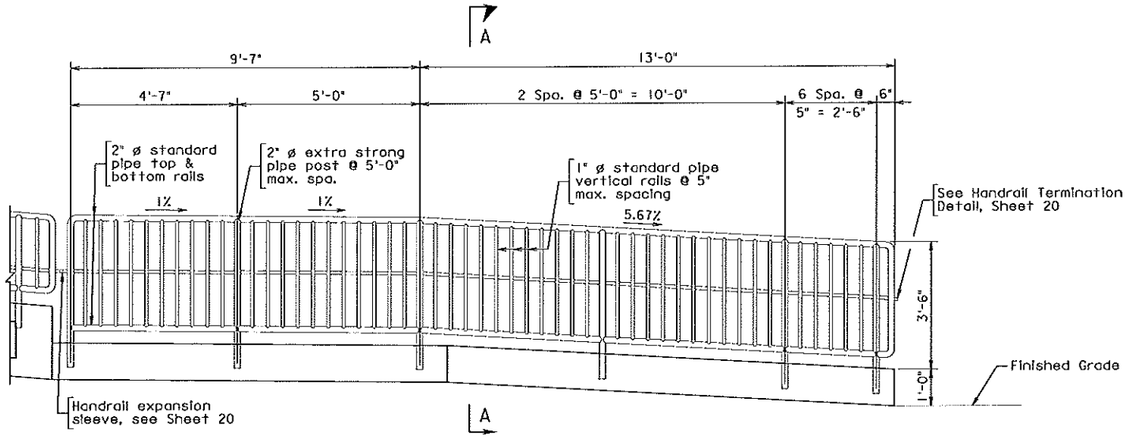
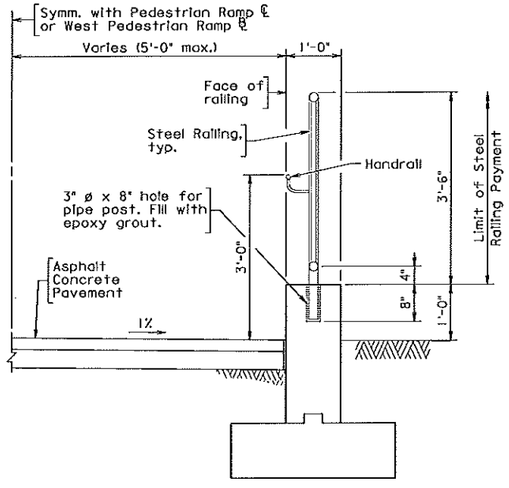
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	---	RSTP-5401 (944)	123	0123-151-139, B605	21



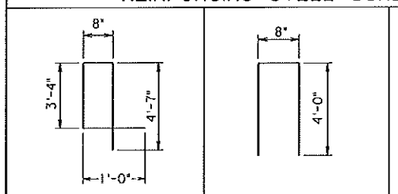
ELEVATION
Scale: ½" = 1'-0"

Note:
West Railing at South Pedestrian Ramp shown.
See Sheets 12 and 13 for other railing locations, elevations and details.



SECTION A-A
Scale: ¾" = 1'-0"

REINFORCING STEEL SCHEDULE



Mark	Size	No.	Length	Pin ø	Location
RH0401	#4	10	49'-8"	---	Parapet - Beam
RH0402	#4	8	8'-11"	---	Parapet - Beam
RH0403	#4	2	6'-9"	---	Parapet - Beam
RH0404	#4	2	1'-9"	---	Parapet - Beam
RV0401	#4	64	9'-4"	3"	Parapet - Abutments
RH0401	#4	12	14'-0"	---	Parapet - Abutment A
RH0401	#4	12	15'-9"	---	Parapet - Abutment B
RV0402	#4	40	8'-6"	3"	Parapet - North Ramp
RH0402	#4	12	18'-6"	---	Parapet - North Ramp
RV0402	#4	26	8'-6"	3"	Parapet - South Ramp
RH0402	#4	12	11'-8"	---	Parapet - South Ramp
RL0401	#4	88	2'-10"	---	Parapet - Bridge Lighting
RL0402	#4	176	1'-8"	---	Parapet - Bridge Lighting

Dimensions in bending diagram are out-to-out of bars.

Notes:

1. Post shall be set vertical. Rail shall be set parallel to the top of concrete parapet.
2. An inside sleeve type coupling shall be provided at 21' maximum spacing. At every fifth coupling and at expansion joints in parapet, an inside expansion coupling will be provided.
3. The "W" dimension shall be the same as that shown on Rapid Cure Silicone Joint Details, Sheet 22.
4. Handrail expansion sleeve shall be provided at all expansion joints in parapet or railing.
5. All edges of fabricated railing and its supports shall be ground to a 8" max. radius.
6. The railing and its related components shall conform with Section 410 of the Specifications, steel railing and shall be painted in accordance with Section 411 of the Specifications. The color of paint is black or as specified by the City.
7. Posts, rails, and other pipe members shall be ASTM A53 Grade B.
8. For Post Spacings, see Sheet 13 and 14.
9. The handrails shall be included in the price bid for Railing or Steel Railing.
10. The Contractor shall determine all dimensions and details necessary for installation.
11. Steel Railing will be measured in Linear Feet. It will be paid for the contract unit price per linear foot, which shall be full compensation for all materials, labor, tools, equipment and incidentals, necessary to complete the work. It shall include rails, rail posts, anchor assemblies, sleeves, grounding materials, and other associated metal parts as shown on the plans.

