Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

June 22, 2016

CALL NO. 100
CONTRACT ID NO. 161033
ADDENDUM # 3

Subject: Magoffin County, TGR 0061 (064)
Letting June 24, 2016

(1)Revised - Plan Sheets - S1, S14, S15, R2V, R41 & R159
(2)Revised - Bid Items - Pages 714-726 of 726
(3)Added - Special Note - Pages 1-10 of 10

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

Plan revisions are available at http://www.lynnimaging.com/kytransportation/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Rachel Mills

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:ks
Enclosures

LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

MAGOFFIN COUNTY
MOUNTAIN PARKWAY (KY9009)
OVER BURNING FORK
STA. 3934+37.58

ESTIMATE OF QUANTITIES

BID ITEM CODE		08100	08104	08150	08151	08001	08019	02231	08046	08033	08094	08633	02998	08130	08140	08141	08133	08135	20637ED	21777EN	03299	21532ED	23813EC			
BID ITEM		Concrete Class "A"	Concrete Class "AA"	Steel Reinforcement	Steel Reinforcement, Epoxy Coated	Structure Excavation, Common	Cyclopean Stone Rip Rap	Structure Granular Backfill	Piles - Steel HP 12 x 53	Test Piles	Pile Points 12-IN	Precast PC I-Beam Type 3	Masonry Coating	Mechanical Reinf Coupler #5	Mechanical Reinf Coupler #5 Epoxy Coated	Mechanical Reinf Coupler #6 Epoxy Coated	Mechanical Reinf Coupler #8	Mechanical Reinf Coupler #10	Drilled Shaft Rock 48 in.	Drilled Shaft Common 54 in.	Armored Edge for Concrete	Railing System Type 3	Deck Drain			
UNIT		C.Y.	C.Y.	LBS.	LBS.	C.Y.	Tons	C.Y.	L.F.	L.F.	Each	L.F.	S.Y.	Each	Each	Each	Each	Each	L.F.	L.F.	L.F.	L.F.	Each			
Substructure	Integral End Bent #1	43.0	3.5	5303	1228		1460	174	375	26	14		21	4	10		8									
	Pier #1	92.5		22259	535								97		10			16	63.8	112.5						
	Pier #2	135.1		26140	535	40							97		10			16	54.2	126.8						
	Integral End Bent #2	43.0	3.5	5302	1243		1470	174	555	31	14		21	4	10		8									
Superstructure			647.6		167389							1605	700			626					175	363	4			
BRIDGE TOTALS		313.6	654.6	59004	170930	40	2930	348	930	57	28	1605	936	8	40	626	16	32	118.0	239.3	175	363	4			

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SPECIAL NOTES

11C - Special Note for Drilled Shafts

SPECIAL PROVISIONS

69 - Embankment at Bridge End Bent Structures

STANDARD DRAWINGS

BBP-002-04	Bearing Details
BGX-006-09	Stencils for Structures
BGX-012-02	Geotechnical Legend
BGX-015-02	Bridge Drains
BJE-001-12	Neoprene Expansion Dams and Armored Edges
BPS-003-09	HP 12x53 Steel Piles
RGX-100-05	Treatment of Embankments at End-Bents
RGX-105-07	Treatment of Embankments at End-Bents

SPECIFICATIONS

2012 Standard Specifications for Road and Bridge Construction.

6th Edition AASHTO LRFD Bridge Design Specifications with Current Interims.

Plans Prepared By
AECOM

Craig Raymond Klusman, PE
KY. No. 22558

ITEM NUMBER
10-166.00

REVISION	DATE

DATE: 06/21/2016	CHECKED BY
DESIGNED BY: I. MCELHONE	C. KLUSMAN
DETAILED BY: J. CORLEY	E. JEAN-MARY

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
MAGOFFIN

ROUTE
KY 9009

CROSSING
BURNING FORK

TITLE SHEET

PREPARED BY
AECOM
AECOM
500 West Jefferson Street
Suite 1600
Louisville, KY 40202-4251
www.aecom.com

SHEET NO.
S1

DRAWING NO.
27550

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

MAGOFFIN COUNTY
MOUNTAIN PARKWAY (KY9009)
OVER BURNING FORK
STA. 3934+37.58

ESTIMATE OF QUANTITIES

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BID ITEM		Concrete Class "A"	Concrete Class "AA"	Steel Reinforcement	Steel Reinforcement, Epoxy Coated	Structure Excavation, Common	Cyclopean Stone Rip Rap	Structure Granular Backfill	Piles - Steel HP 12 x 53	Test Piles	Pile Points 12-IN	Precast PC I-Beam Type 3	Masonry Coating	Mechanical Reinf Coupler #5	Mechanical Reinf Coupler #5 Epoxy Coated	Mechanical Reinf Coupler #6 Epoxy Coated	Mechanical Reinf Coupler #8	Mechanical Reinf Coupler #10	Drilled Shaft Rock 48 in.	Drilled Shaft Common 54 in.	Armored Edge for Concrete	Railing System Type 3	Deck Drain
UNIT		C.Y.	C.Y.	LBS.	LBS.	C.Y.	Tons	C.Y.	L.F.	L.F.	Each	L.F.	S.Y.	Each	Each	Each	Each	Each	L.F.	L.F.	L.F.	L.F.	Each
Substructure	Integral End Bent #1	43.0	3.5	5303	1228		1460	174	375	26	14		21	4	10		8						
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SPECIAL NOTES

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DETAILED BY: J. CORLEY	E. JEAN-MARY

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

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MAGOFFIN

ROUTE
KY 9009

CROSSING
BURNING FORK

TITLE SHEET

PREPARED BY
AECOM
500 West Jefferson Street
Suite 1600
Louisville, KY 40202-4251
www.aecom.com

SHEET NO.
S1

DRAWING NO.
27550

LETTING DATE

CONSTRUCTION PROJECT NO.

FILE NAME: Q:\PROJECT\KYKYTC\60438042 KYTC US460 STRUCTURES\CADD\STRUCTURE\FINAL\S27550_001.DGN

USER: joe.whelan
DATE PLOTTED: March 14, 2016

E-SHEET NAME:

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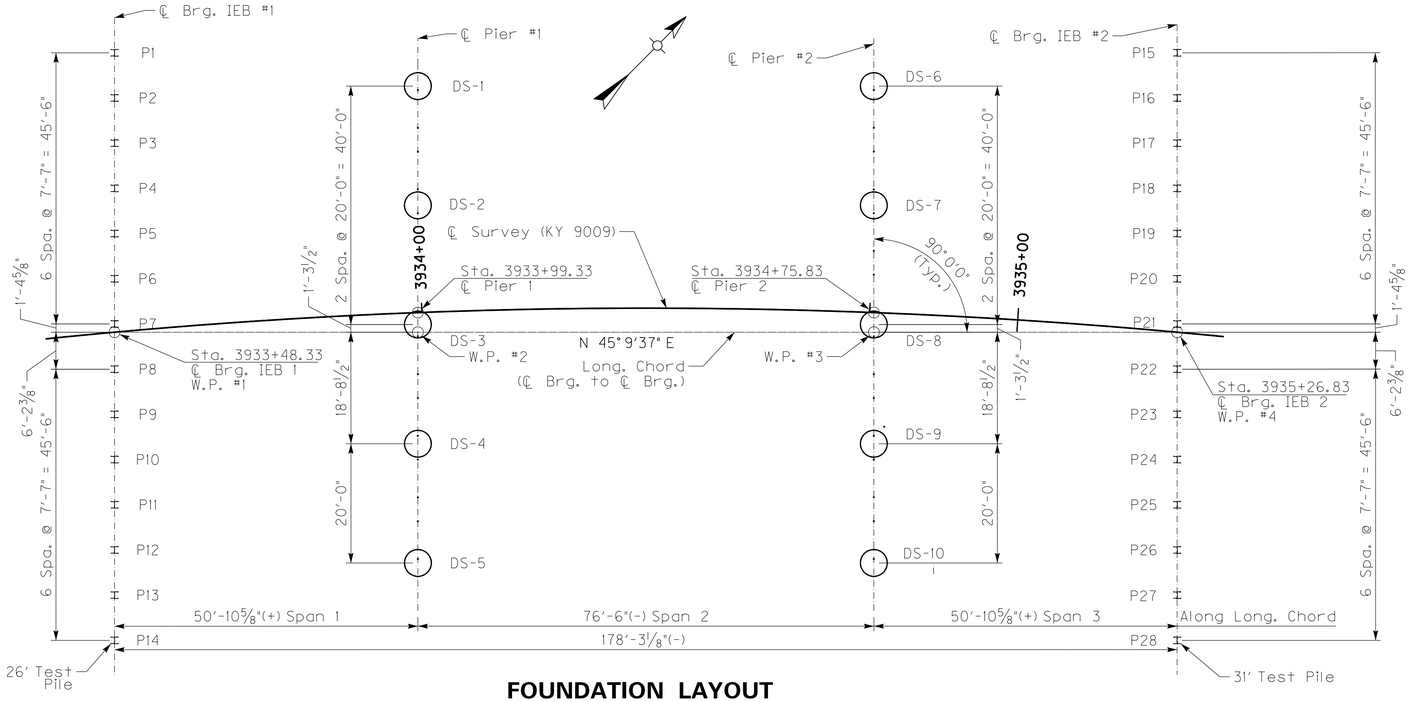


FOUNDATION LAYOUT

LEGEND:

I Indicates HP12x53 Vertical Pile

◯ Indicates Drilled Shaft

PILE RECORD FOR POINT BEARING PILES
INTEGRAL END BENT #1

Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point of Pile Elevation As Driven	Design Axial Load
	FEET	FEET	FEET	TONS
P1	883.48			161
P2	883.21			161
P3	882.63			161
P4	882.05			161
P5	881.47			161
P6	880.89			161
P7	880.31			161
P8	879.72			161
P9	879.14			161
P10	878.56			161
P11	877.98			161
P12	877.40			161
P13	876.82			161
P14	876.55			161

PILE RECORD FOR POINT BEARING PILES
INTEGRAL END BENT #2

Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point of Pile Elevation As Driven	Design Axial Load
	FEET	FEET	FEET	TONS
P15	876.39			161
P16	876.10			161
P17	875.47			161
P18	874.83			161
P19	874.20			161
P20	873.57			161
P21	872.93			161
P22	872.30			161
P23	871.66			161
P24	871.03			161
P25	870.40			161
P26	869.76			161
P27	869.13			161
P28	868.84			161

DRILLED SHAFT RECORD

DRILLED SHAFT NO.	ELEVATION (FEET)						LENGTH (FEET)			
	Top of Drilled Shaft	Estimated Top of Rock	Bottom of Drilled Shaft Common 54"		Bottom of Drilled Shaft Rock 48"		Drilled Shaft Common 54"		Drilled Shaft Rock 48"	
			Plan	As Built	Plan	As Built	Plan	As Built	Plan	As Built
DS-1	856.5	835.1	828.0		818.0		28.5		10.0	
DS-2	856.5	839.3	838.7		822.0		17.8		16.7	
DS-3	856.5	837.7	835.0		822.0		21.5		13.0	
DS-4	856.5	836.2	831.2		821.2		25.3		10.0	
DS-5	856.5	837.1	837.1		823.0		19.4		14.1	
DS-6	852.0	825.1	825.2		815.2		26.8		10.0	
DS-7	852.0	825.9	825.6		815.6		26.4		10.0	
DS-8	852.0	827.5	827.0		817.0		25.0		10.0	
DS-9	852.0	829.1	828.3		818.3		23.7		10.0	
DS-10	852.0	833.5	827.2		813.0		24.8		14.2	

Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.

PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.

DESIGN AXIAL LOAD: Load carried by each pile as estimated from structural design calculations for Factored LRFD Loadings.

CALCULATED FIELD BEARING: Contrary to Section 604.03.07 of the Standard Specifications, in place bearing values are not required for piles bearing on rock when driven to practical refusal.

PRACTICAL REFUSAL: Drive point bearing piles to practical refusal. For this project minimum blow requirements are reached after a total penetration becomes ¼" or less for 5 consecutive blows, practical refusal is obtained after the pile is struck an additional 5 blows with total of ¼" or less. Advance the production piling to the driving resistances specified above and to the depths determined by test piles and subsurface data sheets. Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

HAMMER ENERGY: At the End Bent locations, a diesel pile driving hammer with a rated energy between 20.1 foot-kips and 33.3 foot-kips will be required to drive 12x53 steel H-piles to practical refusal without encountering excessive blow counts or damaging the piles. The Contractor shall submit the proposed pile driving system to the Engineer for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.

Pile Driving Notes

PRE-DRILLING: When predrilling is necessary for pile installation, holes shall be drilled to solid rock. Backfill the holes with sand or pea gravel after the pile is placed in the hole. A temporary casing might be required to prevent collapse of the hole. If used, remove the casing as the hole is being backfilled. Drive piles to refusal after backfill operations are complete. Include the cost of all materials, labor and equipment needed to predrill, backfill the holes and drive the piles to refusal in the price per linear foot for "Pre-drilling For Piles".

Pile layout dimensions are measured at bottom of footing.

Driving Criteria

DRIVING CRITERIA: Drive point bearing piles to practical refusal.

Field Data

For each pile, the Project Engineer shall record the following on this sheet: Pile Length in Place and Point of Pile Elevation as Driven.

Submit this record to:
Kentucky Transportation Cabinet
Director, Division of Structural Design
3rd Floor East
200 Mero Street
Frankfort, KY 40622

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

Use HP 12x53 in accordance with BPS-003, c.e.

All pile points shall be equipped with reinforced pile points capable of penetrating boulders.

REVISION	DATE

DATE: 06/21/2016	CHECKED BY
DESIGNED BY: I. MCELHONE	C. KLUSMAN
DETAILED BY: J. CORLEY	E. JEAN-MARY

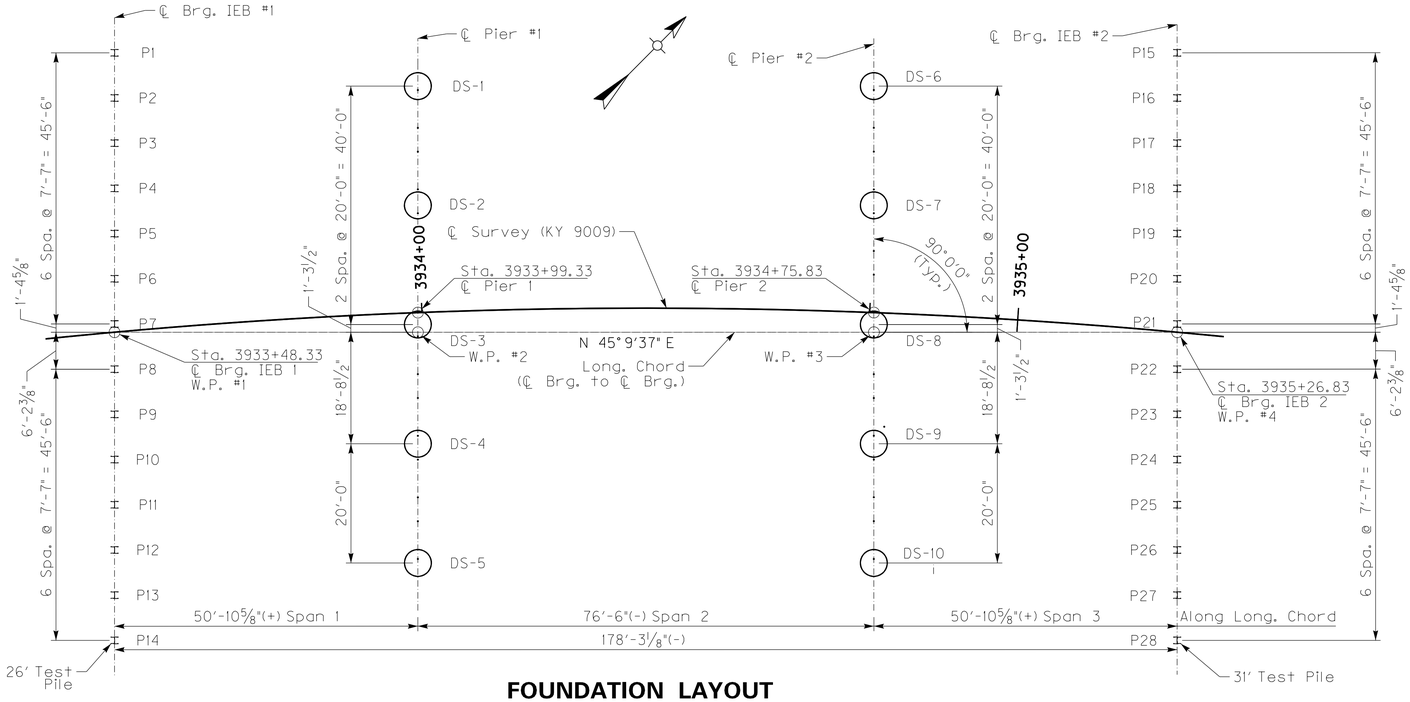
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
MAGOFFIN

ROUTE	CROSSING
KY 9009	BURNING FORK

FOUNDATION LAYOUT

ITEM NUMBER	PREPARED BY	SHEET NO.
10–166.00	AECOM 500 West Jefferson Street Suite 1600 Louisville, KY 40202–4251 www.aecom.com	S14
		DRAWING NO. 27550



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P12	877.40			161
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PILE RECORD FOR POINT BEARING PILES
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Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point of Pile Elevation As Driven	Design Axial Load
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P15	876.39			161
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DS-4	856.5	836.2	831.2		821.2		25.3		10.0	
DS-5	856.5	837.1	837.1		823.0		19.4		14.1	
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DS-7	852.0	825.9	825.6		815.6		26.4		10.0	
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REVISION	DATE

DATE: 06/21/2016	CHECKED BY
DESIGNED BY: I. MCELHONE	C. KLUSMAN
DETAILED BY: J. CORLEY	E. JEAN-MARY

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
MAGOFFIN

ROUTE	CROSSING
KY 9009	BURNING FORK

FOUNDATION LAYOUT

ITEM NUMBER
10–166.00

PREPARED BY
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500 West Jefferson Street
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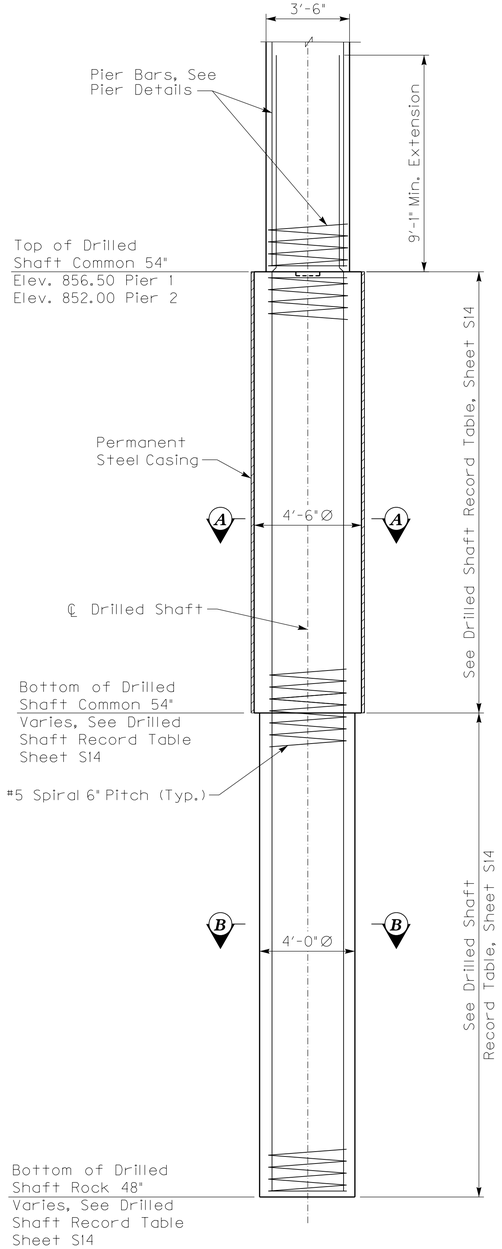
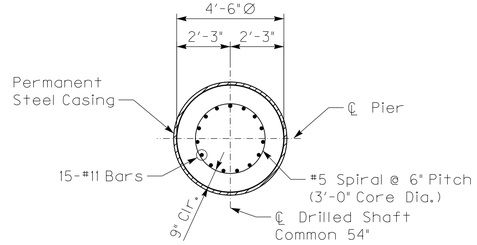
Louisville, KY 40202-4251
www.aecom.com

SHEET NO. S14
DRAWING NO. 27550

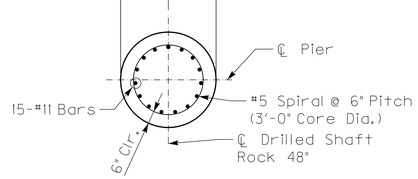


TYPICAL DRILLED SHAFT



SECTION A–A

Drilled Shaft Common 54"



SECTION B–B

Drilled Shaft Rock 48"

DRILLED SHAFT NOTES

1) Drilled shafts shall be constructed in accordance with the Special Note for Drilled Shafts, current edition. Include all costs (materials including spiral and longitudinal reinforcement including extension into column, reinforcement splices and mechanical couplers, concrete and temporary or permanent casing, labor and equipment) associated with the drilled shafts in the unit price bid for Drilled Shaft, Common or Solid Rock, as applicable.

