AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF	PAGES
	1		27

2. AMENDMENT/MODIFICAITON NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicble)
004	08/20/08		VA A-AD-48(1)

6. ISSUED BY CODE

Eastern Federal Lands Highway Division
21400 Ridgetop Circle
Sterling, VA 20166

7. ADMINISTERED BY (If other than Item 6) CODE

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

CODE FACILITY CODE

(X) ✘

9A. AMENDMENT OF SOLICIATION NO.
DTFH71-08-R-00012

9B. DATED (SEE ITEM 11)
07/16/08

10A. MODIFICATION OF CONTRACT/ORDER NO.

10B. DATED (SEE ITEM 11)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☒ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a)By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPIRATION DATA (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this Amendment is to extend the bid opening from 8/19/08 to 8/26/08 at 2:00pm:

1) Replace the Bid Schedule B-pages of the Solicitation Provisions to adjust pay quantities and add new or delete pay items related to erosion control and drainage work.

2) Revise the Special Contract Requirements (J pages) as follows:

a) Section 107 to add material requirements;

b) Section 157 to clarify payment for temporary turf establishment; and

c) Section 621 to clarify settlement monitoring requirements.

3) Revise the Plans to replace tabulation of quantity sheets, pipe culvert summary sheets, erosion and sediment control plans, and detail sheets.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	16C. DATE SIGNED

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

Amendment 004
Mulligan Road (Fort Belvoir Connector Road)
Project VA A-AD-48(1)
DTFH71-08-R-00012

The purpose of this Amendment is to extend the bid opening from 8/19/08 to 8/26/08 at 2:00pm:

1) Replace the Bid Schedule B-pages of the Solicitation Provisions to adjust pay quantities and add new or delete pay items related to erosion control and drainage work.
2) Revise the Special Contract Requirements (J pages) as follows:
   a) Section 157 to clarify payment for temporary turf establishment; and
   b) Section 621 to clarify settlement monitoring requirements.
3) Revise the Plans to replace tabulation of quantity sheets, pipe culvert summary sheets, erosion and sediment control plans, and detail sheets.

<u>Solicitation Provision changes</u>

1. *Delete Solicitation Bid Schedule pages B-1 to B-13 and substitute revised Bid Schedule pages B-1 to B-13.*

<u>Special Contract Requirement changes</u>

1. *Add Section 157 to the Special Contract Requirements, page J-27.*

Section 157.—SOIL EROSION CONTROL

157.15. Delete the third paragraph and substitute the following:

Temporary turf establishment will not be measured for payment.

2. *Add Section 621 to the Special Contract Requirements, page J-48.*

Section 621.—MONUMENTS AND MARKERS

621.01. Add the following:

This work includes the installation of settlement monitoring monuments.

621.03. Add the following:

The settlement points should consist of vertical 4-foot long pieces of steel rebar (No. 4 bar), the lower 2 feet of which are concreted or grouted into the top surfaces of the fills. The settlement points should be surrounded by construction fencing material to protect them. The settlement points should be monitored twice a week until it can be determined that the settlement has essentially ceased. Submit all measurements to the CO.

Plan Sheet changes

1. *Delete Plan Sheets C1, C2, C4, C5, C10, C11, M11, M11B, S32, S35, and S49 and substitute revised Plan Sheets C1, C2, C4, C5, C10, C11, M11, M11B, S32, S35, and S49.*