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	Revisions	

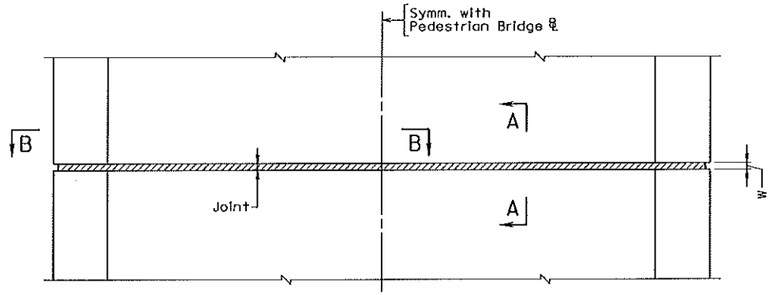
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

PEDESTRIAN RAILING DETAILS - 2

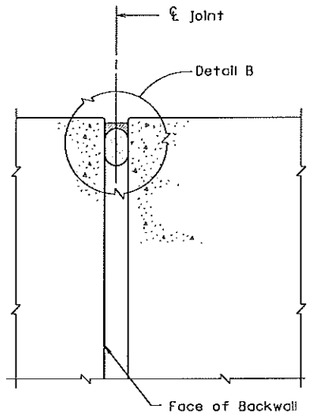
Designed: EMS	Date	Plan No.	Sheet No.
Drawn: WJ			
Checked: EMS	Jan. 2013		21 of 30

DGN: b1021

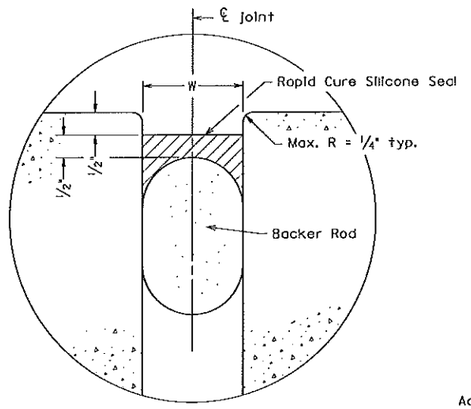
STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	22



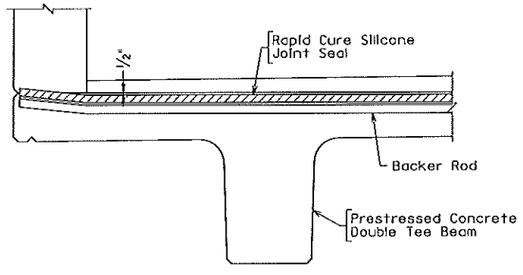
PLAN AT ABUTMENTS



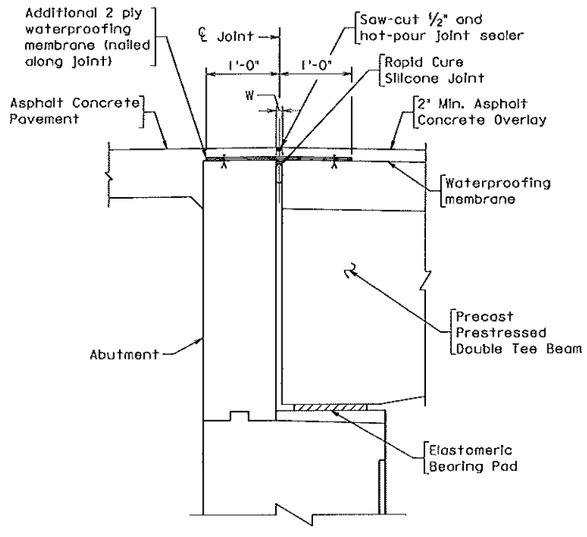
SECTION A-A



DETAIL B



SECTION B-B



JOINT WATERPROOFING DETAIL

Notes:

Silicone Seal shall be one of the following:

a. Dow Corning 902 RCS Joint Sealant - For proper installation, the Contractor shall follow the installation recommendations as described in the Dow Corning Silicone Pavement Sealants Installation Guide.

b. Wabo Silicone Seal by Watson Bowman Acme - For proper installation, the Contractor shall follow the manufacturer's installation procedure as described in Wabo Silicone Seal Joint System Silicone Expansion Joint Sealant for Bridge and Highway Applications.

For first installation, the Sealant Representative shall be on site to observe and insure proper installation.

As nearly as possible, sides of joints shall be straight, vertical and parallel. The area of the installation shall be free from cracks and spalls.

Sealer shall be installed in one continuous piece.

Joint width W= 1" is the final joint width of the cured concrete when placed at 60° F. The joint width shall be increased or decreased for every 10° F temperature drop or rise respectively be 1/64 "

All cost of furnishing materials, fabricating and installing the sealants complete in place shall be included in the unit price bid per linear foot of 'Rapid Cure Silicone Joint'.

COMMONWEALTH OF VIRGINIA
EFREN MAXIMO SEBASTIAN
Lic. No. 20717
PROFESSIONAL ENGINEER

Efren M Sebastian
2013.02.04 11:01:25 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

Not to scale

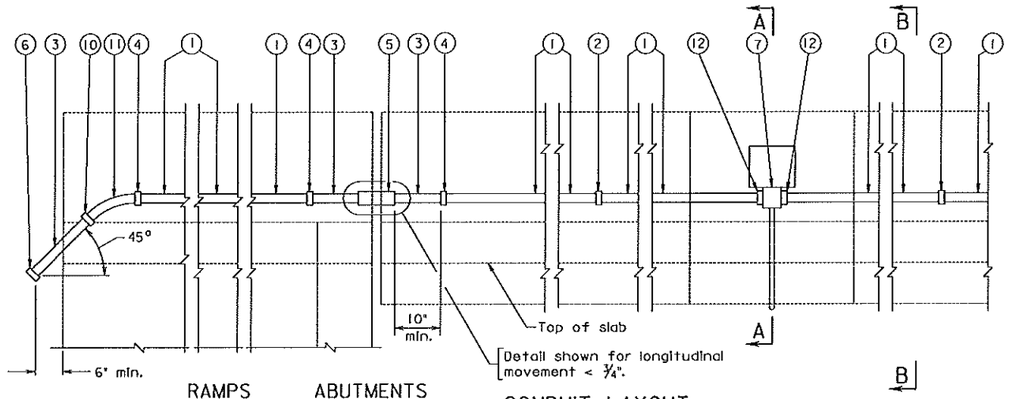
No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

RAPID CURE SILICONE JOINT DETAILS

Designed: GMS	Date	Plan No.	Sheet No.
Drawn: MV	Jan. 2012		22 of 30
Checked: EMS			

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5A01 (944)	123	0123-151-139, B605	23



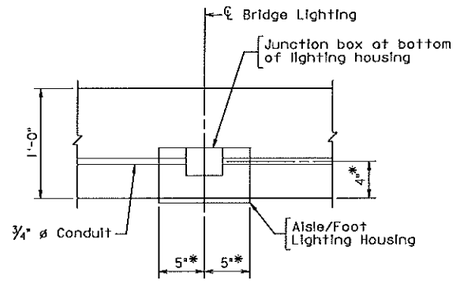
RAMPS ABUTMENTS

CONDUIT LAYOUT

Scale: 3/4" = 1'-0"
(Railing not shown)