2) Contrary to the Special Note for Drilled Shafts, construction cores will not be required at the Pier 1 and Pier 2 drilled shaft locations. Rock cores obtained during the geotechnical exploration were drilled at the center of each shaft and extend deep enough to cover the embedment length.

3) Permanent casing is required in the overburden. Permanent casing is incidental to the unit bid price for "Drilled Shaft 54 inch (common)".

4) Reinforcement cages shall be held centered in the rock socket and adjusted as necessary to match plan location at the bottom of the pier column.

REVISION	DATE

DATE: 06/21/2016	CHECKED BY
DESIGNED BY: J. WHELAN	T. BAKER
DETAILED BY: J. CORLEY	E. JEAN-MARY

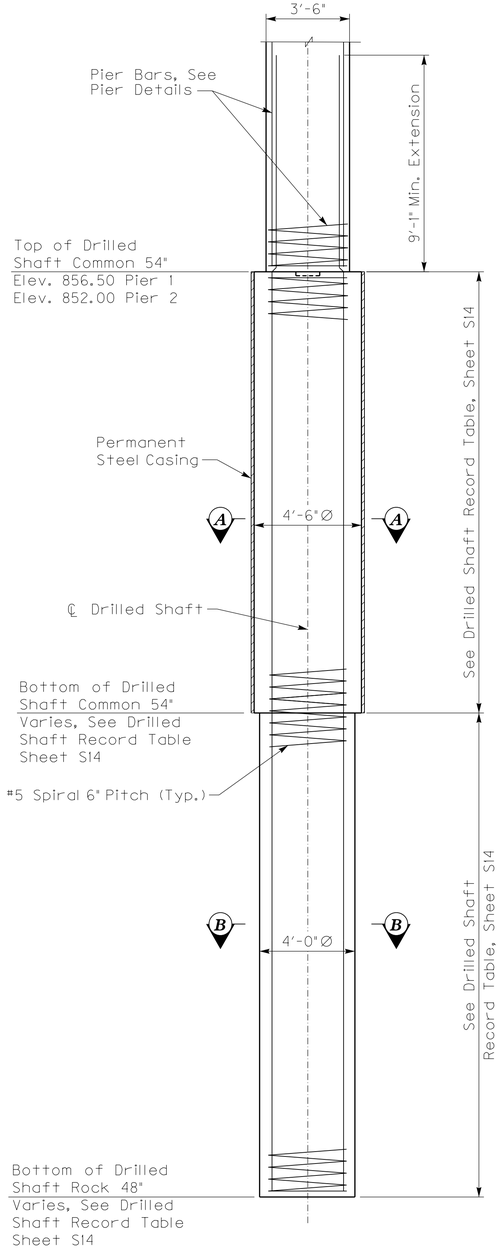
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: **MAGOFFIN**

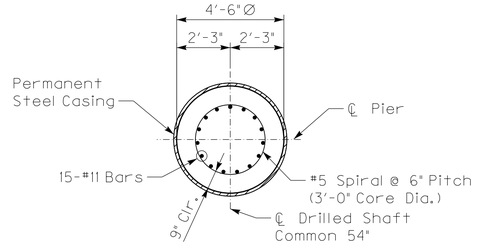
ROUTE: **KY 9009** | CROSSING: **BURNING FORK**

DRILLED SHAFT DETAILS

ITEM NUMBER	PREPARED BY	SHEET NO.
10–166.00	AECOM 500 West Jefferson Street Suite 1600 Louisville, KY 40202–4251 www.aecom.com	S15
		DRAWING NO. 27550

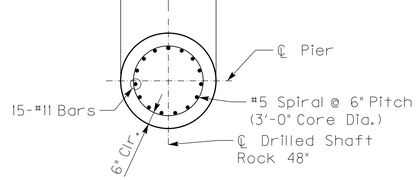


TYPICAL DRILLED SHAFT



SECTION A–A

Drilled Shaft Common 54"



SECTION B–B

Drilled Shaft Rock 48"

DRILLED SHAFT NOTES

1) Drilled shafts shall be constructed in accordance with the Special Note for Drilled Shafts, current edition. Include all costs (materials including spiral and longitudinal reinforcement including extension into column, reinforcement splices and mechanical couplers, concrete and temporary or permanent casing, labor and equipment) associated with the drilled shafts in the unit price bid for Drilled Shaft, Common or Solid Rock, as applicable.

2) Contrary to the Special Note for Drilled Shafts, construction cores will not be required at the Pier 1 and Pier 2 drilled shaft locations. Rock cores obtained during the geotechnical exploration were drilled at the center of each shaft and extend deep enough to cover the embedment length.

3) Permanent casing is required in the overburden. Permanent casing is incidental to the unit bid price for "Drilled Shaft 54 inch (common)".

4) Reinforcement cages shall be held centered in the rock socket and adjusted as necessary to match plan location at the bottom of the pier column.

REVISION	DATE

DATE: 06/21/2016	CHECKED BY
DESIGNED BY: J. WHELAN	T. BAKER
DETAILED BY: J. CORLEY	E. JEAN-MARY

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: **MAGOFFIN**

ROUTE: **KY 9009** | CROSSING: **BURNING FORK**

DRILLED SHAFT DETAILS

ITEM NUMBER	PREPARED BY	SHEET NO.
10–166.00	AECOM 500 West Jefferson Street Suite 1600 Louisville, KY 40202–4251 www.aecom.com	S15
		DRAWING NO. 27550

GENERAL SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
MAGOFFIN	10-166.00	R2V

ITEM	DESCRIPTION	UNIT	U.S. 460 MOUNTAIN PARKWAY	U.S. 460 WEST	FRONTAGE ROAD	LICK BRANCH ROAD	BACKAGE ROAD	APPR. 3962+70	PINE POINT ROAD	PINE POINT APPR.	BURNING FORK	BURNING FORK FRONTAGE	APPR. 4027+00	KY 1415	KY 1888	KY 1888 APPROACHES	U.S. 460 EAST	MOT	TOTAL PROJECT
8150	STEEL REINFORCEMENT	LB	163																163
8257	HANDRAIL - PEDESTRIAN ALUMINUM	LF	275		347														622
8901	CRASH CUSHION TYPE VI CLASS BT TL2	EACH																20	20
8902	CRASH CUSHION TYPE VI CLASS B TL3	EACH	1																1
10020NS	FUEL ADJUSTMENT	DOLLAR																	173,665
10030NS	ASPHALT ADJUSTMENT	DOLLAR																	281,175
20166ES810	TEMPORARY PIPE	LF																125	125
20191ED	OBJECT MARKER TY 3	EACH	4												1				5
20210EN	COHESIVE PILE CORE	CUYD																	1,280
20211ES706	BORE AND JACK	LF	380																380
20327ES212	EROSION CONTROL BLANKET (SPECIAL)	SQYD	363																363
20432ES112	REMOVE CRASH CUSHION	EACH	3																3
21289ED	LONGITUDINAL EDGE KEY	LF	27,300																27,300
22520EN	PAVE MARKING-THERMO YIELD BAR-36 IN	LF		30															30
22884EN	CONCRETE MEDIAN BARRIER TY 14E-SINGLE SLOPE	LF	1,365																1,365
23026ED	ARCHITECTURAL TREATMENT	SQYD			191														191
23086EN	CONCRETE MEDIAN BARRIER WALL TYPE 9C (MODIFIED)	LF					350												350
23158ES505	DETECTABLE WARNINGS	SQFT	270	60	140			20			60								550
23237EN10W	WATERBLAST STRIPE REMOVAL	LF																159,410	159,410
23274EN11F	TURF REINFOCEMENT MAT 1	SQYD	332		92		211		40	60	198			23					956
24489EC	INLAID PAVEMENT MARKER	EACH	424														4		428
24814EC	PIPELINE INSPECTION	LF																	11,736
5997	TOPSOIL FURNISHED AND PLACED	CUYD	58																58
2731	REMOVE STRUCTURE STA. 3964+13	LS	1																1
2731	REMOVE STRUCTURE STA. 3996+59	LS	1																1
2731	REMOVE STRUCTURE STA. 4024+54	LS	1																1
2731	REMOVE STRUCTURE STA. 217+14 FRONTAGE RD.	LS			1														1
2731	REMOVE STRUCTURE - BILLBOARDS - P147	LS	1																1
2731	REMOVE STRUCTURE - BILLBOARDS - P176	LS	1																1
2731	REMOVE STRUCTURE - BILLBOARDS - P178	LS	1																1
2731	REMOVE STRUCTURE - BILLBOARDS - P181	LS			1														1
2731	REMOVE STRUCTURE - BILLBOARDS - P186	LS			1														1
2731	REMOVE STRUCTURE - BILLBOARDS - P197	LS	1																1
2731	REMOVE STRUCTURE - BILLBOARDS - P205	LS	1																1
24573EN	GAS LINE RELOCATION STA. 3933+09	LS	1																1
24573EN	GAS LINE RELOCATION STA. 3935+75	LS	1																1
24668EC	STEEL ENCASEMENT PIPE	LF	380																380
20465EC	CLEAN CULVERT	LS	1																1
2404	SEPTIC TANK TREATMENT	EACH	1				1												2
2475	PLUG WATER WELL	EACH	2																2
2731	REMOVE STRUCTURE STA. 4039+68	LS	1																1

NOTES:

(1) FOR CONTROLLING DUST CAUSED BY MAINTAINING TRAFFIC ONLY (200 MGAL/MILE)

(2) APPROXIMATELY 132 ACRES

(3) ESTIMATED AT 300 LB PER ACRE AND CONTAINS A MINIMUM OF 100 LBS OF NITROGEN, 100 LBS OF PHOSPHATE, AND 100 LBS OF POTASH PER ACRE

(4) ESTIMATED AT 11.5 LBS PER 1000 SQUARE FEET

(5) ESTIMATED AT 3 TON PER ACRE

(6) FOR GRAVITY RETAINING WALLS STA. 261+55 TO STA. 263+71 & STA. 265+75 TO STA. 267+06

(7)

EARTHWORK VOLUMES	
63,700 CU YD	ROCK EXC.
120,868 CU YD	COMMON (8)
20,188 CU YD	EMB. BENCH (9)
4,518 CU YD	SURF. DT. LT.
13,869 CU YD	SURF. DT. RT.
10,071 CU YD	REFILL (9)
1,426 CU YD	DRAINAGE EXC.(10)
234,640 CU YD	TOTAL EXC.
152,725 CU YD	EMBANKMENT (9)
20,188 CU YD	EMB. BENCH (9)
8,370 CU YD	GRAN. EMB. (9)
8,370 CU YD	REFILL
191,354 CU YD	TOTAL EMB.
FOR BIDDING	
234,640 CU YD ROADWAY EXC. TOTAL	

ESTIMATE FOR EARTHWORK CALCULATIONS FOR DESIGN ONLY. THE CONTRACTOR IS ADVISED THAT THE EARTHWORK CALCULATIONS SHOWN ARE FOR INFORMATION ONLY. ASSUMPTIONS FOR SHRINKAGE AND SWELL FACTORS ARE THE CONTRACTORS RESPONSIBILITY.