Bid Schedule

Project: VA A-AD-48(1)
MULLIGAN ROAD (FORT BELVOIR CONNECTOR ROAD) – SCHEDULE A

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	MOBILIZATION		
	ALL	Lump Sum	$_____
15201-0000	CONSTRUCTION SURVEY AND STAKING		
	ALL	Lump Sum	$_____
15401-0000	CONTRACTOR TESTING		
	ALL	Lump Sum	$_____
15501-0000	CONSTRUCTION SCHEDULE		
	ALL	Lump Sum	$_____
15705-0100	SOIL EROSION CONTROL, SILT FENCE		
	8,000		
	LNFT	$_____	$_____
15705-0100	SOIL EROSION CONTROL, SILT FENCE (SUPER SILT FENCE)		
	3,700		
	LNFT	$_____	$_____
15705-0400	SOIL EROSION CONTROL, EARTH BERMS		
	9,200		
	LNFT	$_____	$_____
15705-0500	**SOIL EROSION CONTROL, TEMPORARY CULVERT PIPE**		
	350		
	LNFT	$_____	$_____
15705-1300	SOIL EROSION CONTROL, TEMPORARY DIVERSION CHANNEL		
	150		
	LNFT	$_____	$_____
15706-0200	SOIL EROSION CONTROL, CHECK DAM		
	34		
	EACH	$_____	$_____
15706-0300	SOIL EROSION CONTROL, SANDBAG		
	800		
	EACH	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15706-0500	SOIL EROSION CONTROL, INLET SEDIMENT TRAP (TY. A)		
	6 EACH	$_____	$_____
15706-0500	SOIL EROSION CONTROL, INLET SEDIMENT TRAP (TY. B)		
	68 EACH	$_____	$_____
15706-0600	SOIL EROSION CONTROL, RISER PIPE ASSEMBLY (TEMP. SEDIMENT BASIN)		
	2 EACH	$_____	$_____
15706-0600	SOIL EROSION CONTROL, RISER PIPE ASSEMBLY (SWM STRUCTURES)		
	3 EACH	$_____	$_____
20101-0000	CLEARING AND GRUBBING		
	38.0 ACRE	$_____	$_____
20301-0400	REMOVAL OF BRIDGE		
	1 EACH	$_____	$_____
20301-2700	REMOVAL OF STRUCTURE (CONCRETE BUNKER)		
	1 EACH	$_____	$_____
20302-0900	REMOVAL OF FENCE, CHAIN LINK		
	600 LNFT	$_____	$_____
20302-1200	REMOVAL OF GUARDRAIL		
	135 LNFT	$_____	$_____
20310-1000	PLUG, EXISTING PIPE (TEMP. NEW PIPE PLUG)		
	1 EACH	$_____	$_____
20402-0000	SUBEXCAVATION		
	8,000 CUYD	$_____	$_____
20410-0000	SELECT BORROW		
	8,000 CUYD	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
20420-0000	EMBANKMENT CONSTRUCTION		
	166,000 CUYD	$_____	$_____
20701-1000	EARTHWORK GEOTEXTILE, TYPE III-A		
	16,000 SQYD	$_____	$_____
20701-1400	EARTHWORK GEOTEXTILE, TYPE IV-C		
	1,400 SQYD	$_____	$_____
20801-0000	STRUCTURE EXCAVATION		
	300 CUYD	$_____	$_____
20803-0000	STRUCTURAL BACKFILL		
	450 CUYD	$_____	$_____
25102-2000	PLACED RIPRAP, CLASS 2		
	150 TON	$_____	$_____
25102-3000	PLACED RIPRAP, CLASS 3		
	2,400 TON	$_____	$_____
25102-4000	PLACED RIPRAP, CLASS 4		
	160 TON	$_____	$_____
25302-2000	GABIONS, POLYVINYL CHLORIDE COATED		
	125 CUYD	$_____	$_____
30101-4000	AGGREGATE BASE GRADING C OR D		
	36,500 TON	$_____	$_____
55101-0800	PRECAST PRESTRESSED CONCRETE PILES, 18-INCH X 18-INCH, IN PLACE		
	5,580 LNFT	$_____	$_____
55101-1000	PRECAST PRESTRESSED CONCRETE PILES, 24-INCH X 24-INCH, IN PLACE		
	1,710 LNFT	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
55104-1000	DYNAMIC PILE LOAD TEST		
	3 EACH	$_____	$_____
55120-0000	TEST PILES		
	300 LNFT	$_____	$_____
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)		
	480 CUYD	$_____	$_____
55201-1100	STRUCTURAL CONCRETE, CLASS HPC		
	680 CUYD	$_____	$_____
55202-1000	STRUCTURAL CONCRETE, CLASS D (AE), FOR APPROACH SLABS, TYPE 1		
	260 SQYD	$_____	$_____
55401-1000	REINFORCING STEEL		
	44,000 LB	$_____	$_____
55401-2000	REINFORCING STEEL, EPOXY COATED		
	191,000 LB	$_____	$_____
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED		
	442,000 LB	$_____	$_____
55601-0500	BRIDGE RAILING, CONCRETE		
	242 LNFT	$_____	$_____
55601-1200	BRIDGE RAILING, STEEL, THREE RAIL		
	223 LNFT	$_____	$_____
56401-1000	BEARING DEVICE, ELASTOMERIC		
	27 EACH	$_____	$_____
60103-0020	CONCRETE, HEADWALL FOR 6-INCH PIPE CULVERT		
	3 EACH	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60103-0080	**CONCRETE, HEADWALL FOR 15-INCH PIPE CULVERT**		
	6		
	EACH	$_____	$_____
60103-0100	**CONCRETE, HEADWALL FOR 18-INCH PIPE CULVERT**		
	2		
	EACH	$_____	$_____
60103-0140	**CONCRETE, HEADWALL FOR 24-INCH PIPE CULVERT**		
	4		
	EACH	$_____	$_____
60103-0160	CONCRETE, HEADWALL FOR 30-INCH PIPE CULVERT		
	1		
	EACH	$_____	$_____
60103-0240	CONCRETE, HEADWALL FOR 54-INCH PIPE CULVERT		
	4		
	EACH	$_____	$_____
60103-1980	CONCRETE, HEADWALL FOR 42-INCH EQUIVALENT DIAMETER PIPE CULVERT		
	2		
	EACH	$_____	$_____
60201-0500	15-INCH PIPE CULVERT		
	5,000		
	LNFT	$_____	$_____
60201-0600	18-INCH PIPE CULVERT		
	1,500		
	LNFT	$_____	$_____
60201-0800	24-INCH PIPE CULVERT		
	350		
	LNFT	$_____	$_____
60201-0900	30-INCH PIPE CULVERT		
	450		
	LNFT	$_____	$_____
60201-1300	54-INCH PIPE CULVERT		
	300		
	LNFT	$_____	$_____
60202-0200	18-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT		
	250		
	LNFT	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60202-0400	24-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT		
	100 LNFT	$_____	$_____
60202-0500	30-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT		
	60 LNFT	$_____	$_____
60202-0700	42-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT		
	130 LNFT	$_____	$_____
60220-4150	12 FEET SPAN, 10 FEET RISE PRECAST REINFORCED CONCRETE BOX CULVERT		
	132 LNFT	$_____	$_____
60403-0000	INLET (VDOT STD. DI-1)		
	2 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3A)		
	7 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3B L=4')		
	6 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3B L=6')		
	11 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3B L=8')		
	17 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3B L=10')		
	5 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3B L=12')		
	3 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3B L=14')		
	2 EACH	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60403-0000	INLET (VDOT STD. DI-3BB L=4')		
	5 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3BB L=6')		
	3 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3BB L=8')		
	2 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-3C L=6')		
	7 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-5)		
	1 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-12 L=4')		
	2 EACH	$_____	$_____
60403-0000	INLET (VDOT STD. DI-12 L=6')		
	1 EACH	$_____	$_____
60410-0000	SPRINGBOX (SPRING DRAIN)		
	11 EACH	$_____	$_____
60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT UD-1)		
	3,300 LNFT	$_____	$_____
60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT UD-2)		
	8,100 LNFT	$_____	$_____
60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT UD-4)		
	8,500 LNFT	$_____	$_____
60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT CD-1)		
	320 LNFT	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT CD-2)		
	390 LNFT	$_____	$_____
60510-1060	10-INCH OUTLET PIPE		
	50 LNFT	$_____	$_____
61103-1500	24-INCH ENCASEMENT PIPE, GALVANIZED STEEL (22-INCH DIAMETER ENCASEMENT PIPE)		
	225 LNFT	$_____	$_____
61103-1500	24-INCH ENCASEMENT PIPE, GALVANIZED STEEL (36-INCH DIAMETER ENCASEMENT PIPE)		
	400 LNFT	$_____	$_____
61202-0800	8-INCH SEWER LINE, DUCTILE IRON		
	225 LNFT	$_____	$_____
61202-0800	8-INCH SEWER LINE, DUCTILE IRON (18-INCH SEWER LINE, DUCTILE IRON)		
	400 LNFT	$_____	$_____
61401-0000	LEAN CONCRETE BACKFILL		
	30 CUYD	$_____	$_____
61901-2100	FENCE, CHAIN LINK, 96-INCH HEIGHT (BARB WIRE, 3 STRAND)		
	300 LNFT	$_____	$_____
61902-2200	GATE, METAL, 34 FEET WIDTH		
	3 EACH	$_____	$_____
62101-0000	MONUMENT (SETTLEMENT MONITORING)		
	14 EACH	$_____	$_____
62302-1000	SPECIAL LABOR, HIRED TECHNICAL SERVICES (UXO CONSTRUCTION SUPPORT)		
	1,000 HOUR	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
62401-0300	FURNISHING AND PLACING TOPSOIL, 4-INCH DEPTH		
	70,000 SQYD	$_____	$_____
62502-0000	TURF ESTABLISHMENT		
	70,000 SQYD	$_____	$_____
62901-1000	ROLLED EROSION CONTROL PRODUCT, TYPE 3.B		
	9,200 SQYD	$_____	$_____
62901-1200	ROLLED EROSION CONTROL PRODUCT, TYPE 5.A		
	4,100 SQYD	$_____	$_____
62901-1400	ROLLED EROSION CONTROL PRODUCT, TYPE 5.C		
	2,200 SQYD	$_____	$_____
63502-1300	TEMPORARY TRAFFIC CONTROL, DRUM		
	40 EACH	$_____	$_____
63502-2100	TEMPORARY TRAFFIC CONTROL, CRASH CUSHION		
	3 EACH	$_____	$_____
63502-2700	TEMPORARY TRAFFIC CONTROL, REPLACEMENT CARTRIDGES FOR CRASH CUSHION		
	3 EACH	$_____	$_____
63503-0300	TEMPORARY TRAFFIC CONTROL, BARRICADE TYPE 3		
	40 LNFT	$_____	$_____
63503-0400	TEMPORARY TRAFFIC CONTROL, CONCRETE BARRIER		
	625 LNFT	$_____	$_____
63503-1000	TEMPORARY TRAFFIC CONTROL, PLASTIC FENCE		
	500 LNFT	$_____	$_____
63504-1000	TEMPORARY TRAFFIC CONTROL, CONSTRUCTION SIGN		
	320 SQFT	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
63506-0500	TEMPORARY TRAFFIC CONTROL, FLAGGER		
	350 HOUR	$19.00	$6,650.00
63701-0000	FIELD OFFICE		
	1 EACH	$_____	$_____
64501-0000	LOCATE UTILITIES		
	ALL	Lump Sum	$_____

TOTAL $_____

Submitted by: _____
Name of Bidder

Bid Schedule

Project: VA A-AD-48(1)
KINGMAN ROAD BRIDGE – SCHEDULE B

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101-0000	MOBILIZATION		
	ALL	Lump Sum	$_____
15201-0000	CONSTRUCTION SURVEY AND STAKING		
	ALL	Lump Sum	$_____
15401-0000	CONTRACTOR TESTING		
	ALL	Lump Sum	$_____
20701-1400	EARTHWORK GEOTEXTILE, TYPE IV-C		
	800		
	SQYD	$_____	$_____
20801-0000	STRUCTURE EXCAVATION		
	300		
	CUYD	$_____	$_____
20803-0000	STRUCTURAL BACKFILL		
	1,000		
	CUYD	$_____	$_____
25102-1000	PLACED RIPRAP, CLASS 1		
	700		
	TON	$_____	$_____
55101-0500	PRECAST PRESTRESSED CONCRETE PILES, 12-INCH X 12-INCH, IN PLACE		
	4,832		
	LNFT	$_____	$_____
55104-1000	DYNAMIC PILE LOAD TEST		
	2		
	EACH	$_____	$_____
55120-0000	TEST PILES		
	142		
	LNFT	$_____	$_____
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)		
	310		
	CUYD	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)		
	60 CUYD	$_____	$_____
55201-1100	STRUCTURAL CONCRETE, CLASS HPC		
	250 CUYD	$_____	$_____
55202-1000	STRUCTURAL CONCRETE, CLASS D (AE), FOR APPROACH SLABS, TYPE 1		
	230 SQYD	$_____	$_____
55401-1000	REINFORCING STEEL		
	47,000 LB	$_____	$_____
55401-2000	REINFORCING STEEL, EPOXY COATED		
	59,000 LB	$_____	$_____
55401-2500	REINFORCING STEEL, GALVANIZED		
	3,100 LB	$_____	$_____
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED		
	198,000 LB	$_____	$_____
55601-0500	BRIDGE RAILING, CONCRETE		
	130 LNFT	$_____	$_____
55601-1200	BRIDGE RAILING, STEEL, THREE RAIL		
	130 LNFT	$_____	$_____
56401-1000	BEARING DEVICE, ELASTOMERIC		
	10 EACH	$_____	$_____
60203-0200	6-INCH SLOTTED DRAIN PIPE		
	300 LNFT	$_____	$_____