1. 3/4" ø nonmetallic conduit
2. Nonmetallic coupling
3. 3/4" ø metal conduit
4. Adapter to connect nonmetallic conduit to metal conduit
5. Metal expansion and deflection fitting
6. 3/4" ø pipe cap
7. Junction box (included in lighting fixture assembly)
8. 3/4" ø metal conduit. Furnish locknut and bushing to connect conduit to junction box.
9. Metal expansion fitting
10. Pipe coupling
11. 3/4" ø 45° 13" R steel elbow
12. Bell fitting or bushing to connect conduit to junction box

Abutment	Longitudinal Movement	t	Detail Type
A (Expansion)	1/2"	1/16"	A
B (Fixed)	-	-	A



*Contractor to verify the actual lighting fixture dimensions

PLAN

Scale: 1 1/2" = 1'-0"

Notes:

All reinforcing bars shall be corrosion resistant reinforcing steel -

Cut or bend bars to clear bridge lighting.

Close adherence to the manufacturer's requirements in regard to clearances for the installation of deflection fittings shall be observed.

Cost of Bridge Conduit System and anchorages shall be included in price bid for railing.

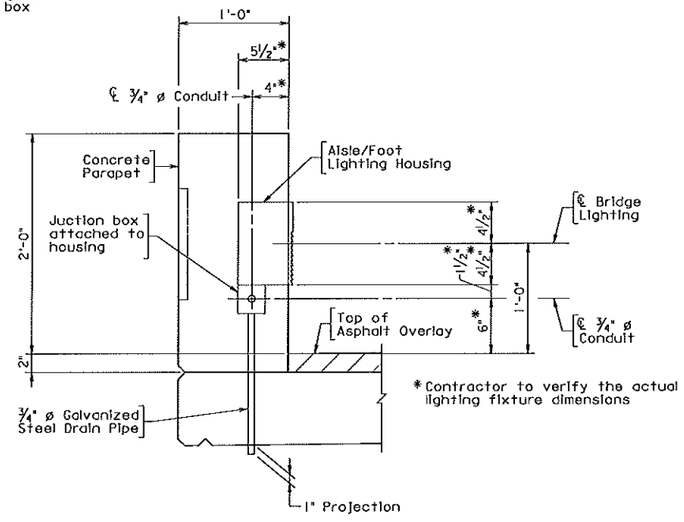
Longitudinal movement is the maximum amount of movement of the expansion and deflection fitting calculated for placement at 60 F and shall be adjusted in accordance with manufacturer's requirements. The amount of movement shall be increased or decreased for every 10 F temperature drop or rise respectively by t.

The Contractor shall determine all dimensions and details necessary for installation.

Conduit shall be grounded in conformance with Section 700 with grounding materials that conform to Section 238.

See pedestrian bridge and ramp railing elevations for reinforcment details.

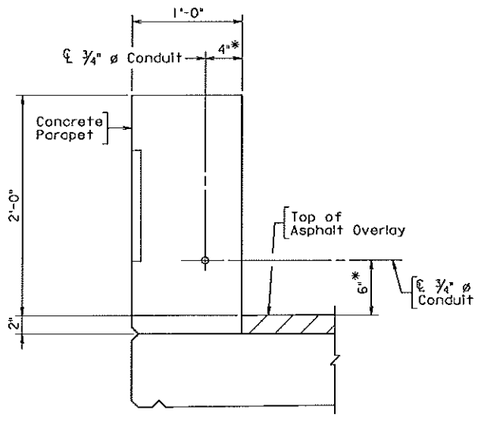
See bridge lighting plans for lighting details.



SECTION A-A

Scale: 1 1/2" = 1'-0"

Note: Steel railing not shown for clarity.



SECTION B-B

Scale: 1 1/2" = 1'-0"

Note: Steel railing not shown for clarity.

DGN

b1023

COMMONWEALTH OF VIRGINIA
EFREN MASSO SEBASTIAN
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PROFESSIONAL ENGINEER

Efren M Sebastian
2013.02.04 11:02:31 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

Scale as shown.

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

BRIDGE CONDUIT SYSTEM

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: MA	Jan. 2013		23 of 30
Checked: EMS			

REINFORCING STEEL SCHEDULE

MARK	NO.	BAR SIZE	PIN DIA. FT-IN	LENGTH FT-IN	LENGTH FT-IN	WEIGHT (LBS.)	LOCATION
ABUTMENT A NEAT LOW CARBON/CHROMIUM							
AV0501	11	5	3 3/4	11-04		129	STEM
AV0502	15	5	3 3/4	17-09		277	STEM
AV0503	4	5		8-10		37	STEM
AV0504	2	5		12-06		26	STEM
AV0505	4	5	3 3/4	4-00		17	STEM
AV0506	4	5		10-03		43	STEM
AV0507	4	5		12-05		52	STEM
AH0401	5	4		11-07		39	STEM
AH0402	5	4		10-06		35	STEM
AH0503	11	5	3 3/4	14-01		161	STEM
AH0504	12	5		10-06		131	STEM
AH0405	10	4	3	5-00		33	STEM
AH0506	22	5	3 3/4	7-03		165	STEM
AH0407	10	4	3	4-00		26	STEM
AH0508	22	5	3 3/4	4-08		107	STEM
AH0409	10	4	3	4-07		30	STEM
AH0510	22	5	3 3/4	5-04		121	STEM
AH0511	3	5		11-07		36	STEM
AW0501	44	5	3 3/4	12-06		571	WINGWALL
AW0502	20	5	3 3/4	5-00	TO 9-00	146	WINGWALL
AW0503	20	5		4-08	TO 9-02	144	WINGWALL
AW0404	6	4	3	14-07		58	WINGWALL
AW0405	10	4	3	13-08		91	WINGWALL
AW0406	6	4	3	5-00		20	WINGWALL
AW0407	6	4		12-04		49	WINGWALL
AW0508	24	5	3 3/4	14-07		364	WINGWALL
AW0509	2	5	3 3/4	5-00		10	WINGWALL
AW0510	2	5		12-04		26	WINGWALL
AW0511	10	5	3 3/4	7-00	TO 15-00	114	WINGWALL
AW0512	10	5		2-04	TO 10-04	66	WINGWALL
AW0513	10	5	3 3/4	14-07		152	WINGWALL
AW0514	8	5		11-06		96	WINGWALL
AW0515	2	5	3 3/4	4-03		9	WINGWALL
AW0516	2	5		10-03		21	WINGWALL
AP0401	12	4	3	3-05		27	SEAT
AP0502	8	5		2-06		21	SEAT
TOTAL WEIGHT IN PRECEDING GROUP OF BARS						3451	
ABUTMENT A FOOTING							
AF0701	7	7	5 1/4	16-08		238	FOOTING
AF0502	17	5	3 3/4	16-09		297	FOOTING
AF0503	18	5	2 1/2	10-08		199	FOOTING
AF0504	21	5		3-01		68	FOOTING/STEM
AF0505	19	5		3-08		73	FOOTING/STEM
AF0706	14	7	5 1/4	21-05		612	FOOTING
AF0507	14	5	3 3/4	21-06		314	FOOTING
AF0508	40	5	2 1/2	10-08		444	FOOTING
AF0509	18	5	2 1/2	11-04		212	FOOTING
AF0510	22	5		3-01		71	FOOTING/STEM
AF0511	44	5		4-08		214	FOOTING/STEM
AF0512	8	5		3-04		28	FOOTING/STEM
AF0413	48	4	3	3-01		98	FOOTING
TOTAL WEIGHT IN PRECEDING GROUP OF BARS						2867	