(8) INCLUDES 2,798 CU YD FOR TRANSVERSE BENCHING

(9) SEE GEOTECHNICAL NOTES

(10) 1,426 CU YD OF ROADWAY EXCAVATION CARRIED OVER FROM PIPE DRAINAGE SUMMARY

(11) 73,600 SQ YD CARRIED OVER FROM PAVING SUMMARY

(12) QUANTITIES ARE APPROXIMATE. SEE PROPOSAL FOR CONTAMINATED SOIL REMOVAL SPECIFICATIONS

GENERAL SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
MAGOFFIN	10-166.00	R2V

ITEM	DESCRIPTION	UNIT	U.S. 460 MOUNTAIN PARKWAY	U.S. 460 WEST	FRONTAGE ROAD	LICK BRANCH ROAD	BACKAGE ROAD	APPR. 3962+70	PINE POINT ROAD	PINE POINT APPR.	BURNING FORK	BURNING FORK FRONTAGE	APPR. 4027+00	KY 1415	KY 1888	KY 1888 APPROACHES	U.S. 460 EAST	MOT	TOTAL PROJECT
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24668EC	STEEL ENCASEMENT PIPE	LF	380																380
20465EC	CLEAN CULVERT	LS	1																1
2404	SEPTIC TANK TREATMENT	EACH	1				1												2
2475	PLUG WATER WELL	EACH	2																2
2731	REMOVE STRUCTURE STA. 4039+68	LS	1																1

NOTES:

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6. FOR GRAVITY RETAINING WALLS STA. 261+55 TO STA. 263+71 & STA. 265+75 TO STA. 267+06

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FOR BIDDING		
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9. SEE GEOTECHNICAL NOTES
10. 1,426 CU YD OF ROADWAY EXCAVATION CARRIED OVER FROM PIPE DRAINAGE SUMMARY
11. 73,600 SQ YD CARRIED OVER FROM PAVING SUMMARY
12. QUANTITIES ARE APPROXIMATE. SEE PROPOSAL FOR CONTAMINATED SOIL REMOVAL SPECIFICATIONS

COUNTY OF	ITEM NO.	SHEET NO.
MAGOFFIN	10-166.00	R41

GUARDRAIL CONSTRUCTION LEFT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE	---	4A	2A
4041+00 - 4044+00	300	---	---	1

DITCH CONSTRUCTION LEFT OF ℄					
STA. TO STA.	DESCRIPTION	CHANNEL LINING			
		TYPE	DEPTH	QUANTITY	GEO. TY. 1
4038+50 - 4039+50	2' F.B. SPEC.	ECB	1'	157 SY	---
4039+50 - 4040+50	SPEC. "V"	ECB	1'	135 SY	---

CONST. STANDARD HEADER CURB LEFT OF ℄	
STATION TO STATION	LF
4041+00 - 4044+00	290

SEE ▩ FOR REPAVING OF SURFACE LOT

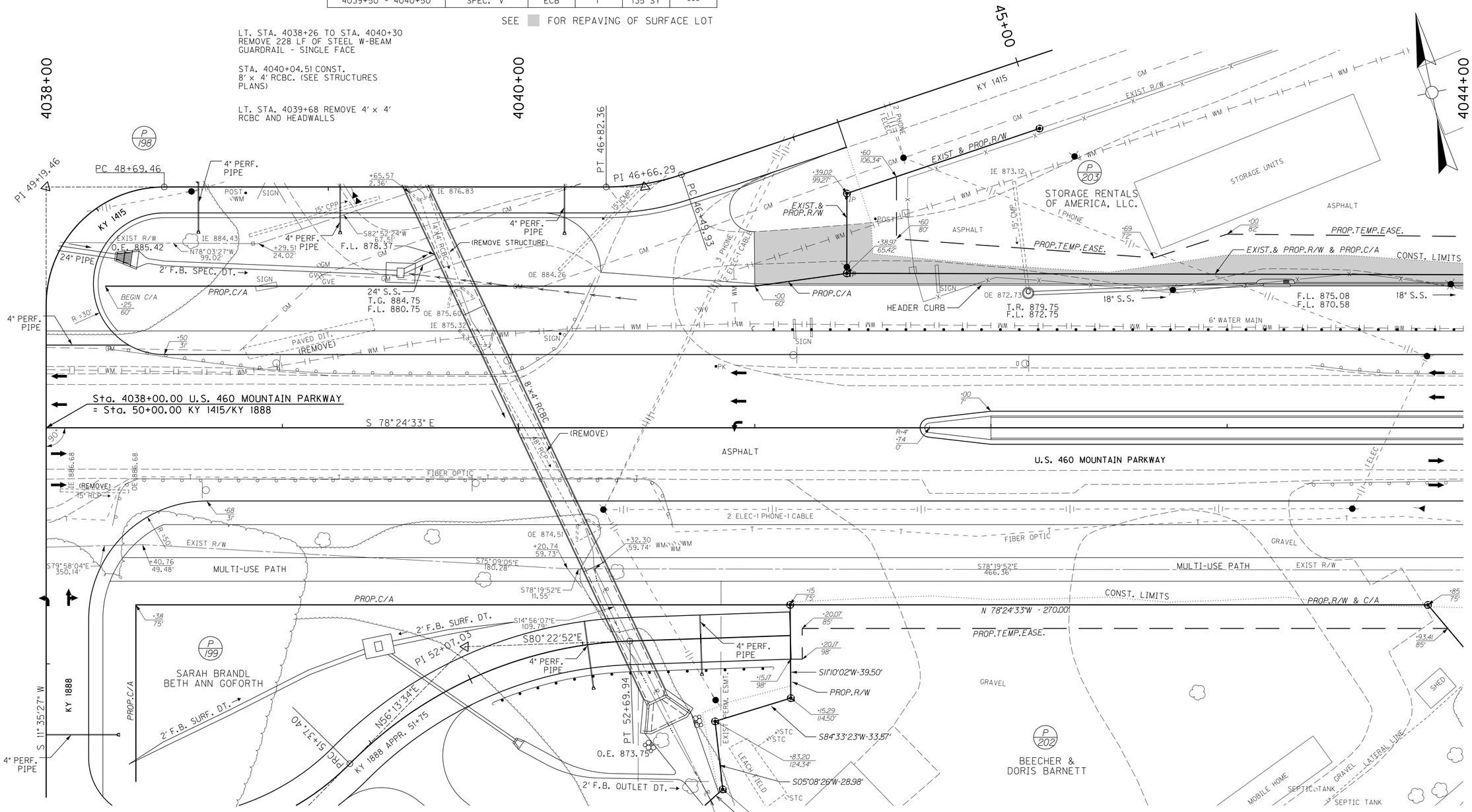
LT. STA. 4038+26 TO STA. 4040+30
REMOVE 228 LF OF STEEL W-BEAM
GUARDRAIL - SINGLE FACE

STA. 4040+04.51 CONST.
8' x 4' RCBC. (SEE STRUCTURES
PLANS)

LT. STA. 4039+68 REMOVE 4' x 4'
RCBC AND HEADWALLS

LT. STA. 4043+35 TO STA. 4044+00
REMOVE 65 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

LT. STA. 4041+00 TO STA. 4044+00
CONST. 398 SY OF ASPHALT ENTR.
PAVEMENT FOR SURFACE LOT



CONST. SOD RIGHT OF ℄	
STATION TO STATION	SY
4038+27 - 4044+00	380

RT. STA. 4038+28 TO STA. 4040+65
REMOVE 263 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

RT. STA. 4043+33 TO STA. 4044+00
REMOVE 67 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

STA. 4041+70 TO STA. 4042+00
CONST. 1 - CONCRETE TERMINAL
SECTION TY. 1

CONSTRUCT MULTI-USE PATH RIGHT OF ℄			
STATION TO STATION	SY	RAMP	DET. WARN.
4038+27 - 4044+00	634	---	20 SF

DITCH CONSTRUCTION RIGHT OF ℄					
STA. TO STA.	DESCRIPTION	CHANNEL LINING			
		TYPE	DEPTH	QUANTITY	GEO. TY. 1
4038+50 - 4044+00	NORMAL	ECB	1'	623 SY	---

CONST. STANDARD CURB & GUTTER MEDIAN	
STATION TO STATION	LF
4042+00 - 4044+00	400

SCALE: 1"=20'

U.S. 460 MOUNTAIN PARKWAY
STA. 4038+00 TO STA. 4044+00

FILE NAME: J:\11303\PROJECT_MILESTONES\CONTRACT_PLANS_AND_PROPOSAL\CONTRACT_PLAN_SET\ROADWAY\DGN'S\R04100PL - ADDENDUM - 6-20-2016.DGN
USER: ehackworth
DATE PLOTTED: June 20, 2016
E-SHEET NAME:
MicroStation v8.11.9.357

COUNTY OF	ITEM NO.	SHEET NO.
MAGOFFIN	10-166.00	R41

GUARDRAIL CONSTRUCTION LEFT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE	---	4A	2A
4041+00 - 4044+00	300	---	---	1

DITCH CONSTRUCTION LEFT OF ℄					
STA. TO STA.	DESCRIPTION	CHANNEL LINING			
		TYPE	DEPTH	QUANTITY	GEO. TY. 1
4038+50 - 4039+50	2' F.B. SPEC.	ECB	1'	157 SY	---
4039+50 - 4040+50	SPEC. "V"	ECB	1'	135 SY	---

CONST. STANDARD HEADER CURB LEFT OF ℄	
STATION TO STATION	LF
4041+00 - 4044+00	290

LT. STA. 4043+35 TO STA. 4044+00
REMOVE 65 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

LT. STA. 4041+00 TO STA. 4044+00
CONST. 398 SY OF ASPHALT ENTR.
PAVEMENT FOR SURFACE LOT

SEE ▩ FOR REPAVING OF SURFACE LOT

LT. STA. 4038+26 TO STA. 4040+30
REMOVE 228 LF OF STEEL W-BEAM
GUARDRAIL - SINGLE FACE

STA. 4040+04.51 CONST.
8' x 4' RCBC. (SEE STRUCTURES PLANS)