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60902-0800	CURB AND GUTTER, CONCRETE, 10-INCH DEPTH		
	310 LNFT	$_____	$_____

TOTAL $_____

Submitted by: _____
Name of Bidder

AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	C1

SCHEDULE A:
GRADING, DRAINAGE AND AGGREGATE BASE FROM POLE ROAD TO TELEGRAPH ROAD, AND BRIDGE OVER PINEY RUN

	PLAN SHEET SECTION SCHEDULE A		ESTIMATED QUANTITIES		
ITEM	DESCRIPTION	UNIT		PLAN	BID SCHEDULE
15101-0000	MOBILIZATION	LPSM		ALL	ALL
15201-0000	CONSTRUCTION SURVEY AND STAKING	LPSM		ALL	ALL
15401-0000	CONTRACTOR TESTING	LPSM		ALL	ALL
15501-0000	CONSTRUCTION SCHEDULE	LPSM		ALL	ALL
15705-0100	SOIL EROSION CONTROL, SILT FENCE	LNFT	8000	8000	8,000
15705-0100	SOIL EROSION CONTROL, SILT FENCE (SUPER SILT FENCE)	LNFT	3700	3700	3,700
15705-0400	SOIL EROSION CONTROL, EARTH BERMS	LNFT	9200	9200	9,200
4 15705-0500	SOIL EROSION CONTROL, TEMPORARY CULVERT PIPE	LNFT	350	350	350
15705-1300	SOIL EROSION CONTROL, TEMPORARY DIVERSION CHANNEL	LNFT	150	150	150
15706-0200	SOIL EROSION CONTROL, CHECK DAM	EACH	34	34	34
15706-0300	SOIL EROSION CONTROL, SANDBAG	EACH	800	800	800
15706-0500	SOIL EROSION CONTROL, INLET SEDIMENT TRAP (TY. A)	EACH	6	6	6
15706-0500	SOIL EROSION CONTROL, INLET SEDIMENT TRAP (TY. B)	EACH	68	68	68
15706-0600	SOIL EROSION CONTROL, RISER PIPE ASSEMBLY (TEMP. SEDIMENT BASIN)	EACH	2	2	2
15706-0600	SOIL EROSION CONTROL, RISER PIPE ASSEMBLY (SWM STRUCTURES)	EACH	3	3	3
20101-0000	CLEARING AND GRUBBING	ACRE	38	38.0	38.0
20301-0400	REMOVAL OF BRIDGE	EACH	1	1	1
20301-2700	REMOVAL OF STRUCTURE (CONCRETE BUNKER)	EACH	1	1	1
20302-0900	REMOVAL OF FENCE, CHAIN LINK	LNFT	600	600	600
20302-1200	REMOVAL OF GUARDRAIL	LNFT	135	135	135
20310-1000	PLUG, EXISTING PIPE (TEMP. NEW PIPE PLUG)	EACH	1	1	1
20402-0000	SUBEXCAVATION	CUYD	8000	8000	8,000
20410-0000	SELECT BORROW	CUYD	8000	8000	8,000
20420-0000	EMBANKMENT CONSTRUCTION	CUYD	166000	166000	166,000
20701-1000	EARTHWORK GEOTEXTILE, TYPE III-A	SQYD	16000	16000	16,000
20701-1400	EARTHWORK GEOTEXTILE, TYPE IV-C	SQYD	1400	1400	1,400
20801-0000	STRUCTURE EXCAVATION	CUYD	300	300	300

REVISIONS

NO	DESCRIPTION	BY	DATE
4	Revised Temporary Culvert Pipe Quantity	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

TABULATION OF QUANTITIES SHEET

SCHEDULE A

SHEET 1 OF 5

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AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	C2

SCHEDULE A:
GRADING, DRAINAGE AND AGGREGATE BASE FROM POLE ROAD TO TELEGRAPH ROAD, AND BRIDGE OVER PINEY RUN

PLAN SHEET SECTION
SCHEDULE A

ITEM	DESCRIPTION	UNIT		ESTIMATED QUANTITIES PLAN	BID SCHEDULE
20803-0000	STRUCTURAL BACKFILL	CUYD	450	450	450
25102-2000	PLACED RIPRAP, CLASS 2	TON	150	150	150
25102-3000	PLACED RIPRAP, CLASS 3	TON	2400	2400	2,400
25102-4000	PLACED RIPRAP, CLASS 4	TON	160	160	160
25302-2000	GABIONS, POLYVINYL CHLORIDE COATED	CUYD	125	125	125
30101-4000	AGGREGATE BASE GRADING C OR D	TON	36500	36500	36,500
55101-0800	PRECAST PRESTRESSED CONCRETE PILES, 18-INCH X 18-INCH, IN PLACE	LNFT	5580	5580	5,580
55101-1000	PRECAST PRESTRESSED CONCRETE PILES, 24-INCH X 24-INCH, IN PLACE	LNFT	1710	1710	1,710
55104-1000	DYNAMIC PILE LOAD TEST	EACH	3	3	3
55120-0000	TEST PILES	LNFT	300	300	300
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CUYD	480	480	480
55201-1100	STRUCTURAL CONCRETE, CLASS HPC	CUYD	680	680	680
55202-1000	STRUCTURAL CONCRETE, CLASS D (AE), FOR APPROACH SLABS, TYPE 1	SQYD	260	260	260
55401-1000	REINFORCING STEEL	LB	44000	44000	44,000
55401-2000	REINFORCING STEEL, EPOXY COATED	LB	191000	191000	191,000
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED	LB	442000	442000	442,000
55601-0500	BRIDGE RAILING, CONCRETE	LNFT	242	242	242
55601-1200	BRIDGE RAILING, STEEL, THREE RAIL	LNFT	223	223	223
56401-1000	BEARING DEVICE, ELASTOMERIC	EACH	27	27	27
60103-0020	CONCRETE, HEADWALL FOR 6-INCH PIPE CULVERT	EACH	3	3	3
4 60103-0080	CONCRETE, HEADWALL FOR 15-INCH PIPE CULVERT	EACH	6	6	6
4 60103-0100	CONCRETE, HEADWALL FOR 18-INCH PIPE CULVERT	EACH	2	2	2
4 60103-0140	CONCRETE, HEADWALL FOR 24-INCH PIPE CULVERT	EACH	4	4	4
60103-0160	CONCRETE, HEADWALL FOR 30-INCH PIPE CULVERT	EACH	1	1	1
60103-0240	CONCRETE, HEADWALL FOR 54-INCH PIPE CULVERT	EACH	4	4	4
60103-1980	CONCRETE, HEADWALL FOR 42-INCH EQUIVALENT DIAMETER PIPE CULVERT	EACH	2	2	2

REVISIONS

NO.	DESCRIPTION	BY	DATE
4	Revised Headwall Quantities	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

TABULATION OF QUANTITIES SHEET
SCHEDULE A

SHEET 2 OF 5

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AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	C4