DIMENSION TABLE

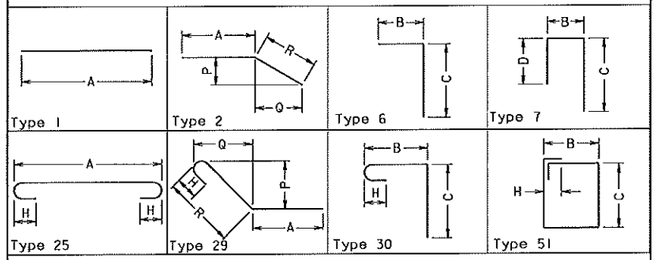
TYPE	A FT-IN	B FT-IN	C FT-IN	D FT-IN	E P FT-IN	F Q FT-IN	G R FT-IN	H FT-IN	I S FT-IN	J T FT-IN	K U FT-IN	L FT-IN	V FT-IN	N
30		1-11 3/4	8-10					5						
7		6 1/2	12-06	4-10 3/4										
1	8-10													
1	12-06													
6		10	3-03 1/2											
1	10-03													
1	12-05													
1	11-06 1/2													
1	10-06													
7		11-05 1/4	1-05 1/8	1-05 1/8										
1	10-06	1-04	3-09											
6														
6		1-08	5-08					4 1/2						
25	2-11 1/2							5						
25	3-06													
6		1-04	3-04											
6		1-08	3-09											
1	11-06 1/2													
29	10-03				1-01 3/8	1-04	1-07 3/4	5						
6		10	VARY											
1	VARY													
6		1-01	13-07											
2	10-10 1/8				2 7/8	2-09 1/4	2-09 3/8							
7		3-00 1/2	1-01	1-01										
1	12-04													
6		1-01	13-07											
7		3-00 1/2	1-01	1-01										
1	12-04													
7		VARY	1-01	1-01										
1	VARY													
6		1-01	13-07											
1	11-06													
6		1-01	3-03 1/2											
1	10-03													
30		1-00	2-00					4 1/2						
1	2-06													
7		13-06	1-09	1-09										
7		13-06	1-09	1-09										
51		3-00 1/2	2-00 3/4											
1	3-01													
1	3-08							5 5/8						
7		18-03	1-09	1-09										
51		3-00 1/2	2-01											
51		3-04 3/4	2-00 3/4											
1	3-01							5 5/8						
1	4-08							5 5/8						
1	3-04													
25	2-00 3/4							4 1/2						

STATE	FEDERAL AID ROUTE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	----	RSTP-5401 (944)	123	0123-151-139, B605	24

DIMENSION VARIATION TABLE

MARK	NO. EA. LEN.	DIMENSION	FROM FT-IN	TO FT-IN	VARY BY FT-IN	DIMENSION	FROM FT-IN	TO FT-IN	VARY BY FT-IN
AW0502	4	C	4-03 1/2	8-03 1/2	1-00				
AW0503	4	A	4-08	9-02	1-01 1/2				
AW0511	2	B	5-00 1/2	13-00 1/2	2-00				
AW0512	2	A	2-04	10-04	2-00				

BENDING DIAGRAM



NOTES:

Dimensions in Bending Diagram are out-to-out of bars.