LT. STA. 4039+68 REMOVE 4' x 4' RCBC AND HEADWALLS

4038+00 4040+00 45+00 4044+00

P 198 P 203 P 199 P 202

PI 49+19.46 PC 48+69.46 PT 46+82.36 PI 46+66.29 POC 46+49.93

KY 1415 KY 1888

4" PERF. PIPE 24" PIPE 15" CPP 15" RCP 14'-4" x 8'-0" RCBC 8'x4' RCBC 48" RCP

EXIST R/W O.E. 885.42 IE 884.43 N78°03'27"W 99.02' +65.57 2.36' +29.51 24.02' S82°52'24"W 67.51' F.L. 878.37 IE 876.83 OE 884.26 OE 875.60 IE 875.32 OE 874.51 OE 873.75 OE 886.68 IE 886.68

2' F.B. SPEC. DT. 2' F.B. SURF. DT. 2' F.B. OUTLET DT. 24" S.S. T.G. 884.75 F.L. 880.75 18" S.S. F.L. 875.08 F.L. 870.58 6" WATER MAIN

PROP.C/A BEGIN C/A +25 60' R=30' PAVED DIT. (REMOVE) (REMOVE) (REMOVE) EXIST R/W PROP.R/W PROP.R/W & C/A PROP.TEMP.EASE. CONST. LIMITS

EXIST.& PROP.R/W EXIST & PROP.R/W EXIST.& PROP.R/W & PROP.C/A

HEADER CURB T.R. 879.75 F.L. 872.75 R=4' T=4' 0'

STORAGE RENTALS OF AMERICA, LLC. STORAGE UNITS ASPHALT

2 PHONE-1 TELEC 3 PHONE-1 ELEC-1 CABLE 2 ELEC-1 PHONE-1 CABLE FIBER OPTIC GM WM SIGN POST PK

Sta. 4038+00.00 U.S. 460 MOUNTAIN PARKWAY
= Sta. 50+00.00 KY 1415/KY 1888

S 78°24'33" E U.S. 460 MOUNTAIN PARKWAY ASPHALT

S 11°35'27" W S79°58'04"E 350.14' +40.76 49.48' MULTI-USE PATH S75°09'05"E 180.28' S78°19'52"E 11.55' S78°19'52"E 466.36' MULTI-USE PATH GRAVEL

PI 52+07.05 S80°22'52"E PT 52+69.94 N56°13'34"E KY 1888 APPR. 51+75 PRC 51+37.40

SARAH BRANDL BETH ANN GOFORTH

BEECHER & DORIS BARNETT

S11°10'02"W-39.50' S84°33'23"W-33.57' S05°08'26"W-28.98' S59°32'28"W-7.00' N 78°24'33"W - 270.00'

4" PERF. PIPE 4" PERF. PIPE (REMOVE STRUCTURE) 4" PERF. PIPE 4" PERF. PIPE

PROP. ESMT. EXIST. ESMT. LEACH FIELD STC GRAVEL LATERAL LINE SHED MOBILE HOME SEPTIC TANK SEPTIC TANK

RT. STA. 4038+28 TO STA. 4040+65
REMOVE 263 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

CONST. SOD RIGHT OF ℄	
STATION TO STATION	SY
4038+27 - 4044+00	380

RT. STA. 4043+33 TO STA. 4044+00
REMOVE 67 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

STA. 4041+70 TO STA. 4042+00
CONST. 1 - CONCRETE TERMINAL
SECTION TY. 1

CONSTRUCT MULTI-USE PATH RIGHT OF ℄			
STATION TO STATION	SY	RAMP	DET. WARN.
4038+27 - 4044+00	634	---	20 SF

DITCH CONSTRUCTION RIGHT OF ℄					
STA. TO STA.	DESCRIPTION	CHANNEL LINING			
		TYPE	DEPTH	QUANTITY	GEO. TY. 1
4038+50 - 4044+00	NORMAL	ECB	1'	623 SY	---

CONST. STANDARD CURB & GUTTER MEDIAN	
STATION TO STATION	LF
4042+00 - 4044+00	400

0' 20' 40' 80'

SCALE: 1"=20'

U.S. 460 MOUNTAIN PARKWAY
STA. 4038+00 TO STA. 4044+00

MAINTENANCE OF TRAFFIC SPECIAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
MAGOFFIN	10-166.00	R159

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.

2. THE CONTRACTOR SHALL MAINTAIN A TWO LANE TRAVELED WAY WITH A MINIMUM LANE WIDTH OF 11 FEET AND A MINIMUM PAVED SHOULDER WIDTH OF 2 FEET, UNLESS OTHERWISE NOTED. FROM THE US 460 WEST INTERSECTION TO THE US 460 EAST INTERSECTION, THE CONTRACTOR SHALL MAINTAIN 3 LANES (MINIMUM WIDTH OF 11 FEET AND A MINIMUM PAVED SHOULDER WIDTH OF 2 FEET) UNTIL THE FRONTAGE, BACKAGE, AND APPROACH ROADS ARE CONSTRUCTED AND OPEN TO TRAFFIC AND UNTIL EXISTING DRIVEWAY/ENTRANCE ACCESSES ARE RELOCATED OFF THE MAINLINE. ONCE THE FRONTAGE, BACKAGE, AND APPROACH ROADS ARE OPEN TO TRAFFIC AND THE DRIVEWAYS/ENTRANCES ARE RELOCATED, THEN THE CONTRACTOR CAN MAINTAIN 2 LANES (MINIMUM WIDTH OF 11 FEET AND A MINIMUM PAVED SHOULDER WIDTH OF 2 FEET) EXCEPT AT THE INTERSECTIONS WHERE LEFT TURN LANES WILL BE REQUIRED. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL SCHEME AND CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS AND THIS PROPOSAL, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL BY THE INITIAL SIGNERS OF THE TMP.

   ACCESS SHALL BE MAINTAINED TO ALL ENTRANCES DURING CONSTRUCTION OF THE PROJECT. ACCESS SHALL BE DEFINED AT A MINIMUM AS AN ENTRANCE WITH 4 INCHES OF CRUSHED STONE BASE OVER A WIDTH EQUAL TO THAT OF THE EXISTING ENTRANCES. ACCESS TO FIRE HYDRANTS MUST ALSO BE MAINTAINED AT ALL TIMES. ENTRANCES SHALL BE A MINIMUM OF 12' FOR SINGLE DIRECTION COMMERCIAL ENTRANCE, 24' FOR A BI-DIRECTIONAL ENTRANCE OR 12' FOR A RESIDENTIAL ENTRANCE. IN CASES WHERE EXISTING PROPERTIES HAVE TWO ENTRANCES, THEN ACCESS MUST BE PROVIDED TO ACCOMMODATE EXISTING OPERATIONS (I.E. DRIVE-THROUGH).

   PRIOR TO THE CONTRACTOR PERFORMING ANY CONSTRUCTION PHASE, HE MUST APPLY IN WRITING TO THE ENGINEER FOR APPROVAL OF THE TIME SELCTED. THE CONTRACTOR SHALL BE CHARGED DISINCENTIVES FOR FAILING TO RE-OPEN TRAFFIC TO THREE LANES OF TRAVEL BY THE SPECIFIED TIME. THE FOLLOWING DISCENTIVES WILL APPLY:

A. ROAD CLOSURES ON MOUNTAIN PARKWAY & U. S. 460

   WHEN SETTING BEAMS, REMOVING AND SETTING OVERHEAD SIGN SUPPORTS, CHANGING FROM ONE TRAFFIC PATTERN TO ANOTHER OR OTHER ACTIVITIES APPROVED BY THE ENGINEER, TRAFFIC MAY BE HALTED. PRIOR APPROVAL BY THE ENGINEER WILL BE REQUIRED FOR ALL ROAD CLOSURES. IT IS THE INTENT THAT ALL ROAD CLOSURES BE KEPT TO A MINIMUM TIME. THE CONTRACTOR IS TO SCHEDULE OPERATIONS INVOLVING ROAD CLOSURES SO THAT ALL WORK PROCEEDS IN AN EXPEDITIOUS MANNER. IT IS THE INTENT THAT ROAD CLOSURES BE HELD TO A MAXIMUM OF 20 MINUTES. WHEN LANE CLOSURES EXCEED 20 MINUTES, THEN THE FOLLOWING DISINCENTIVES APPLY FOR EACH OCCURRENCE:

   21 MINUTES: $2,000 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 40 MINS
   41 MINUTES: ADDITIONAL $5,000 (FIVE THOUSAND DOLLARS) + $250 MIN UP TO 60 MIN

   IN ADDITION TO THE PREVIOUS DISINCENTIVES, ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF ROAD CLOSURE OPERATIONS: MOUNTAIN PARKWAY & US 460" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $10,000.00 (TEN THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF. ROAD CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF ROAD CLOSURE OPERATIONS: MOUNTAIN PARKWAY & U. S. 460" AS DESCRIBED BELOW. INTERRUPTIONS TO TRAFFIC SHALL NOT OCCUR MORE THAN ONCE IN A PERIOD OF PERMITTED ROAD CLOSURES UNLESS NORMAL TRAFFIC FLOW HAS BEEN RESTORED AND THE ENGINEER APPROVES ANOTHER ROAD CLOSURE.

B. HOURS OF ROAD CLOSURE OPERATIONS: MOUNTAIN PARKWAY

MONDAY	8:00 PM	-	TUESDAY	6:00 AM
TUESDAY	8:00 PM	-	WEDNESDAY	6:00 AM
WEDNESDAY	8:00 PM	-	THURSDAY	6:00 AM
THURSDAY	8:00 PM	-	FRIDAY	6:00 AM
FRIDAY	MIDNIGHT	-	SATURDAY	8:00 AM
SATURDAY	MIDNIGHT	-	SUNDAY	8:00 AM
SUNDAY	8:00 PM	-	MONDAY	6:00 AM

C. ROAD CLOSURES ON FRONTAGE ROAD, BACKAGE ROAD & APPROACHES

   WHEN CHANGING FROM ONE TRAFFIC PATTERN TO ANOTHER OR OTHER ACTIVITIES APPROVED BY THE ENGINEER, TRAFFIC MAY BE HALTED. PRIOR APPROVAL BY THE ENGINEER WILL BE REQUIRED FOR ALL ROAD CLOSURES. IT IS THE INTENT THAT ALL ROAD CLOSURES BE KEPT TO A MINIMUM TIME. THE CONTRACTOR IS TO SCHEDULE OPERATIONS INVOLVING ROAD CLOSURES SO THAT ALL WORK PROCEEDS IN AN EXPEDITIOUS MANNER. IT IS THE INTENT THAT ROAD CLOSURES BE HELD TO A MAXIMUM OF 20 MINUTES. WHEN LANE CLOSURES EXCEED 20 MINUTES, THEN THE FOLLOWING DISINCENTIVES APPLY FOR EACH OCCURRENCE:

C. ROAD CLOSURES ON FRONTAGE ROAD, BACKAGE ROAD & APPROACHES (CONTINUED)

   21 MINUTES: $1,000.00 (ONE THOUSAND DOLLARS) + $50/MIN UP TO 40 MIN
   41 MINUTES: ADDITIONAL $2,000.00 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 60 MIN

   ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $5,000.00 (FIVE THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF. ROAD CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF ROAD CLOSURE OPERATIONS" AS DESCRIBED BELOW. INTERRUPTIONS TO TRAFFIC SHALL NOT OCCUR MORE THAN ONCE IN A PERIOD OF PERMITTED ROAD CLOSURES UNLESS NORMAL TRAFFIC FLOW HAS BEEN RESTORED AND THE ENGINEER APPROVES ANOTHER ROAD CLOSURE.