SCHEDULE A:
GRADING, DRAINAGE AND AGGREGATE BASE FROM POLE ROAD TO TELEGRAPH ROAD, AND BRIDGE OVER PINEY RUN

PLAN SHEET SECTION
SCHEDULE A

	ITEM	DESCRIPTION	UNIT		ESTIMATED QUANTITIES PLAN	BID SCHEDULE
	60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT UD-1)	LNFT	3300	3300	3,300
	60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT UD-2)	LNFT	8100	8100	8,100
	60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT UD-4)	LNFT	8500	8500	8,500
	60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT CD-1)	LNFT	320	320	320
	60501-0000	STANDARD UNDERDRAIN SYSTEM (VDOT CD-2)	LNFT	390	390	390
4	60510-1060	10-INCH OUTLET PIPE	LNFT	50	50	50
1	61103-1500	24-INCH ENCASEMENT PIPE, GALVANIZED STEEL (22-INCH DIAMETER ENCASEMENT PIPE)	LNFT	225	225	225
1	61103-1500	24-INCH ENCASEMENT PIPE, GALVANIZED STEEL (36-INCH DIAMETER ENCASEMENT PIPE)	LNFT	400	400	400
1	61202-0800	8-INCH SEWERLINE, DUCTILE IRON	LNFT	225	225	225
1	61202-0800	8-INCH SEWERLINE, DUCTILE IRON (18-INCH DUCTILE IRON)	LNFT	400	400	400
	61401-0000	LEAN CONCRETE BACKFILL	CUYD	30	30	30
	61901-2100	FENCE, CHAIN LINK, 96-INCH HEIGHT (BARB WIRE, 3 STRAND)	LNFT	300	300	300
	61902-2200	GATE, METAL, 34 FEET WIDTH	EACH	3	3	3
	62101-0000	MONUMENT (SETTLEMENT MONITORING)	EACH	14	14	14
2	62302-1000	SPECIAL LABOR, HIRED TECHNICAL SERVICES (UXO CONSTRUCTION SUPPORT)	HOUR	1000	1000	1,000
	62401-0300	FURNISHING AND PLACING TOPSOIL, 4-INCH DEPTH	SQYD	70000	70000	70,000
	62502-0000	TURF ESTABLISHMENT	SQYD	70000	70000	70,000
	62901-1000	ROLLED EROSION CONTROL PRODUCT, TYPE 3.B	SQYD	9200	9200	9,200
	62901-1200	ROLLED EROSION CONTROL PRODUCT, TYPE 5.A	SQYD	4100	4100	4,100
	62901-1400	ROLLED EROSION CONTROL PRODUCT, TYPE 5.C	SQYD	2200	2200	2,200
	63502-1300	TEMPORARY TRAFFIC CONTROL, DRUM	EACH	40	40	40
	63502-2100	TEMPORARY TRAFFIC CONTROL, CRASH CUSHION	EACH	3	3	3
	63502-2700	TEMPORARY TRAFFIC CONTROL, REPLACEMENT CARTRIDGES FOR CRASH CUSHION	EACH	3	3	3
	63503-0300	TEMPORARY TRAFFIC CONTROL, BARRICADE TYPE 3	LNFT	40	40	40
	63503-0400	TEMPORARY TRAFFIC CONTROL, CONCRETE BARRIER	LNFT	625	625	625
	63503-1000	TEMPORARY TRAFFIC CONTROL, PLASTIC FENCE	LNFT	500	500	500
	63504-1000	TEMPORARY TRAFFIC CONTROL, CONSTRUCTION SIGN	SQFT	320	320	320
	63506-0500	TEMPORARY TRAFFIC CONTROL, FLAGGER	HOUR	350	350	350
	63701-0000	FIELD OFFICE	EACH	1	1	1
	64501-0000	LOCATE UTILITIES	LPSM	ALL	ALL	ALL

REVISIONS

NO	DESCRIPTION	BY	DATE
1	Revised quantities from PVC pipe to DI pipe	CEC	08/01/08
2	Added Special Labor Quantity	CAW	08/07/08
4	Removed Granular Backfill Quantity	CEC	08/12/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

TABULATION OF QUANTITIES SHEET
SCHEDULE A

SHEET 4 OF 5

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AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	C5

SCHEDULE B:
BRIDGE OVER KINGMAN ROAD

ITEM	DESCRIPTION	UNIT	PLAN SHEET SECTION SCHEDULE B	ESTIMATED QUANTITIES PLAN	ESTIMATED QUANTITIES BID SCHEDULE
15101-0000	MOBILIZATION	LPSM		ALL	ALL
15201-0000	CONSTRUCTION SURVEY AND STAKING	LPSM		ALL	ALL
15401-0000	CONTRACTOR TESTING	LPSM		ALL	ALL
20701-1400	EARTHWORK GEOTEXTILE, TYPE IV-C	SQYD	800	800	800
20801-0000	STRUCTURE EXCAVATION	CUYD	300	300	300
20803-0000	STRUCTURAL BACKFILL	CUYD	1000	1000	1,000
25102-1000	PLACED RIPRAP, CLASS 1	TON	700	700	700
55101-0500	PRECAST PRESTRESSED CONCRETE PILES, 12-INCH X 12-INCH, IN PLACE	LNFT	4832	4832	4,832
55104-1000	DYNAMIC PILE LOAD TEST	EACH	2	2	2
55120-0000	TEST PILES	LNFT	142	142	142
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CUYD	310	310	310
55201-0200	STRUCTURAL CONCRETE, CLASS A (AE)	CUYD	60	60	60
55201-1100	STRUCTURAL CONCRETE, CLASS HPC	CUYD	250	250	250
55202-1000	STRUCTURAL CONCRETE, CLASS D (AE), FOR APPROACH SLABS, TYPE 1	SQYD	230	230	230
55401-1000	REINFORCING STEEL	LB	47000	47000	47,000
55401-2000	REINFORCING STEEL, EPOXY COATED	LB	59000	59000	59,000
55401-2500	REINFORCING STEEL, GALVANIZED	LB	3100	3100	3,100
55502-0000	STRUCTURAL STEEL, FURNISHED, FABRICATED, AND ERECTED	LB	198000	198000	198,000
55601-0500	BRIDGE RAILING, CONCRETE	LNFT	130	130	130
55601-1200	BRIDGE RAILING, STEEL, THREE RAIL	LNFT	130	130	130
56401-1000	BEARING DEVICE, ELASTOMERIC	EACH	10	10	10
60203-0200	6-INCH SLOTTED DRAIN PIPE	LNFT	300	300	300
4 60902-0800	CURB AND GUTTER, CONCRETE, 10-INCH DEPTH	LNFT	310	310	310

REVISIONS

NO	DESCRIPTION	BY	DATE
4	Removed Granular Backfill Quantity	CEC	08/12/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

TABULATION OF QUANTITIES SHEET

SCHEDULE B - KINGMAN ROAD BRIDGE

SHEET 5 OF 5

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REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	C10

MULLIGAN ROAD

AMENDMENT NO. 004

Structure No.		Structure No.	PAY ITEM 60201-0500 15-INCH PIPE CULVERT	PAY ITEM 60201-0600 18-INCH PIPE CULVERT	PAY ITEM 60201-0800 24-INCH PIPE CULVERT	PAY ITEM 60201-0900 30-INCH PIPE CULVERT	PAY ITEM 60201-1000 54-INCH PIPE CULVERT	PAY ITEM 60202-0200 18-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60202-0400 24-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60202-0500 30-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60202-0700 42-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60103-0080 CONCRETE HEADWALL FOR 15 INCH PIPE CULVERT	PAY ITEM 60103-0100 CONCRETE HEADWALL FOR 18 INCH PIPE CULVERT	PAY ITEM 60103-0140 CONCRETE HEADWALL FOR 24 INCH PIPE CULVERT	PAY ITEM 60103-0160 CONCRETE HEADWALL FOR 30 INCH PIPE CULVERT	PAY ITEM 60103-1980 CONCRETE HEADWALL FOR 42 INCH EQUIVALENT DIAMETER PIPE CULVERT	PAY ITEM 60103-1320 CONCRETE HEADWALL FOR 54 INCH PIPE CULVERT	PAY ITEM 60103-2540 CONCRETE HEADWALL FOR 6 INCH UNDERDRAIN
			LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)
D1-1	To	D1-2	71															
D1-2	To	D1-4						137										
D1-3	To	D1-4							88									
D1-4	To	D1-5								54								
D1-7	To	D1-6		136														
D1-8	To	D1-9		176														
D1-9	To	D1-10						68										
D1-10	To	D1-11			100									1 △4				
D2-1	To	D1-3		248														
D2-2	To	D2-1	297															
D2-3	To	D2-2	40															
D3-1	To	D2-2	297															
D3-2	To	D3-1	40															
D3-3	To	D3-1	291															
D3-4	To	D3-3	71															
D4-1	To	D4-2	40															
D4-2	To	D4-3	48															
D4-3	To	D4-8	39															
D4-4	To	D4-8			92													
D4-5	To	D4-4		47														
D4-6	To	D4-3	32															
D4-8	To	D4-7			45									1				
D4-9	To	D4-10		43									1					
D4-11	To	D4-6	167															
D4-12	To	D4-1	42															
D5-1	To	D5-2	39															
D5-2	To	D4-5		175														
D5-3	To	D5-4	71															
D5-4	To	D5-2	245															
D5-5	To	D5-6	71															
D5-6	To	D5-4	238															
D6-1	To	D6-2	71															
D6-2	To	D6-4	45								1							
D6-3	To	D6-5	52								1							
D7-1	To	D7-2	60															
D7-2	To	D7-3	296															
D7-3	To	D7-4	86															
D7-4	To	D8-2	197															
D7-7	To	D7-6					126										2.00	
D8-1	To	D8-3	65															
D8-2	To	D8-4	65															
D8-3	To	D8-4		71														
D8-4	To	D8-5			20									1 △4				
D8-6	To	D8-3	41															
D8-7	To	D8-4	41															
D8-8	To	D8-6	103															
D8-9	To	D8-7	103															