Weights in schedule are based on density of 490 lb/ft.^{3}

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

REINFORCING STEEL SCHEDULE
ABUTMENT A

Designed: GWK	Date	Plan No.	Sheet No.
Drawn: WH	Jan. 2013		24 of 30
Checked: EMS			

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b1024

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	25

REINFORCING STEEL SCHEDULE

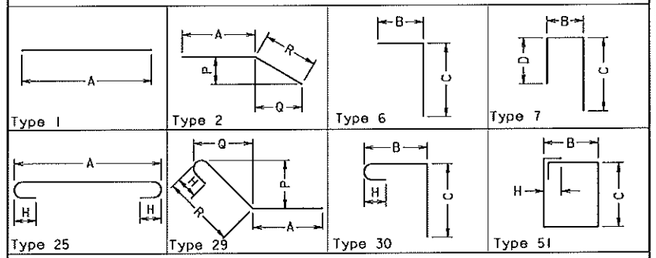
DIMENSION TABLE

MARK	NO.	BAR SIZE	PIN DIA. FT-IN	LENGTH FT-IN	WEIGHT (LBS.)	LOCATION	TYPE	A FT-IN	B FT-IN	C FT-IN	D FT-IN	E P FT-IN	F Q FT-IN	G R FT-IN	H FT-IN	I S FT-IN	J T FT-IN	K U FT-IN	L FT-IN	V FT-IN	N
ABUTMENT B NEAT LOW CARBON/CHROMIUM																					
AV0501	11	5	3 3/4	10-04	118	STEM	30		1-11 3/4	7-10					5						
AV0502	15	5	3 3/4	16-07	259	STEM	7		6 1/2	11-06	4-09										
AV0503	4	5		7-10	33	STEM	1	7-10													
AV0504	2	5		11-06	24	STEM	1	11-06													
AV0505	4	5	3 3/4	4-00	16	STEM	6		10	3-03											
AV0506	4	5		9-03	39	STEM	1	9-03													
AV0507	4	5		11-05	48	STEM	1	11-05													
AH0401	5	4		11-07	39	STEM	1	11-06 1/2													
AH0402	5	4		10-06	35	STEM	1	10-06													
AH0503	10	5	3 3/4	14-01	146	STEM	7		11-05 1/4	1-05 1/8	1-05 1/8										
AH0504	11	5		10-06	120	STEM	1	10-06													
AH0405	10	4	3	5-00	33	STEM	6		1-04	3-09											
AH0506	20	5	3 3/4	7-03	150	STEM	6		1-08	5-08											
AH0407	10	4	3	4-00	26	STEM	25	2-11 1/2							4 1/2						
AH0508	20	5	3 3/4	4-08	97	STEM	25	3-06							5						
AH0409	10	4	3	4-07	30	STEM	6		1-04	3-04											
AH0510	20	5	3 3/4	5-04	110	STEM	6		1-08	3-09											
AH0511	3	5		11-07	36	STEM	1	11-06 1/2													
AW0501	38	5	3 3/4	11-08	460	WINGWALL	29	9-05				1-01 3/8	1-04	1-07 3/4	5						
AW0502	16	5	3 3/4	5-00 TO 8-00	108	WINGWALL	6		10	VARY											
AW0503	16	5		5-03 TO 8-03	113	WINGWALL	1	VARY													
AW0404	6	4	3	12-10	51	WINGWALL	6		1-01	11-10											
AW0405	10	4	3	11-11	79	WINGWALL	2	9-01				2 3/4	2-09 1/8	2-09 1/4							
AW0406	6	4	3	5-00	20	WINGWALL	7		3-00 1/2	1-01	1-01										
AW0407	6	4		10-08	43	WINGWALL	1	10-08													
AW0508	22	5	3 3/4	12-10	293	WINGWALL	6		1-01	11-10											
AW0509	2	5	3 3/4	5-00	10	WINGWALL	7		3-00 1/2	1-01	1-01										
AW0510	2	5		10-08	22	WINGWALL	1	10-08													
AW0511	8	5	3 3/4	7-00 TO 13-00	83	WINGWALL	7		VARY	1-01	1-01										
AW0512	8	5		2-08 TO 8-08	47	WINGWALL	1	VARY													
AW0513	10	5	3 3/4	12-10	133	WINGWALL	6		1-01	11-10											
AW0514	8	5		10-08	89	WINGWALL	1	10-08													
AW0515	2	5	3 3/4	4-03	9	WINGWALL	6		1-01	3-03											
AW0516	2	5		9-03	19	WINGWALL	1	9-03													
AP0401	12	4	3	3-05	27	SEAT	30		1-00	2-00					4 1/2						
AP0502	8	5		2-06	21	SEAT	1	2-06													
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					2988																
ABUTMENT B FOOTING																					
AF0701	7	7	5 1/4	16-08	238	FOOTING	7		13-06	1-09	1-09										
AF0502	17	5	3 3/4	16-09	297	FOOTING	7		13-06	1-09	1-09										
AF0503	18	5	2 1/2	10-08	199	FOOTING	51		3-00 1/2	2-00 3/4					5 5/8						
AF0504	21	5		3-01	68	FOOTING/STEM	1	3-01													
AF0505	19	5		3-08	73	FOOTING/STEM	1	3-08													
AF0706	14	7	5 1/4	19-08	562	FOOTING	7		16-06	1-09	1-09										
AF0507	14	5	3 3/4	19-09	288	FOOTING	7		16-06	1-09	1-09										
AF0508	32	5	2 1/2	10-08	355	FOOTING	51		3-00 1/2	2-01					5 5/8						
AF0509	18	5	2 1/2	11-04	212	FOOTING	51		3-04 3/4	2-00 3/4					5 5/8						
AF0510	18	5		3-01	58	FOOTING/STEM	1	3-01													
AF0511	38	5		4-08	185	FOOTING/STEM	1	4-08													
AF0512	8	5		3-04	28	FOOTING/STEM	1	3-04													
AF0413	48	4	3	3-01	98	FOOTING	25	2-00 3/4							4 1/2						
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					2661																

DIMENSION VARIATION TABLE

MARK	NO. EA. LEN.	DIMENSION	FROM FT-IN	TO FT-IN	VARY BY FT-IN	DIMENSION	FROM FT-IN	TO FT-IN	VARY BY FT-IN
AW0502	4	C	4-03	7-03	1-00				
AW0503	4	A	5-03	8-03	1-00				
AW0511	2	B	5-00 1/2	11-00 1/2	2-00				
AW0512	2	A	2-08	8-08	2-00				

BENDING DIAGRAM



NOTES:

Dimensions in Bending Diagram are out-to-out of bars.

Weights in schedule are based on density of 490 lb/ft.^{3}

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

REINFORCING STEEL SCHEDULE
ABUTMENT B

Designed: GVK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		25 of 30
Checked: EMS			

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	26

REINFORCING STEEL SCHEDULE

MARK	NO.	BAR SIZE	PIN DIA. FT-IN	LENGTH FT-IN	WEIGHT (LBS.)	LOCATION
NORTH PEDESTRIAN RAMP MAT						
RH0403	12	4		18-04	147	GRADE WALL
RH0404	4	4		9-02	24	GRADE WALL
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					171	
NORTH PEDESTRIAN RAMP FOOTING						
RF0401	40	4	3	3-00	80	FOOTING
RF0402	80	4		4-05 TO 6-00	275	FOOTING/WALL
RF0403	16	4		18-03	195	FOOTING
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					550	

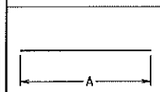
DIMENSION TABLE

TYPE	A FT-IN	B FT-IN	C FT-IN	D FT-IN	E P FT-IN	F Q FT-IN	G R FT-IN	H FT-IN	I S FT-IN	J T FT-IN	K U FT-IN	L FT-IN	V FT-IN	N
1	18-04													
1	9-02													
1	3-00	1-09 1/2	VARY											
6														
1	18-03													

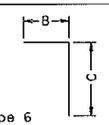
DIMENSION VARIATION TABLE

MARK	NO. EA. LEN.	DIMEN-SION	FROM FT-IN	TO FT-IN	VARY BY FT-IN	DIMEN-SION	FROM FT-IN	TO FT-IN	VARY BY FT-IN
RF0402	4	C	2-08	4-03	1				

BENDING DIAGRAM



Type 1



Type 6

NOTES:

Dimensions in Bending Diagram are out-to-out of bars.