D. ADDITIONAL CLOSURES ON FRONTAGE ROAD

   WHEN CONSTRUCTING THE FRONTAGE ROAD, CONSTRUCTING UTILITIES ALONG THE FRONTAGE ROAD OR OTHER ACTIVITIES ALONG THE FRONTAGE ROAD APPROVED BY THE ENGINEER, TRAFFIC MAY BE HALTED OVER A CONTINUOUS 400 FOOT SECTION OF THE FRONTAGE ROAD. THIS CLOSURE SHALL ONLY BE WITHIN THE SPECIFIED "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES" DESCRIBED BELOW AND LOCAL ACCESS MUST BE MAINTAINED AT ALL TIMES. PRIOR APPROVAL BY THE ENGINEER WILL BE REQUIRED FOR ALL ROAD CLOSURES. THE CONTRACTOR IS TO SCHEDULE OPERATIONS INVOLVING ROAD CLOSURES SO THAT ALL WORK PROCEEDS IN AN EXPEDITIOUS MANNER.

   REGARDLESS OF WHETHER PLANNED CONSTRUCTION CAN BE COMPLETED IN A SINGLE APPROVED PERIOD OF THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES", THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE ROAD CLOSURE AND PROVIDE A TEMPORARY DRIVING SURFACE, SIGNING AND DELINEATION FOR NORMAL OPERATION AS DIRECTED BY THE ENGINEER. WHEN LANE CLOSURES EXCEED THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES", THEN THE FOLLOWING DISINCENTIVES APPLY FOR EACH OCCURRENCE:

   UP TO 20 MINUTES: $2,000.00 (TWO THOUSAND DOLLARS)
   21 MINUTES: ADDITIONAL $5,000.00 (FIVE THOUSAND DOLLARS) + $250/MIN UP TO 40 MIN
   41 MINUTES: ADDITIONAL $10,000.00 (TEN THOUSAND DOLLARS) + $500/MIN UP TO 60 MIN

   ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $20,000.00 (TWENTY THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF.

E. HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES

MONDAY	10:00 PM	-	TUESDAY	6:00 AM
TUESDAY	10:00 PM	-	WEDNESDAY	6:00 AM
WEDNESDAY	10:00 PM	-	THURSDAY	6:00 AM
THURSDAY	10:00 PM	-	FRIDAY	6:00 AM
FRIDAY	MIDNIGHT	-	SATURDAY	6:00 AM
SATURDAY	MIDNIGHT	-	SUNDAY	6:00 AM
SUNDAY	10:00 PM	-	MONDAY	6:00 AM

F. BLASTING OPERATIONS

   BLASTING OPERATION SHALL COMPLY WITH 'SPECIAL NOTE FOR ROCK BLASTING - 11D' (INCLUDED IN THE PROPOSAL) AND THE NOTE BELOW.

   DURING BLASTING OPERATIONS, TRAFFIC MAY BE HALTED A MAXIMUM OF 20 MINUTES PER HOUR TO ALLOW THE EXECUTION OF THE "SHOT" AND TO ALLOW FOR REMOVAL OF ROCK FRAGMENTS AND DEBRIS. THE CONTRACTOR, WHEN USING EXPLOSIVE CHARGES OF ANY KIND FOR THE PURPOSE OF EXCAVATING, REMOVAL, ETC., ON THIS PROJECT SHALL HALT ALL TRAFFIC A SAFE DISTANCE ON EITHER SIDE OF THE IMPENDING EXPLOSION. THE CONTRACTOR SHALL IMMEDIATELY INSPECT THE PAVEMENTS FOR ANY DEBRIS THAT MAY BE A HAZARD TO TRAFFIC BEFORE ALLOWING TRAFFIC TO PROCEED ON THE AFFECTED SECTION. WHEN BLASTING, THE CONTRACTOR SHALL HALT TRAFFIC, BLAST, CLEAN THE EXISTING PAVEMENTS AND RETURN TRAFFIC TO NORMAL OPERATION IN THE LEAST AMOUNT OF TIME POSSIBLE.

   21 MINUTES: $2,000 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 40 MIN
   41 MINUTES: ADDITIONAL $5,000 (FIVE THOUSAND DOLLARS) + $250/MIN UP TO 60 MIN

   IN ADDITION TO THE PREVIOUS DISINCENTIVES, ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF BLASTING OPERATIONS" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $10,000.00 (TEN THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF. ROAD CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF BLASTING OPERATIONS" AS DESCRIBED BELOW. INTERRUPTIONS TO TRAFFIC SHALL NOT OCCUR MORE THAN ONCE IN A PERIOD OF PERMITTED ROAD CLOSURES UNLESS NORMAL TRAFFIC FLOW HAS BEEN RESTORED AND THE ENGINEER APPROVES ANOTHER ROAD CLOSURE.

G. HOURS OF BLASTING OPERATIONS

MONDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
TUESDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
WEDNESDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
THURSDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
FRIDAY	9:00 AM - 11:00 AM AND 1:00 PM - 2:00 PM
SATURDAY	NO BLASTING PERMITTED
SUNDAY	NO BLASTING PERMITTED

H. HOLIDAYS AND SPECIAL EVENTS

   LISTED BELOW ARE DATES AND TIMES FOR HOLIDAYS AND SPECIAL EVENTS WHEN LANE CLOSURES, ROAD CLOSURES, OR BLASTING WILL NOT BE PERMITTED:

   JULY 2 - 5, 2016 (INDEPENDENCE DAY WEEKEND)
   SEPTEMBER 2 - 5, 2016 (LABOR DAY WEEKEND)
   NOVEMBER 8, 2016 (PRESIDENTIAL ELECTION)
   NOVEMBER 23 - 28, 2016 (THANKSGIVING DAY WEEKEND)
   DECEMBER 23, 2016 - JANUARY 2, 2017 (CHRISTMAS AND NEW YEAR'S PERIOD)
   APRIL 14 - 16, 2017 (EASTER WEEKEND)
   MAY 26 - 29, 2017 (MEMORIAL DAY WEEKEND)

   FUTURE HOLIDAY AND SPECIAL EVENTS DATES WHEN LANE CLOSURES WILL NOT BE PERMITTED SHALL BE DETERMINED BY THE DEPARTMENT IF NECESSARY, COMPARABLE TO ABOVE DATES. THE ABOVE DATES ARE SUBJECT TO CHANGE IF THE DEPARTMENT DEEMS IT NECESSARY. THE CONTRACTOR IS FURTHER CAUTIONED THAT THE ENGINEER MAY, WITH A MINIMUM OF 48 HOURS WRITTEN NOTICE, PROHIBIT THE CLOSURE OF ANY LANES ON DAYS THAT THE ENGINEER FEELS WOULD BE DETRIMENTAL TO TRAFFIC FOR SPECIAL OR UNUSUAL DAYS NOT COVERED ABOVE.

I. LANE CLOSURES

   WHEN CONSTRUCTION ADJACENT TO THE EDGE OF PAVEMENT IS IN PROGRESS AND WHEN INSTALLING BARRIER WALL ADJACENT TO A TRAVELED WAY, ONE LANE SHALL BE CLOSED. LANE CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF LANE CLOSURE" AS DESCRIBED BELOW. ONCE CONSTRUCTION ADJACENT TO A TRAVELED WAY HAS BEGUN, THAT CONSTRUCTION SHALL BE EXPEDITED UNTIL COMPLETE.

   IF CONSTRUCTION CANNOT BE COMPLETED IN A SINGLE APPROVED PERIOD OF "HOURS OF LANE CLOSURE OPERATIONS", THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE LANE CLOSURE AND PROVIDE THE PROPER SIGNING AND DELINEATION FOR A SHOULDER CLOSURE. LANE CLOSURES SHALL NOT BE LEFT IN PLACE DURING NON-WORKING HOURS.

   ONE-WAY TRAFFIC MAY BE ALLOWED WITHIN THE "HOURS OF LANE CLOSURE OPERATIONS" AT THE DISCRETION OF THE ENGINEER, PROVIDED ADEQUATE SIGNING AND A FLAG PERSON ARE AT THE LOCATION. THE FOLLOWING DISINCENTIVES WILL BE ASSESSED FOR EACH OCCURRENCE OF LANE CLOSURES EXCEEDING THE "HOURS OF LANE CLOSURE":

   UP TO 20 MINUTES: $1,000.00 (ONE THOUSAND DOLLARS)
   21 MINUTES: ADDITIONAL $2,000.00 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 40 MIN
   41 MINUTES: ADDITIONAL $5,000.00 (FIVE THOUSAND DOLLARS) + $250/MIN UP TO 60 MIN

   ALL LANE CLOSURES EXCEEDING THE "HOURS OF LANE CLOSURE OPERATIONS" BY 60 MINUTES OR OUTSIDE THE "HOURS OF LANE CLOSURE OPERATIONS" DESCRIBED BELOW, WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $10,000.00 (TEN THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF.

   ALL LANE CLOSURES SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK COMMENCING.

J. HOURS OF LANE CLOSURE OPERATIONS

MON.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
TUE.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
WED.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
THR.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
FRI.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM & 1:00 PM - 3:00 PM
SAT.	NO LANE CLOSURES PERMITTED
SUN.	NO LANE CLOSURES PERMITTED

K. IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY VEHICLE ON AN OFFICIAL EMERGENCY RUN ARRIVES AT THE SCENE, THE CONTRACTOR SHALL MAKE THE PROVISIONS FOR THE PASSAGE OF THAT VEHICLE AS QUICKLY AS POSSIBLE.