ALLOWABLE PIPE TYPES (UNLESS OTHERWISE SHOWN ON PLANS)												
LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 CORRUGATED STEEL	ALUMINUM COATED TYPE 2 CORRUGATED STEEL FULLY ASPHALT COATED	GALVANIZED CORRUGATED STEEL FULLY ASPHALT COATED WITH PAVED INVERT	GALVANIZED STEEL STRUCTURAL PLATE FULLY ASPHALT COATED WITH PAVED INVERT	GALVANIZED STEEL STRUCTURAL PLATE FULLY ASPHALT COATED	POLYMER COATED (10/10) CORRUGATED STEEL	UNCOATED GALVANIZED CORRUGATED STEEL	CORRUGATED ALUMINUM ALLOY CULVERTS & STRUCTURAL PLATE	PVC STORM DRAIN PIPE (SMOOTH INTERIOR)	POLYETHYLENE DOUBLE WALL TYPE S AND TYPE D	POLYETHYLENE CORRUGATED TYPE C
MULLIGAN ROAD	X											
STORM DRAIN SYSTEMS	X											

NOTE: ALL CONCRETE PIPE WILL CONFORM TO AASHTO M170
RUBBER GASKETS WILL CONFORM TO ASTM-C443

REVISIONS

NO.	DESCRIPTION	BY	DATE
△4	Revised Headwall Quantities	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

PIPE CULVERT PLACEMENT SUMMARY

Sheet 1 of 2

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AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	C11

Structure No.		Structure No.	PAY ITEM 60201-0500 15-INCH PIPE CULVERT	PAY ITEM 60201-0600 18-INCH PIPE CULVERT	PAY ITEM 60201-0800 24-INCH PIPE CULVERT	PAY ITEM 60201-0900 30-INCH PIPE CULVERT	PAY ITEM 60201-1300 54-INCH PIPE CULVERT	PAY ITEM 60202-0200 18-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60202-0400 24-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60202-0500 30-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60202-0700 42-INCH EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	PAY ITEM 60103-0080 CONCRETE HEADWALL FOR 15 INCH PIPE CULVERT	PAY ITEM 60103-0100 CONCRETE HEADWALL FOR 18 INCH PIPE CULVERT	PAY ITEM 60103-0140 CONCRETE HEADWALL FOR 24 INCH PIPE CULVERT	PAY ITEM 60103-0160 CONCRETE HEADWALL FOR 30 INCH PIPE CULVERT	PAY ITEM 60103-1980 CONCRETE HEADWALL FOR 42 INCH EQUIVALENT DIAMETER PIPE CULVERT	PAY ITEM 60103-1320 CONCRETE HEADWALL FOR 54 INCH PIPE CULVERT	PAY ITEM 60103-2540 CONCRETE HEADWALL FOR 6 INCH UNDERDRAIN
			LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	LNFT	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)	(EACH)
D8-12	To	D8-3	16															
D8-10	To	D8-11			48									1 (4)				
D9-1	To	D9-2	16															
D9-2	To	D9-3	71															
D9-3	To	D10-2	285															
D10-1	To	D10-2	40															
D10-2	To	D10-7	97															
D10-3	To	D10-4	40															
D10-4	To	D10-6		238														
D10-5	To	D10-6	40															
D10-6	To	D11-2		148														
D10-7	To	D10-4	142															
D10-8	To	D10-7	4															
D11-1	To	D11-4				293												
D11-2	To	D11-1				40												
D11-3	To	D11-7				53									1			
D11-4	To	D11-3				40												
D11-5	To	D11-6	42															
D11-6	To	D11-3		67														
D11-8	To	D11-9	42															
D11-9	To	D11-6		51														
D11-11	To	D11-12		80									1					
D12-1	To	D12-6	40									1						
D12-2	To	D12-1	212															
D12-3	To	D12-2	41															
D12-4	To	D12-1	120															
D12-5	To	D12-4	73															
D12-8	To	D12-9									112					2.00		
D12-10	To	D12-5	33															
D12-13	To	D13-3	88															
D13-1	To	D13-2					139										2.00	
D13-3	To	D13-4	61									1						
D13-5	To	D13-6	18									1						
D14-1	To	D14-2	41									1						
			4926	1480	305	426	265	205	88	54	112	6	2	4	1	2	4	3
		Frac. Pip	615.75	185	38.125	53.25	33.125	25.625	11	6.75	14							
		Total # Pipes	616	185	39	54	33	26	11	7	14							
		Total Length Pipes	4928	1480	312	432	264	208	88	56	112							
		AS REQ	72	20	38	18	36	42	12	4	18							
		USE	5000	1500	350	450	300	250	100	60	130							

ALLOWABLE PIPE TYPES (UNLESS OTHERWISE SHOWN ON PLANS)												
LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 CORRUGATED STEEL	ALUMINUM COATED TYPE 2 CORRUGATED STEEL FULLY ASPHALT COATED	GALVANIZED CORRUGATED STEEL FULLY ASPHALT COATED WITH PAVED INVERT	GALVANIZED STEEL STRUCTURAL PLATE FULLY ASPHALT COATED WITH PAVED INVERT	GALVANIZED STEEL STRUCTURAL PLATE FULLY ASPHALT COATED	POLYMER COATED (10/10) CORRUGATED STEEL	UNCOATED GALVANIZED CORRUGATED STEEL	CORRUGATED ALUMINUM ALLOY CULVERTS & STRUCTURAL PLATE	PVC STORM DRAIN PIPE (SMOOTH INTERIOR)	POLYETHYLENE DOUBLE WALL TYPE S AND TYPE D	POLYETHYLENE CORRUGATED TYPE C
MULLIGAN ROAD	X											
STORM DRAIN SYSTEMS	X											

NOTE: ALL CONCRETE PIPE WILL CONFORM TO AASHTO M170
RUBBER GASKETS WILL CONFORM TO ASTM-C443

REVISIONS

NO.	DESCRIPTION	BY	DATE
4	Revised Headwall Quantities	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