Weights in schedule are based on density of 490 lb/ft.^{3}

COMMONWEALTH OF VIRGINIA
EFREN MAXIMO SEBASTIAN
Lic. No. 20717
PROFESSIONAL ENGINEER

Efren M Sebastian
2013.02.04 11:20:48 -05'00'

LPA/BAKER
FALLS CHURCH, VA
STRUCTURAL ENGINEER

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

REINFORCING STEEL SCHEDULE NORTH PEDESTRIAN RAMP

Designed: GVK	Date	Plan No.	Sheet No.
Drawn: VH	Jan. 2013		26 of 30
Checked: EMS			

©DGN: b1026

REINFORCING STEEL SCHEDULE

MARK	NO.	BAR SIZE	PIN DIA. FT-IN	LENGTH FT-IN	WEIGHT (LBS.)	LOCATION
SOUTH PEDESTRIAN RAMP NEAT						
RV0403	12	4	3	7-02	57	GRADE WALL
RV0404	15	4	3	6-00 TO 7-02	66	GRADE WALL
RH0403	3	4		10-02	20	GRADE WALL
RH0404	9	4		11-07	70	GRADE WALL
RH0405	3	4		11-08	23	GRADE WALL
RH0406	10	4		9-07	64	GRADE WALL
RH0407	10	4		12-08	85	GRADE WALL
RH0408	6	4		11-04	45	GRADE WALL
RH0409	1	4		10-00	7	GRADE WALL
RH0410	1	4		11-05	8	GRADE WALL
RH0411	10	4		4-00	27	GRADE WALL
RH0412	10	4	3	4-06	30	GRADE WALL
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					501	
SOUTH PEDESTRIAN RAMP FOOTING						
RF0401	53	4		3-00	106	FOOTING
RF0402	52	4	3	4-11 TO 5-11	186	FOOTING
RF0403	8	4		21-03	114	FOOTING
RF0404	8	4		12-03	65	FOOTING
RF0405	8	4		12-03 1/4 TO 12-10 3/4	67	FOOTING
RF0406	8	4	3	6-00	32	FOOTING
RF0409	54	4	3	4-06	160	FOOTING
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					730	

DIMENSION TABLE

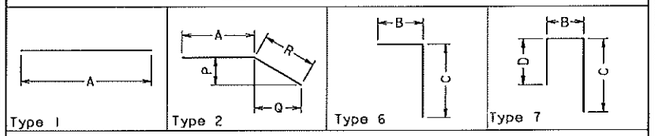
TYPE	A FT-IN	B FT-IN	C FT-IN	D FT-IN	E P FT-IN	F Q FT-IN	G R FT-IN	H FT-IN	I S FT-IN	J T FT-IN	K U FT-IN	L FT-IN	V FT-IN	N
7		8	3-04	3-04										
7		8	VARY	VARY										
1	10-02													
1	11-07													
1	11-07 1/2													
1	9-07													
1	12-08													
1	11-04													
1	9-11 1/2													
1	11-04 1/2													
1	4-00													
2	2-03				1-01 1/4	1-11 3/4	2-03							
1	3-00	1-09 1/2	VARY											
6														
1	21-03													
1	12-02 1/2													
1	VARY													
2	3-00	1-09 1/2	2-09		1-05 1/2	2-07 3/4	3-00							
6														

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	27

DIMENSION VARIATION TABLE

MARK	NO. EA. LEN.	DIMEN-SION	FROM FT-IN	TO FT-IN	VARY BY FT-IN	DIMEN-SION	FROM FT-IN	TO FT-IN	VARY BY FT-IN
RV0404	1	C	2-09	3-04	0 1/2	D	2-09	3-04	0 1/2
RF0402	4	C	3-02	4-02	1				
RF0405	2	A	12-03 1/4	12-10 3/4	2 1/2				

BENDING DIAGRAM



NOTES:

Dimensions in Bending Diagram are out-to-out of bars.

Weights in schedule are based on density of 490 lb/ft.^{3}

No.	Description	Date
Revisions		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

REINFORCING STEEL SCHEDULE SOUTH PEDESTRIAN RAMP

Designed: GMK	Date	Plan No.	Sheet No.
Drawn: VH	Jan. 2013		27 of 30
Checked: EMS			

STATE	FEDERAL AID		STATE		SHEET
	ROUTE	PROJECT	ROUTE	PROJECT	NO.
VA.	—	RSTP-5401 (944)	123	0123-151-139, 8605	28

REINFORCING STEEL SCHEDULE

MARK	NO.	BAR SIZE	PIN DIA. FT-IN	LENGTH FT-IN	WEIGHT (LBS.)	LOCATION
WEST PEDESTRIAN RAMP NEAT						
RV0401	15	4	3	6-02 TO 8-06	73	GRADE WALL
RV0402	5	4	3	6-08 TO 7-02	23	GRADE WALL
RV0403	15	4	3	5-10 TO 8-02	70	GRADE WALL
RV0404	6	4	3	6-04 TO 7-02	27	GRADE WALL
RV0405	9	4	3	6-03 TO 7-02	40	GRADE WALL
RH0401	2	4		18-10	25	GRADE WALL
RH0402	2	4		18-06	25	GRADE WALL
RH0403	2	4		18-09	25	GRADE WALL
RH0404	2	4		18-06	25	GRADE WALL
RH0405	1	4		8-09	6	GRADE WALL
RH0406	1	4		8-06	6	GRADE WALL
RH0407	2	4		14-07	19	GRADE WALL
RH0408	2	4		20-00	27	GRADE WALL
RH0409	2	4		20-03	27	GRADE WALL
RH0410	1	4		14-09	10	GRADE WALL
RH0411	1	4		15-00	10	GRADE WALL
RH0412	2	4		14-07	19	GRADE WALL
RH0413	5	4	3	5-00	16	GRADE WALL
RH0414	5	4	3	5-00	16	GRADE WALL
RH0415	1	4		20-02	13	GRADE WALL
RH0416	1	4		19-11	13	GRADE WALL
RH0417	1	4		6-00	4	GRADE WALL
RH0418	1	4		5-09	4	GRADE WALL
RH0419	2	4		8-00	11	GRADE WALL
RH0420	2	4		7-09	10	GRADE WALL
RH0421	1	4		8-00	5	GRADE WALL
RH0422	1	4		7-09	5	GRADE WALL
RH0423	2	4		8-00	11	GRADE WALL
RH0424	2	4		7-09	10	GRADE WALL
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					576	
WEST PEDESTRIAN RAMP FOOTING						
RF0401	56	4		3-00	112	FOOTING
RF0409	100	4	3	4-06	299	FOOTING
RF0410	8	4	3	4-04	23	FOOTING
RF0411	8	4	3	3-08	19	FOOTING
RF0412	16	4		14-06	155	FOOTING
RF0406	8	4		5-07	30	FOOTING
RF0407	8	4		7-00	37	FOOTING
RF0408	8	4		8-09 1/2 TO 9-08	49	FOOTING
TOTAL WEIGHT IN PRECEDING GROUP OF BARS					725	