L. NO DIRECT PAYMENT WILL BE MADE FOR ROAD OR LANE CLOSURES. ALL LANE CLOSURES (LONG-TERM OR SHORT-TERM) WILL BE INCIDENTAL TO THE LUMP SUM ITEM FOR MAINTAIN & CONTROL TRAFFIC.

MAINTENANCE OF TRAFFIC
SPECIAL NOTES

MAINTENANCE OF TRAFFIC SPECIAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
MAGOFFIN	10-166.00	R159

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.

2. THE CONTRACTOR SHALL MAINTAIN A TWO LANE TRAVELED WAY WITH A MINIMUM LANE WIDTH OF 11 FEET AND A MINIMUM PAVED SHOULDER WIDTH OF 2 FEET, UNLESS OTHERWISE NOTED. FROM THE US 460 WEST INTERSECTION TO THE US 460 EAST INTERSECTION, THE CONTRACTOR SHALL MAINTAIN 3 LANES (MINIMUM WIDTH OF 11 FEET AND A MINIMUM PAVED SHOULDER WIDTH OF 2 FEET) UNTIL THE FRONTAGE, BACKAGE, AND APPROACH ROADS ARE CONSTRUCTED AND OPEN TO TRAFFIC AND UNTIL EXISTING DRIVEWAY/ENTRANCE ACCESSES ARE RELOCATED OFF THE MAINLINE. ONCE THE FRONTAGE, BACKAGE, AND APPROACH ROADS ARE OPEN TO TRAFFIC AND THE DRIVEWAYS/ENTRANCES ARE RELOCATED, THEN THE CONTRACTOR CAN MAINTAIN 2 LANES (MINIMUM WIDTH OF 11 FEET AND A MINIMUM PAVED SHOULDER WIDTH OF 2 FEET) EXCEPT AT THE INTERSECTIONS WHERE LEFT TURN LANES WILL BE REQUIRED. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL SCHEME AND CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS AND THIS PROPOSAL, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL BY THE INITIAL SIGNERS OF THE TMP.

ACCESS SHALL BE MAINTAINED TO ALL ENTRANCES DURING CONSTRUCTION OF THE PROJECT. ACCESS SHALL BE DEFINED AT A MINIMUM AS AN ENTRANCE WITH 4 INCHES OF CRUSHED STONE BASE OVER A WIDTH EQUAL TO THAT OF THE EXISTING ENTRANCES. ACCESS TO FIRE HYDRANTS MUST ALSO BE MAINTAINED AT ALL TIMES. ENTRANCES SHALL BE A MINIMUM OF 12' FOR SINGLE DIRECTION COMMERCIAL ENTRANCE, 24' FOR A BI-DIRECTIONAL ENTRANCE OR 12' FOR A RESIDENTIAL ENTRANCE. IN CASES WHERE EXISTING PROPERTIES HAVE TWO ENTRANCES, THEN ACCESS MUST BE PROVIDED TO ACCOMMODATE EXISTING OPERATIONS (I.E. DRIVE-THROUGH).

PRIOR TO THE CONTRACTOR PERFORMING ANY CONSTRUCTION PHASE, HE MUST APPLY IN WRITING TO THE ENGINEER FOR APPROVAL OF THE TIME SELCTED. THE CONTRACTOR SHALL BE CHARGED DISINCENTIVES FOR FAILING TO RE-OPEN TRAFFIC TO THREE LANES OF TRAVEL BY THE SPECIFIED TIME. THE FOLLOWING DISCENTIVES WILL APPLY:

A. ROAD CLOSURES ON MOUNTAIN PARKWAY & U. S. 460

WHEN SETTING BEAMS, REMOVING AND SETTING OVERHEAD SIGN SUPPORTS, CHANGING FROM ONE TRAFFIC PATTERN TO ANOTHER OR OTHER ACTIVITIES APPROVED BY THE ENGINEER, TRAFFIC MAY BE HALTED. PRIOR APPROVAL BY THE ENGINEER WILL BE REQUIRED FOR ALL ROAD CLOSURES. IT IS THE INTENT THAT ALL ROAD CLOSURES BE KEPT TO A MINIMUM TIME. THE CONTRACTOR IS TO SCHEDULE OPERATIONS INVOLVING ROAD CLOSURES SO THAT ALL WORK PROCEEDS IN AN EXPEDITIOUS MANNER. IT IS THE INTENT THAT ROAD CLOSURES BE HELD TO A MAXIMUM OF 20 MINUTES. WHEN LANE CLOSURES EXCEED 20 MINUTES, THEN THE FOLLOWING DISINCENTIVES APPLY FOR EACH OCCURRENCE:

21 MINUTES: $2,000 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 40 MINS
41 MINUTES: ADDITIONAL $5,000 (FIVE THOUSAND DOLLARS) + $250 MIN UP TO 60 MIN

IN ADDITION TO THE PREVIOUS DISINCENTIVES, ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF ROAD CLOSURE OPERATIONS: MOUNTAIN PARKWAY & US 460" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $10,000.00 (TEN THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF. ROAD CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF ROAD CLOSURE OPERATIONS: MOUNTAIN PARKWAY & U. S. 460" AS DESCRIBED BELOW. INTERRUPTIONS TO TRAFFIC SHALL NOT OCCUR MORE THAN ONCE IN A PERIOD OF PERMITTED ROAD CLOSURES UNLESS NORMAL TRAFFIC FLOW HAS BEEN RESTORED AND THE ENGINEER APPROVES ANOTHER ROAD CLOSURE.

B. HOURS OF ROAD CLOSURE OPERATIONS: MOUNTAIN PARKWAY

MONDAY	8:00 PM	-	TUESDAY	6:00 AM
TUESDAY	8:00 PM	-	WEDNESDAY	6:00 AM
WEDNESDAY	8:00 PM	-	THURSDAY	6:00 AM
THURSDAY	8:00 PM	-	FRIDAY	6:00 AM
FRIDAY	MIDNIGHT	-	SATURDAY	8:00 AM
SATURDAY	MIDNIGHT	-	SUNDAY	8:00 AM
SUNDAY	8:00 PM	-	MONDAY	6:00 AM

C. ROAD CLOSURES ON FRONTAGE ROAD, BACKAGE ROAD & APPROACHES

WHEN CHANGING FROM ONE TRAFFIC PATTERN TO ANOTHER OR OTHER ACTIVITIES APPROVED BY THE ENGINEER, TRAFFIC MAY BE HALTED. PRIOR APPROVAL BY THE ENGINEER WILL BE REQUIRED FOR ALL ROAD CLOSURES. IT IS THE INTENT THAT ALL ROAD CLOSURES BE KEPT TO A MINIMUM TIME. THE CONTRACTOR IS TO SCHEDULE OPERATIONS INVOLVING ROAD CLOSURES SO THAT ALL WORK PROCEEDS IN AN EXPEDITIOUS MANNER. IT IS THE INTENT THAT ROAD CLOSURES BE HELD TO A MAXIMUM OF 20 MINUTES. WHEN LANE CLOSURES EXCEED 20 MINUTES, THEN THE FOLLOWING DISINCENTIVES APPLY FOR EACH OCCURRENCE:

C. ROAD CLOSURES ON FRONTAGE ROAD, BACKAGE ROAD & APPROACHES (CONTINUED)

21 MINUTES: $1,000.00 (ONE THOUSAND DOLLARS) + $50/MIN UP TO 40 MIN
41 MINUTES: ADDITIONAL $2,000.00 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 60 MIN

ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $5,000.00 (FIVE THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF. ROAD CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF ROAD CLOSURE OPERATIONS" AS DESCRIBED BELOW. INTERRUPTIONS TO TRAFFIC SHALL NOT OCCUR MORE THAN ONCE IN A PERIOD OF PERMITTED ROAD CLOSURES UNLESS NORMAL TRAFFIC FLOW HAS BEEN RESTORED AND THE ENGINEER APPROVES ANOTHER ROAD CLOSURE.

D. ADDITIONAL CLOSURES ON FRONTAGE ROAD

WHEN CONSTRUCTING THE FRONTAGE ROAD, CONSTRUCTING UTILITIES ALONG THE FRONTAGE ROAD OR OTHER ACTIVITIES ALONG THE FRONTAGE ROAD APPROVED BY THE ENGINEER, TRAFFIC MAY BE HALTED OVER A CONTINUOUS 400 FOOT SECTION OF THE FRONTAGE ROAD. THIS CLOSURE SHALL ONLY BE WITHIN THE SPECIFIED "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES" DESCRIBED BELOW AND LOCAL ACCESS MUST BE MAINTAINED AT ALL TIMES. PRIOR APPROVAL BY THE ENGINEER WILL BE REQUIRED FOR ALL ROAD CLOSURES. THE CONTRACTOR IS TO SCHEDULE OPERATIONS INVOLVING ROAD CLOSURES SO THAT ALL WORK PROCEEDS IN AN EXPEDITIOUS MANNER.

REGARDLESS OF WHETHER PLANNED CONSTRUCTION CAN BE COMPLETED IN A SINGLE APPROVED PERIOD OF THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES", THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE ROAD CLOSURE AND PROVIDE A TEMPORARY DRIVING SURFACE, SIGNING AND DELINEATION FOR NORMAL OPERATION AS DIRECTED BY THE ENGINEER. WHEN LANE CLOSURES EXCEED THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES", THEN THE FOLLOWING DISINCENTIVES APPLY FOR EACH OCCURRENCE:

UP TO 20 MINUTES: $2,000.00 (TWO THOUSAND DOLLARS)
21 MINUTES: ADDITIONAL $5,000.00 (FIVE THOUSAND DOLLARS) + $250/MIN UP TO 40 MIN
41 MINUTES: ADDITIONAL $10,000.00 (TEN THOUSAND DOLLARS) + $500/MIN UP TO 60 MIN

ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $20,000.00 (TWENTY THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF.

E. HOURS OF ROAD CLOSURE OPERATIONS: FRONTAGE RD. BACKAGE RD. & APPROACHES

MONDAY	10:00 PM	-	TUESDAY	6:00 AM
TUESDAY	10:00 PM	-	WEDNESDAY	6:00 AM
WEDNESDAY	10:00 PM	-	THURSDAY	6:00 AM
THURSDAY	10:00 PM	-	FRIDAY	6:00 AM
FRIDAY	MIDNIGHT	-	SATURDAY	6:00 AM
SATURDAY	MIDNIGHT	-	SUNDAY	6:00 AM
SUNDAY	10:00 PM	-	MONDAY	6:00 AM

F. BLASTING OPERATIONS

BLASTING OPERATION SHALL COMPLY WITH 'SPECIAL NOTE FOR ROCK BLASTING - 11D' (INCLUDED IN THE PROPOSAL) AND THE NOTE BELOW.