PIPE CULVERT PLACEMENT SUMMARY

Sheet 2 of 2

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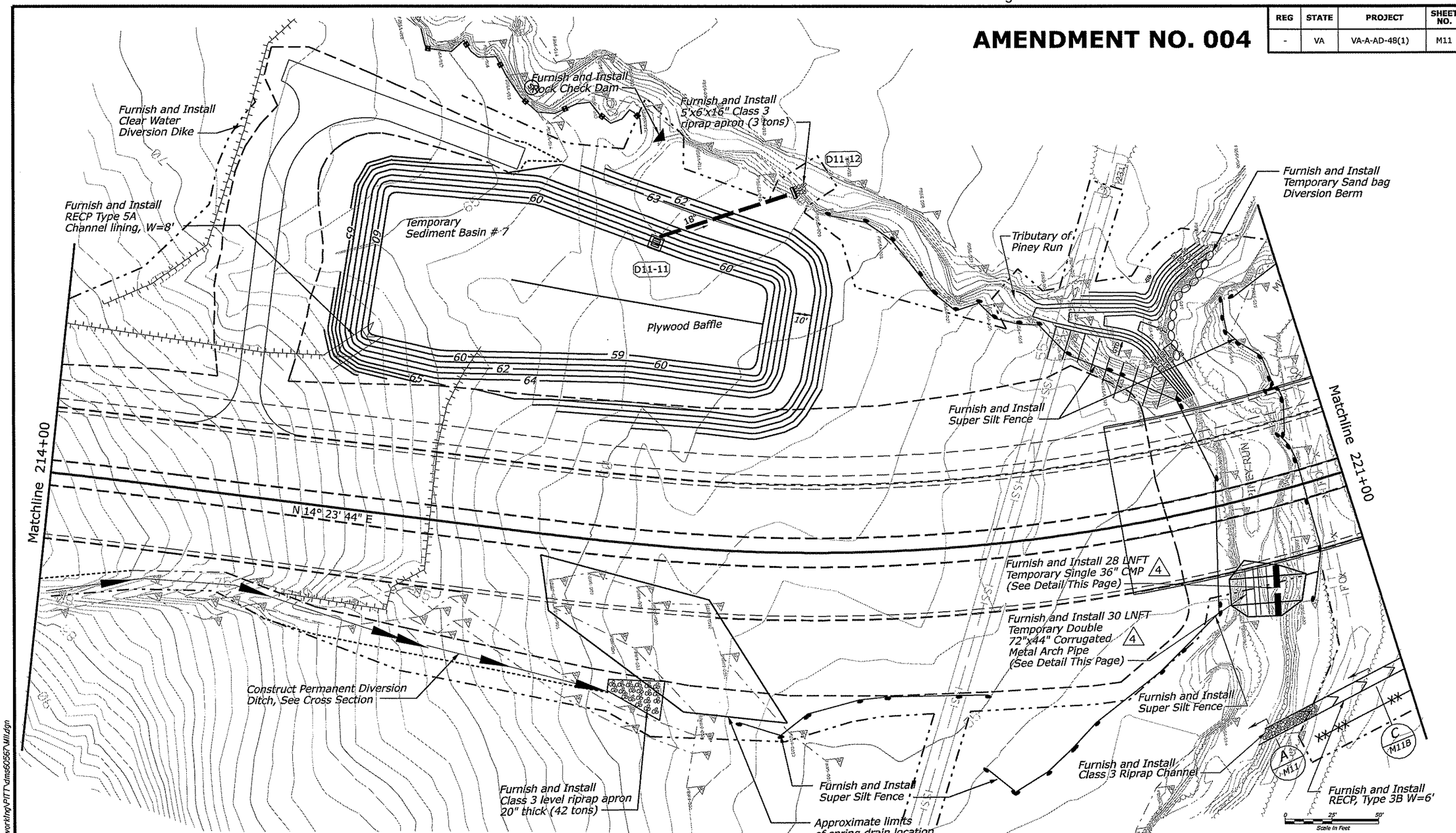
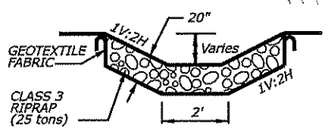
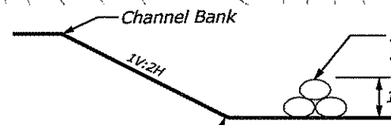
AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	M11

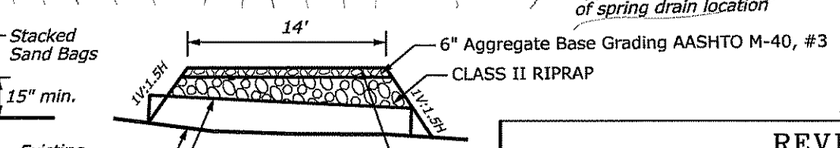




TYPICAL CHANNEL SECTION N.T.S. (A / M11)



DETAIL SAND BAG DIVERSION BERM



DETAIL TEMPORARY CAUSEWAY (3)

REVISIONS

NO.	DESCRIPTION	BY	DATE
4	Added Causeway over Piney Run	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

EROSION & SEDIMENT CONTROL PLAN - PHASE I

Mulligan Road
214+00 to 221+00

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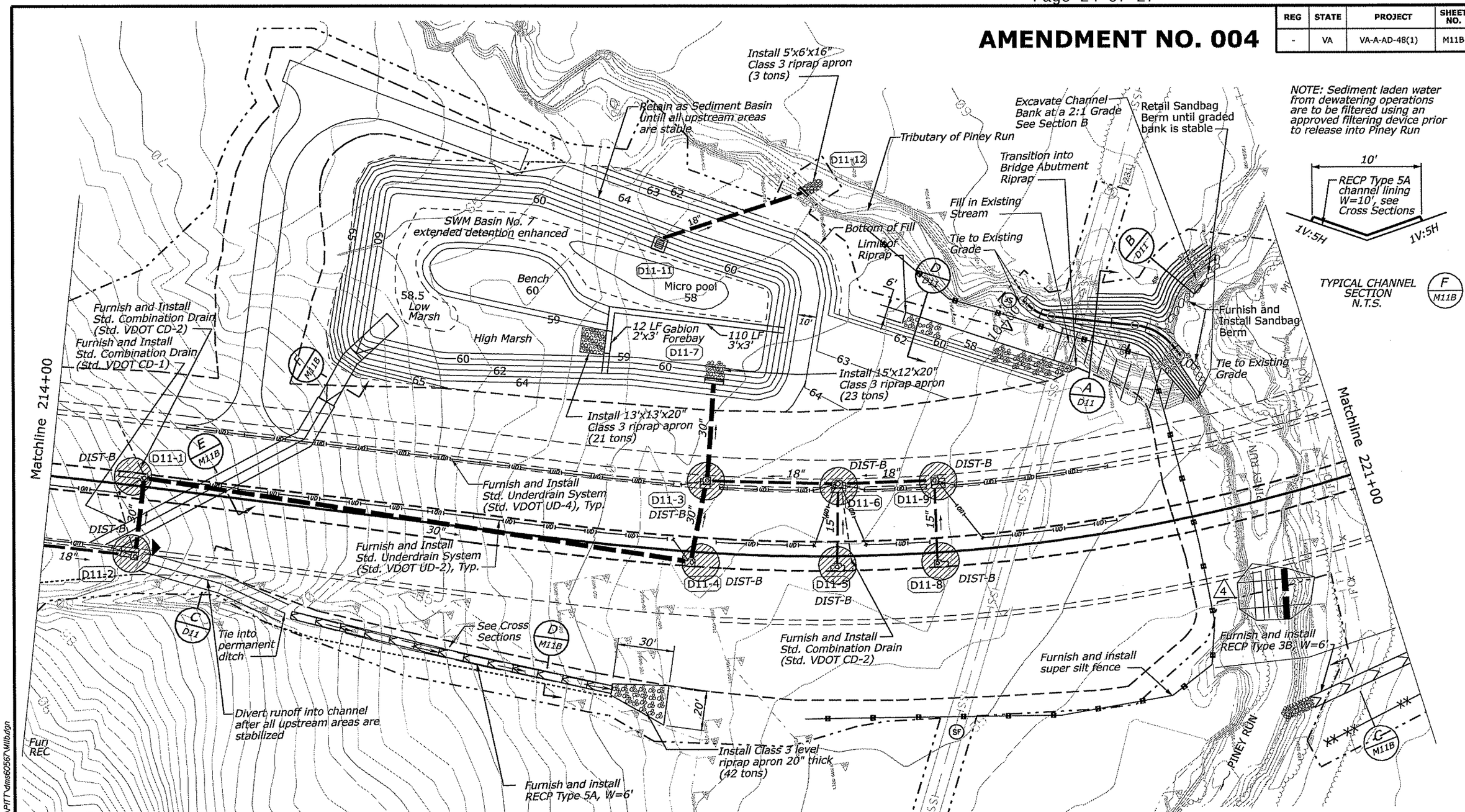
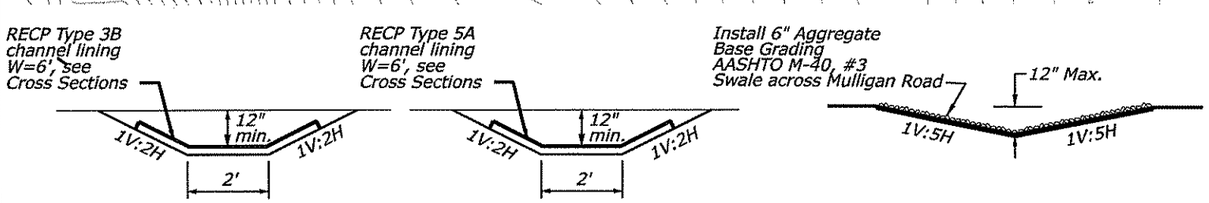
AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	M11B



NOTE: Sediment laden water from dewatering operations are to be filtered using an approved filtering device prior to release into Piney Run

TYPICAL CHANNEL SECTION N.T.S. (F / M11B)



TYPICAL CHANNEL SECTION N.T.S. (C / M11B)

TYPICAL CHANNEL SECTION N.T.S. (D / M11B)

TYPICAL CHANNEL SECTION N.T.S. (E / M11B)