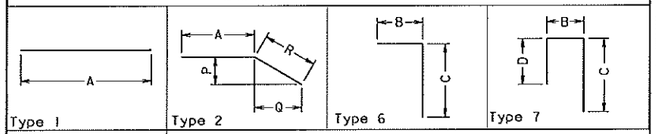
DIMENSION TABLE

TYPE	A FT-IN	B FT-IN	C FT-IN	D FT-IN	E P FT-IN	F Q FT-IN	G R FT-IN	H FT-IN	I S FT-IN	J T FT-IN	K U FT-IN	L FT-IN	V FT-IN	N
7		8	VARY	VARY										
7		8	VARY	VARY										
7		8	VARY	VARY										
7		8	VARY	VARY										
7		8	VARY	VARY										
1	18-09 1/2													
1	18-06													
1	18-09													
1	18-05 1/2													
1	8-09													
1	8-06													
1	14-07													
1	20-00													
1	20-03													
1	14-09													
1	15-00													
1	14-07													
33	2-06				2-05 3/4	7	2-06							
33	2-06				2-05 7/8	5 3/8	2-06							
1	20-02													
1	19-11													
1	6-00													
1	5-09													
1	8-00													
1	7-09													
1	7-11 1/2													
1	7-08 1/2													
1	8-00													
1	7-09													
1	3-00													
6		1-10	2-09											
6		3-00	1-05											
2	1-10				1-03 7/8	1-03 1/2	1-10							
1	14-06													
1	5-07													
1	7-00													
1	VARY													

DIMENSION VARIATION TABLE

MARK	NO. EA. LEN.	DIMEN-SION	FROM FT-IN	TO FT-IN	VARY BY FT-IN	DIMEN-SION	FROM FT-IN	TO FT-IN	VARY BY FT-IN
RV0401	1	C	2-10	4-00	1	D	2-10	4-00	1
RV0402	1	C	3-01	3-04	0 3/4	D	3-01	3-04	0 3/4
RV0403	1	C	2-08	3-10	1	D	2-08	3-10	1
RV0404	1	C	2-11	3-04	1	D	2-11	3-04	1
RV0405	1	C	2-10 1/4	3-04	0 3/4	D	2-10 1/4	3-04	0 3/4
RF0408	2	A	8-09 1/2	9-08	3 1/2				

BENDING DIAGRAM



NOTES:

Dimensions in Bending Diagram are out-to-out of bars.

Weights in schedule are based on density of 490 lb/ft.^{3}

No.	Description	Date
Revisions		

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

REINFORCING STEEL SCHEDULE
WEST PEDESTRIAN RAMP

Designed: GVK	Date	Plan No.	Sheet No.
Drawn: MH	Jan. 2013		28 of 30
Checked: EMS			

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944) 123		0123-151-139, B605	29

BURGESS & NIPLE

PROJECT #: 0123-151-139-PE101
LOCATION: City of Fairfax
STRUCTURE: PEDESTRIAN ABUTMENT B

R-3
PAGE 1 OF 1

STATION:
NORTHING: 6995109.24 ft
SURFACE ELEVATION: 356.74 ft
OFFSET:
Eastings: 11822490.43 ft
COORD. DATUM: VA North

FIELD DATA

Date(s) Drilled: 8/17/11 - 8/17/11
Drilling Method(s): 3 1/4" HSA
SPT Method: Automatic Hammer
Other Test(s):
Driller: Jimmy Cave
Logger: Darryl Keating

GROUND WATER
▽ FIRST ENCOUNTERED AT 25.0 ft DEPTH
NO LONG TERM MEASUREMENTS TAKEN

LAB DATA

FIELD DESCRIPTION OF STRATA

0.0 / 356.74
TOPSOIL: 3" TOPS

0.25 / 356.49
FILL, sampled as brown silty fine to coarse sand with gravel, moist FILL

3.0 / 353.74
FILL, sampled as yellowish brown silt with sand, trace rock fragments, moist FILL

5.5 / 347.24
Medium dense to dense mottled white, brown, and gray silty fine to medium SAND, trace rock fragments, moist SW

25.0 / 328.74
WEATHERED ROCK, sampled as mottled white, brown, and gray silty fine to medium sand, trace rock fragments, moist WR

38.8 / 318.14
Auger and spoon refusal at 38.8'
Boring terminated at 38.8'

REMARKS: Rig Type: CME 45C

PAGE 1 OF 1
R-3

BURGESS & NIPLE

PROJECT #: 0123-151-139-PE101
LOCATION: City of Fairfax
STRUCTURE: PEDESTRIAN ABUTMENT A

R-4
PAGE 1 OF 1

STATION:
NORTHING: 6995037.62 ft
SURFACE ELEVATION: 356.55 ft
OFFSET:
Eastings: 11822494.03 ft
COORD. DATUM: VA North

FIELD DATA

Date(s) Drilled: 8/17/11 - 8/18/11
Drilling Method(s): 3 1/4" HSA
SPT Method: Automatic Hammer
Other Test(s):
Driller: Jimmy Cave
Logger: Darryl Keating

GROUND WATER
▽ FIRST ENCOUNTERED AT 25.0 ft DEPTH
NO LONG TERM MEASUREMENTS TAKEN

LAB DATA

FIELD DESCRIPTION OF STRATA

0.0 / 356.55
TOPSOIL: 3" TOPS

0.25 / 356.3
FILL, sampled as brown silty fine to medium sand, trace gravel and organics, moist FILL

8.0 / 348.55
Medium dense to dense mottled black, gray, white, and brown silty fine to medium SAND, trace rock fragments, moist SW

28.0 / 328.55
WEATHERED ROCK, sampled as white silty fine sand, moist WR

38.0 / 320.55
WEATHERED ROCK, sampled as mottled white, brown, and black silty fine to medium sand with rock fragments, moist WR

43.8 / 312.75
Auger and spoon refusal at 43.8'
Boring terminated at 43.8'

REMARKS: Rig Type: CME 45C

PAGE 1 OF 1
R-4

LOGING

b1029

A copy of the original signed geotechnical submittal is on file in the District Office.