REVISIONS

NO.	DESCRIPTION	BY	DATE
4	Added Causeway over Piney Run	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FORT BELVOIR - MULLIGAN ROAD

EROSION & SEDIMENT CONTROL PLAN - PHASE II

Mulligan Road
214+00 to 221+00

Sheet 22 of 28

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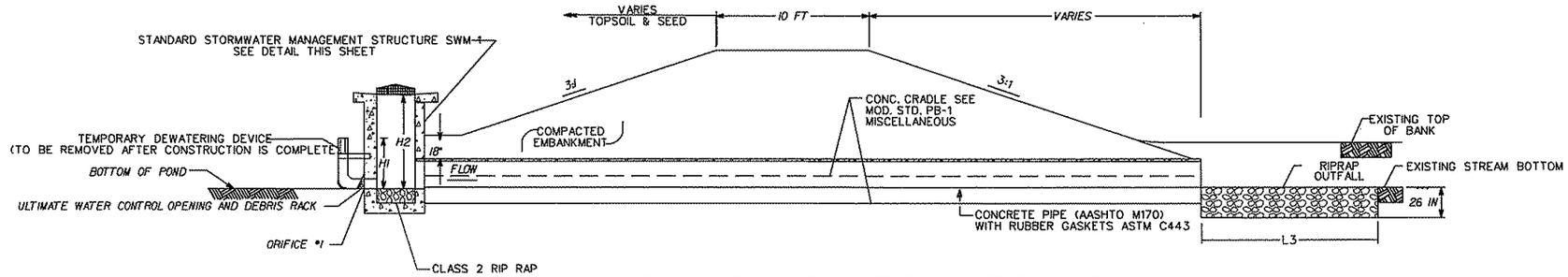
REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-4B(1)	S32

AMENDMENT NO. 004

STORMWATER MANAGEMENT DETAILS

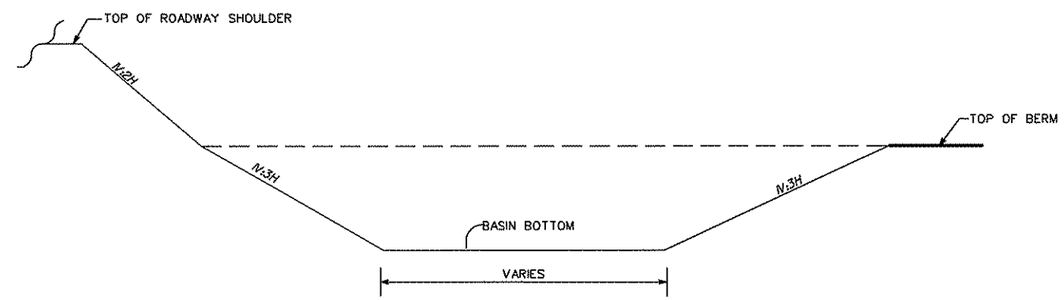


SWM BASIN TYPICAL SECTION THROUGH EMBANKMENT

(N.T.S.)

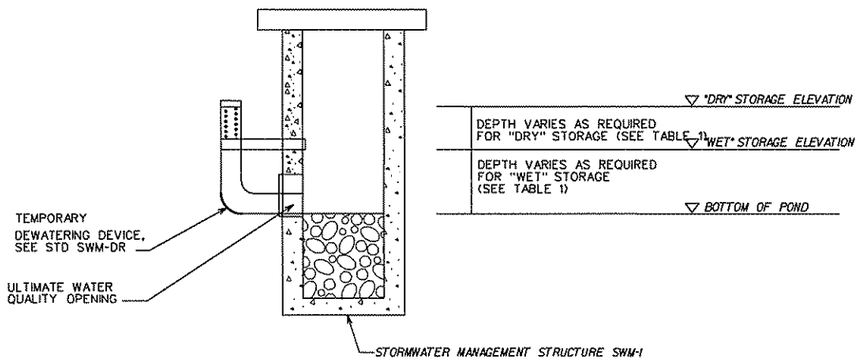
NOTE: SWM EMBANKMENT TO BE CONSTRUCTED AND COMPACTED IN ACCORDANCE WITH FP-03.

THE FOUNDATION MATERIAL UNDER THE DAM AND THE MATERIAL USED FOR THE EMBANKMENT OF THE DAM SHALL BE TYPE A-4 OR FINER, IN ACCORDANCE WITH AASHTO CLASSIFICATION SYSTEM (M145). THE BACKFILL AND EMBANKMENT MATERIAL MUST MEET THE ABOVE SOIL CLASSIFICATION OR THE DESIGN OF THE DAM MUST INCORPORATE A CUTOFF TRENCH. THE CUTOFF TRENCH SHALL BE INSTALLED ALONG EMBANKMENT CENTERLINES TO LIMIT SEEPAGE. THE TRENCH SHALL BE AT LEAST 8 FEET IN WIDTH, AND A MINIMUM 2 FEET DEEP, AND EXTEND INTO LOW PERMEABILITY SOIL OR WEATHERED ROCK. MATERIAL CONSIDERED SUITABLE FOR USE AS EMBANKMENT OR CUTOFF TRENCH MATERIAL IS GENERALLY EXPECTED ON POND SITES. OUTLET PIPES FOR SWMBS SHALL BE INSTALLED IN ACCORDANCE WITH THE MODIFIED PB-1 ST'D. DETAIL.



TYPICAL SECTION SWM BASINS

(N.T.S.)



SIDE VIEW

NOTE: PATCH ANY HOLES REMAINING AFTER REMOVAL OF TEMPORARY METAL PLATES (TYP)

*DRAINAGE TUBING SHALL COMPLY WITH ASTM F667 AND AASHTO M294

TYPICAL SEDIMENT BASIN DEWATERING SYSTEM

(N.T.S.)

** SEE PLAN SHEET FOR LOCATION
N/A DENOTES NOT APPLICABLE

TABLE 1

SWM BASIN AND SEDIMENT BASIN DATA

BASIN NO.	STRUCTURE NO.	RISER PIPE							OUTFALL PIPE DIAMETER	4 LEAN CONCRETE	DEWATERING DEVICE		TOP OF PRINCIPLE SPILLWAY ELEVATION	SILTATION CONTROL EXCAVATION
		ORIFICE 1		WEIR DIMEN.			H1	H2			WET STORAGE ELEVATION	DRY STORAGE ELEVATION		
		D	INV.	L	H	ELEV.								
UNIT		in.	ft.	in.	in.	ft.	ft.	ft.	in.	cy	ft.	ft.	ft.	CY
1	D1-7	3	27.5				1.00	1.5	14"x23"	8.37	32.51	33.55	32.5	890
2	D4-9	2	94.00	12	6	96.1	0.69	3.50	18"	3.24	94.37	94.76	97.50	257
6	D8-10	2	129.00	12	6	131.5	1.42	3.60	24"	3.72	130.00	131.00	132.7	128
7	D11-11	2.5	59.25				0.73	2.55	18"	6.03	59.67	60.30	61.80	702
B-1		4	105.6				1.50	2.60	18"		105.50	106.60	109.00	562

REVISIONS

NO.	DESCRIPTION	BY	DATE
4	Revised Quantity from Flowable Fill to Lean Concrete	CEC	08/12/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

STORMWATER MANAGEMENT

DETAIL APPROVED FOR USE --/----

REVISED:

DETAIL E603-C

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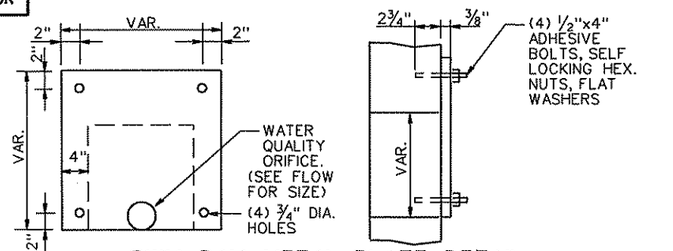
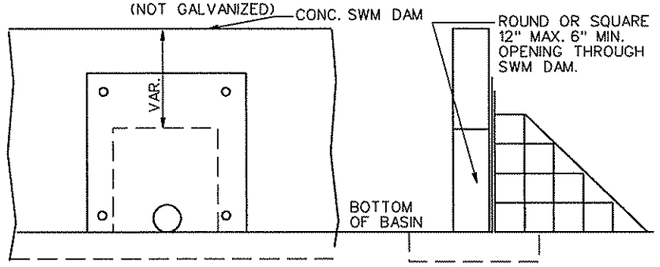
AMENDMENT NO. 004

REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	S35

SWM-DR

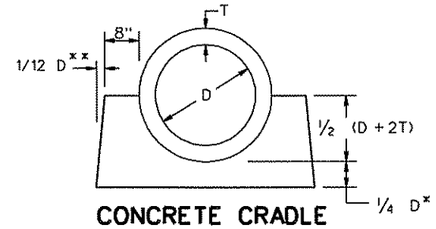


SWM DAM METAL PLATE DETAIL
(NOT GALVANIZED)



DETAIL FOR METAL PLATE AND WATER QUALITY ORIFICE **SIDE VIEW OF SWM DAM WITH DEBRIS**

TYPICAL SWM DAM



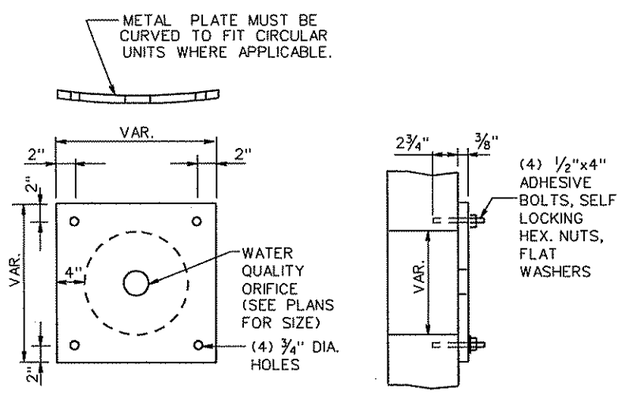
CONCRETE CRADLE

PIPE SIZE INCHES	CRADLE BOTTOM WIDTH (INCHES)	CRADLE HEIGHT (INCHES)	CRADLE TOP WIDTH (INCHES)	INCREMENT, IN CUBIC YARDS, PER LINEAR FOOT OF PIPE
12	34	14	32	0.093
15	38	15.75	35.5	0.110
18	42	17.5	39	0.129
24	50	21	46	0.168
30	58	26	53	0.233
36	66	31	60	0.307
42	74	36	67	0.390

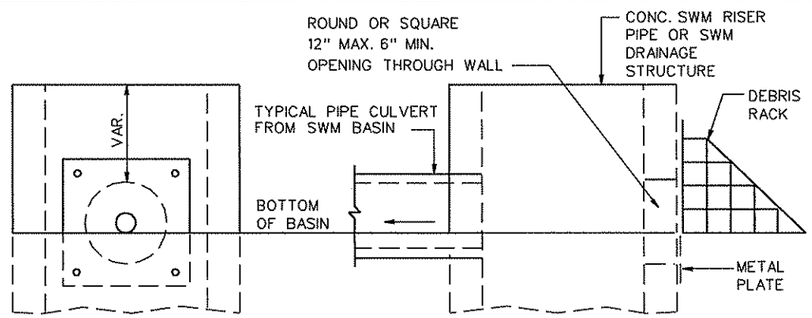
CONCRETE SHALL BE LEAN CONCRETE △4
* BUT NOT LESS THAN 6"
** IF THE PIPE IS LAID IN AN EXCAVATED TRENCH, THEN THE SIDE WALLS MAY CONFORM TO THE TRENCH SHAPE (IE THE TRENCH MAY BECOME THE CRADLE FORM).

CONCRETE CRADLE IS TO BE INSTALLED UNDER THE ENTIRE LENGTH OF CULVERT AT EACH STORMWATER MANAGEMENT BASIN.

CONCRETE CRADLE IS TO BE PAID FOR AS MISCELLANEOUS CONCRETE AND SUMMARIZED IN CUBIC YARDS FOR EACH PIPE LOCATION



METAL PLATE DETAIL
(NOT GALVANIZED)



DETAIL FOR METAL PLATE AND WATER QUALITY ORIFICE **SIDE VIEW WITH DEBRIS RACK**

TYPICAL SWM DRAINAGE STRUCTURE

SHEET 3 OF 5

STORMWATER MANAGEMENT (SWM) DETAILS

DEBRIS RACK, METAL PLATE, WATER QUALITY ORIFICE, CONCRETE CRADLE
(FOR SWM DRAINAGE STRUCTURES, SWM RISER PIPES AND SWM DAMS)

REV. 3/03

116.06

SPECIFICATION REFERENCE: 302

SHEET 3 OF 5

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

STORMWATER MANAGEMENT (SWM) DETAILS

DETAIL APPROVED FOR USE ---/----

REVISED:

DETAIL E603-D

REVISIONS

NO.	DESCRIPTION	BY	DATE
△4	Revised Concrete Specification from A(AE) (F'C = 3000 PSI) to Lean Concrete	CEC	08/12/08

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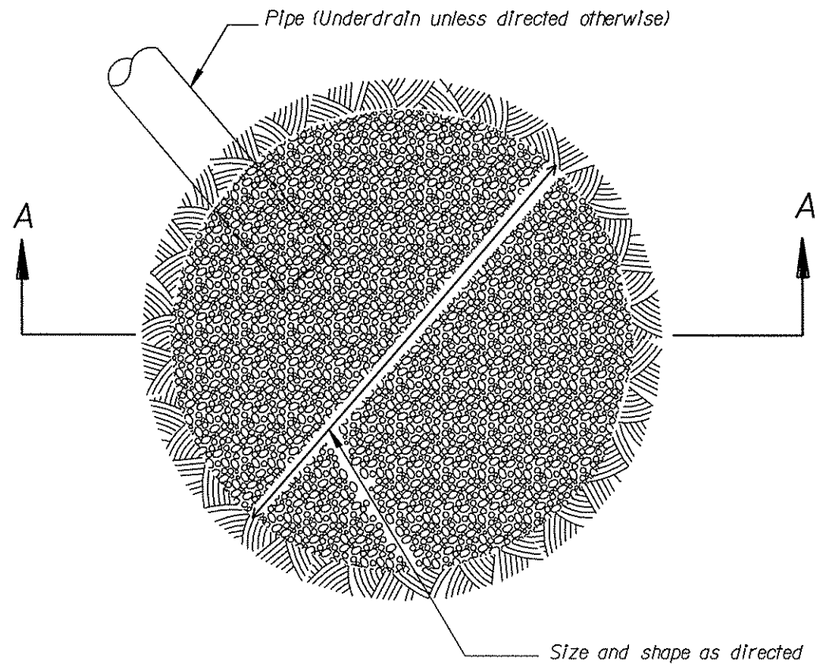
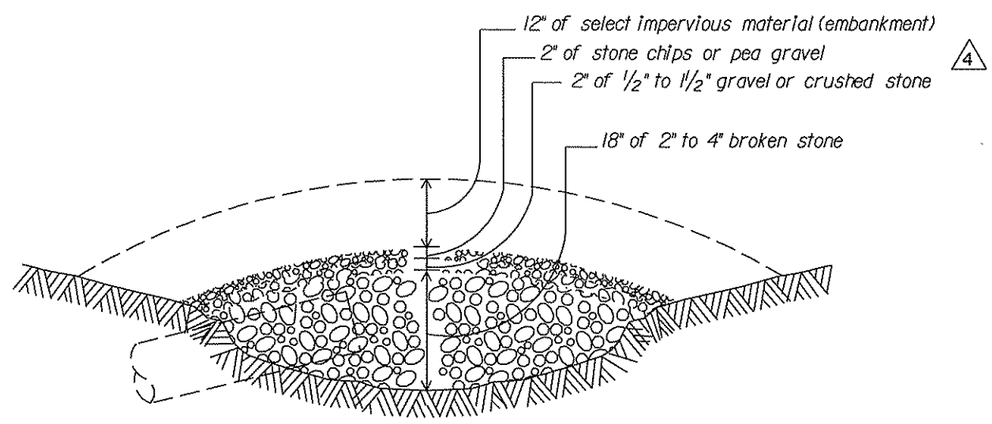
REG	STATE	PROJECT	SHEET NO.
-	VA	VA-A-AD-48(1)	S49

AMENDMENT NO. 004



PLAN



SECTION A-A

POROUS

REVISIONS			
NO.	DESCRIPTION	BY	DATE
4	Revised Callout	CEC	08/13/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

SPRING DRAIN

DETAIL APPROVED FOR USE --/----

REVISED:

DETAIL E604-E

8/19/2008 12:34:35 PM c:\pwworking\pitt\dms81081\dt604x07.dgn