The subsurface information shown on the boring logs in these plans was obtained with reasonable care and recorded in good faith solely for use by the Department in establishing design controls for the project. The Department has no reason to suspect that such information is not reasonably accurate as an approximate indication of the subsurface conditions at the sites where the borings were taken. The Department does not in any way warrant or guarantee that such data can be projected as indicative of conditions beyond the limits of the borings shown; and any such projections by bidders are purely interpretive and altogether speculative. Further, the Department does not in any way guarantee, either expressly or by implication, the sufficiency of the information for bid purposes.

The boring logs are made available to bidders in order that they may have access to subsurface data identical to that which is possessed by the Department, and are not intended as a substitute for personal investigation, interpretation and judgment by the bidders.

Scale: As shown

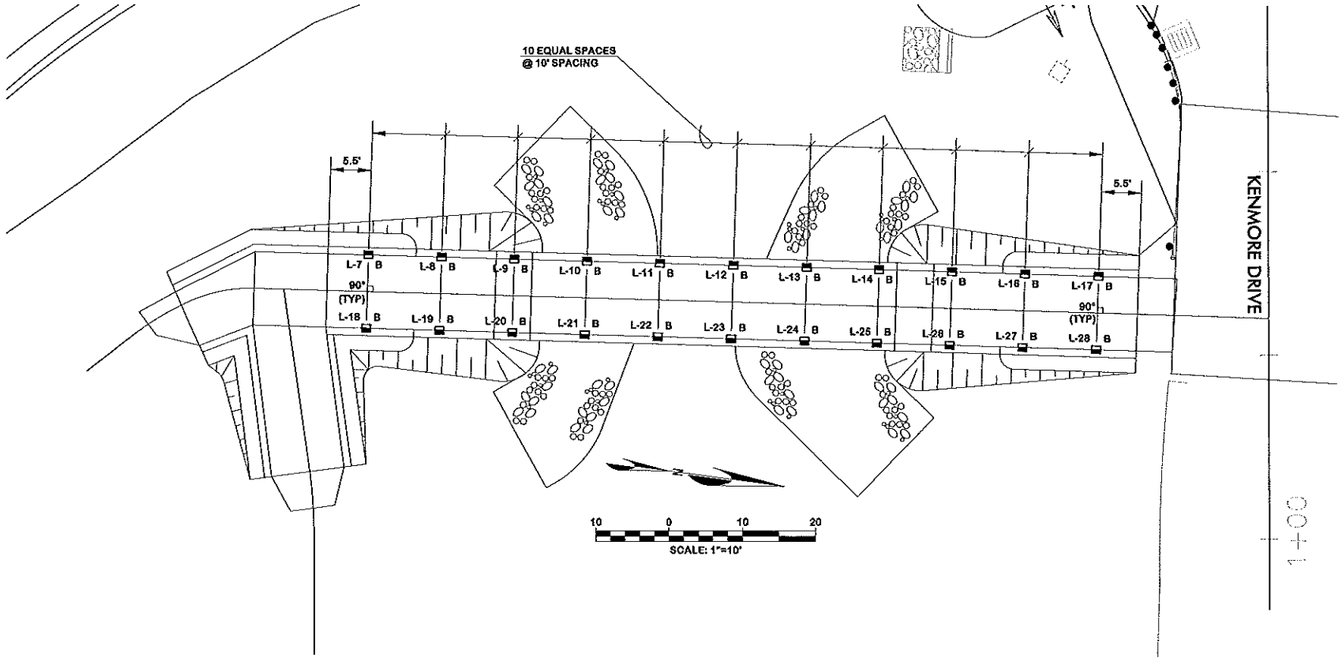
No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

ENGINEERING GEOLOGY - I

Designed: CKT	Date	Plan No.	Sheet No.
Drawn: CKT			
Checked: MCS	Jan. 2013		29 of 30

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	RSTP-5401 (944)	123	0123-151-139, B605	30



PEDESTRIAN BRIDGE LIGHTING LAYOUT

SCALE: 1"=10'

LIGHTING LAYOUT PLAN LEGEND

SYMBOL	DESCRIPTION
L-7 B	WALL MOUNT PEDESTRIAN PATH LIGHT FIXTURE IN BRIDGE PILASTER OR SIDEWALL. SUBSCRIPT "B" DENOTES LIGHT FIXTURE TYPE IN THE LIGHT FIXTURE SCHEDULE. SEE LIGHT FIXTURE SCHEDULE. SUBSCRIPT "L-7" DENOTES FIXTURE I.D. LUMINAIRE SHALL UTILIZE HIGH PRESSURE SODIUM LAMP WITH MAGNETIC HIGH POWER FACTOR BALLAST AND SHALL BE FLUSH MOUNT, LOUVER TYPE. SEE SCHEDULE FOR FIXTURE ELEVATION ABOVE SIDEWALK. LIGHT FIXTURE INSTALLATION LABOR AND MATERIALS SHALL BE PAID AS A PER EACH PAY ITEM FOR THE PEDESTRIAN BRIDGE CONSTRUCTION.

NOTE: SEE BRIDGE LIGHTING WIRING DIAGRAM FOR WIRING INSTALLATION INFORMATION FOR THESE FIXTURES. SEE LIGHTING DETAIL PLANS FOR FIXTURE INSTALLATION DETAILS.

COMMONWEALTH OF VIRGINIA
1-4-13
GARY HAMILTON LOTT
Lic. No. 037458
PROFESSIONAL ENGINEER

LPA/BAKER
COLUMBIA, SC
ELECTRICAL ENGINEER

No.	Description	Date
	Revisions	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
STRUCTURE AND BRIDGE DIVISION

BRIDGE LIGHTING LAYOUT PLAN

Designed: FME/RES
Drawn: FME/MTW
Checked: GHL

Date	Plan No.	Sheet No.
Jan. 2013		30 of 30

Scale: As shown

DGN

bXXXXX030

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