DURING BLASTING OPERATIONS, TRAFFIC MAY BE HALTED A MAXIMUM OF 20 MINUTES PER HOUR TO ALLOW THE EXECUTION OF THE "SHOT" AND TO ALLOW FOR REMOVAL OF ROCK FRAGMENTS AND DEBRIS. THE CONTRACTOR, WHEN USING EXPLOSIVE CHARGES OF ANY KIND FOR THE PURPOSE OF EXCAVATING, REMOVAL, ETC., ON THIS PROJECT SHALL HALT ALL TRAFFIC A SAFE DISTANCE ON EITHER SIDE OF THE IMPENDING EXPLOSION. THE CONTRACTOR SHALL IMMEDIATELY INSPECT THE PAVEMENTS FOR ANY DEBRIS THAT MAY BE A HAZARD TO TRAFFIC BEFORE ALLOWING TRAFFIC TO PROCEED ON THE AFFECTED SECTION. WHEN BLASTING, THE CONTRACTOR SHALL HALT TRAFFIC, BLAST, CLEAN THE EXISTING PAVEMENTS AND RETURN TRAFFIC TO NORMAL OPERATION IN THE LEAST AMOUNT OF TIME POSSIBLE.

21 MINUTES: $2,000 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 40 MIN
41 MINUTES: ADDITIONAL $5,000 (FIVE THOUSAND DOLLARS) + $250/MIN UP TO 60 MIN

IN ADDITION TO THE PREVIOUS DISINCENTIVES, ALL ROAD CLOSURES LONGER THAN 60 MINUTES OR OUTSIDE OF THE "HOURS OF BLASTING OPERATIONS" WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $10,000.00 (TEN THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF. ROAD CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF BLASTING OPERATIONS" AS DESCRIBED BELOW. INTERRUPTIONS TO TRAFFIC SHALL NOT OCCUR MORE THAN ONCE IN A PERIOD OF PERMITTED ROAD CLOSURES UNLESS NORMAL TRAFFIC FLOW HAS BEEN RESTORED AND THE ENGINEER APPROVES ANOTHER ROAD CLOSURE.

G. HOURS OF BLASTING OPERATIONS

MONDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
TUESDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
WEDNESDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
THURSDAY	9:00 AM - 11:00 AM, 1:00 PM - 2:00 PM AND 6:00 PM TO 8:00 PM
FRIDAY	9:00 AM - 11:00 AM AND 1:00 PM - 2:00 PM
SATURDAY	NO BLASTING PERMITTED
SUNDAY	NO BLASTING PERMITTED

H. HOLIDAYS AND SPECIAL EVENTS

LISTED BELOW ARE DATES AND TIMES FOR HOLIDAYS AND SPECIAL EVENTS WHEN LANE CLOSURES, ROAD CLOSURES, OR BLASTING WILL NOT BE PERMITTED:

JULY 2 - 5, 2016 (INDEPENDENCE DAY WEEKEND)
SEPTEMBER 2 - 5, 2016 (LABOR DAY WEEKEND)
NOVEMBER 8, 2016 (PRESIDENTIAL ELECTION)
NOVEMBER 23 - 28, 2016 (THANKSGIVING DAY WEEKEND)
DECEMBER 23, 2016 - JANUARY 2, 2017 (CHRISTMAS AND NEW YEAR'S PERIOD)
APRIL 14 - 16, 2017 (EASTER WEEKEND)
MAY 26 - 29, 2017 (MEMORIAL DAY WEEKEND)

FUTURE HOLIDAY AND SPECIAL EVENTS DATES WHEN LANE CLOSURES WILL NOT BE PERMITTED SHALL BE DETERMINED BY THE DEPARTMENT IF NECESSARY, COMPARABLE TO ABOVE DATES. THE ABOVE DATES ARE SUBJECT TO CHANGE IF THE DEPARTMENT DEEMS IT NECESSARY. THE CONTRACTOR IS FURTHER CAUTIONED THAT THE ENGINEER MAY, WITH A MINIMUM OF 48 HOURS WRITTEN NOTICE, PROHIBIT THE CLOSURE OF ANY LANES ON DAYS THAT THE ENGINEER FEELS WOULD BE DETRIMENTAL TO TRAFFIC FOR SPECIAL OR UNUSUAL DAYS NOT COVERED ABOVE.

I. LANE CLOSURES

WHEN CONSTRUCTION ADJACENT TO THE EDGE OF PAVEMENT IS IN PROGRESS AND WHEN INSTALLING BARRIER WALL ADJACENT TO A TRAVELED WAY, ONE LANE SHALL BE CLOSED. LANE CLOSURES SHALL BE ALLOWED ONLY DURING "HOURS OF LANE CLOSURE" AS DESCRIBED BELOW. ONCE CONSTRUCTION ADJACENT TO A TRAVELED WAY HAS BEGUN, THAT CONSTRUCTION SHALL BE EXPEDITED UNTIL COMPLETE.

IF CONSTRUCTION CANNOT BE COMPLETED IN A SINGLE APPROVED PERIOD OF "HOURS OF LANE CLOSURE OPERATIONS", THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE LANE CLOSURE AND PROVIDE THE PROPER SIGNING AND DELINEATION FOR A SHOULDER CLOSURE. LANE CLOSURES SHALL NOT BE LEFT IN PLACE DURING NON-WORKING HOURS.

ONE-WAY TRAFFIC MAY BE ALLOWED WITHIN THE "HOURS OF LANE CLOSURE OPERATIONS" AT THE DISCRETION OF THE ENGINEER, PROVIDED ADEQUATE SIGNING AND A FLAG PERSON ARE AT THE LOCATION. THE FOLLOWING DISINCENTIVES WILL BE ASSESSED FOR EACH OCCURRENCE OF LANE CLOSURES EXCEEDING THE "HOURS OF LANE CLOSURE":

UP TO 20 MINUTES: $1,000.00 (ONE THOUSAND DOLLARS)
21 MINUTES: ADDITIONAL $2,000.00 (TWO THOUSAND DOLLARS) + $100/MIN UP TO 40 MIN
41 MINUTES: ADDITIONAL $5,000.00 (FIVE THOUSAND DOLLARS) + $250/MIN UP TO 60 MIN

ALL LANE CLOSURES EXCEEDING THE "HOURS OF LANE CLOSURE OPERATIONS" BY 60 MINUTES OR OUTSIDE THE "HOURS OF LANE CLOSURE OPERATIONS" DESCRIBED BELOW, WILL BE ASSESSED ADDITIONAL DISINCENTIVES OF $10,000.00 (TEN THOUSAND DOLLARS) PER HOUR OR FRACTION THEREOF.

ALL LANE CLOSURES SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK COMMENCING.

J. HOURS OF LANE CLOSURE OPERATIONS

MON.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
TUE.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
WED.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
THR.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM, 1:00 PM - 3:00 PM & 6:00 PM - MIDNIGHT
FRI.	MIDNIGHT - 6:00 AM, 9:00 AM - 11:00 AM & 1:00 PM - 3:00 PM
SAT.	NO LANE CLOSURES PERMITTED
SUN.	NO LANE CLOSURES PERMITTED

K. IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY VEHICLE ON AN OFFICIAL EMERGENCY RUN ARRIVES AT THE SCENE, THE CONTRACTOR SHALL MAKE THE PROVISIONS FOR THE PASSAGE OF THAT VEHICLE AS QUICKLY AS POSSIBLE.

L. NO DIRECT PAYMENT WILL BE MADE FOR ROAD OR LANE CLOSURES. ALL LANE CLOSURES (LONG-TERM OR SHORT-TERM) WILL BE INCIDENTAL TO THE LUMP SUM ITEM FOR MAINTAIN & CONTROL TRAFFIC.

MAINTENANCE OF TRAFFIC
SPECIAL NOTES

161033

PROPOSAL BID ITEMS

Report Date 6/22/16

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE (REVISED: 6-14-16)	84,168.00	TON		$	
0020	00005		GEOGRID REINFORCEMENT FOR SUBGRADE	73,600.00	SQYD		$	
0030	00100		ASPHALT SEAL AGGREGATE	6.00	TON		$	
0040	00103		ASPHALT SEAL COAT	2.00	TON		$	
0050	00190		LEVELING & WEDGING PG64-22	7,397.00	TON		$	
0060	00194		LEVELING & WEDGING PG76-22	525.00	TON		$	
0070	00212		CL2 ASPH BASE 1.00D PG64-22	25,921.00	TON		$	
0080	00214		CL3 ASPH BASE 1.00D PG64-22 (REVISED: 6-14-16)	20,807.00	TON		$	
0090	00216		CL3 ASPH BASE 1.00D PG76-22	13,186.00	TON		$	
0100	00221		CL2 ASPH BASE 0.75D PG64-22	3,592.00	TON		$	
0110	00301		CL2 ASPH SURF 0.38D PG64-22	6,890.00	TON		$	
0120	00387		CL3 ASPH SURF 0.38B PG76-22	5,827.00	TON		$	
0130	02084		JPC PAVEMENT-8 IN	142.00	SQYD		$	
0140	02101		CEM CONC ENT PAVEMENT-8 IN	1,096.00	SQYD		$	
0150	02677		ASPHALT PAVE MILLING & TEXTURING	4,083.00	TON		$	
0160	20071EC		JOINT ADHESIVE	71,500.00	LF		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1660	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS		$	
1670	01314		PLUG PIPE	3.00	EACH		$	
1680	01810		STANDARD CURB AND GUTTER	47,276.00	LF		$	
1690	01811		STANDARD CURB AND GUTTER MOD	346.00	LF		$	
1700	01815		BARRIER CURB AND GUTTER	42.00	LF		$	
1710	01825		ISLAND CURB AND GUTTER	92.25	LF		$	
1720	01875		STANDARD HEADER CURB	2,952.00	LF		$	
1730	01956		CONC TERMINAL SECTION TYPE 1	8.00	EACH		$	
1740	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	79.00	EACH		$	
1750	01986		DELINEATOR FOR BARRIER WALL-B/Y	29.00	EACH		$	
1760	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	24.00	EACH		$	
1770	01990		DELINEATOR FOR BARRIER WALL-B/W	40.00	EACH		$	
1780	02001		CURB TO BARRIER WALL TRANS	4.00	EACH		$	
1790	02002		REMOVE TEMP CONC BARRIER WALL	505.00	LF		$	
1800	02003		RELOCATE TEMP CONC BARRIER	3,465.00	LF		$	
1810	02014		BARRICADE-TYPE III	39.00	EACH		$	
1820	02015		CEMENT CONCRETE ISLAND	153.00	SQYD		$	
1830	02091		REMOVE PAVEMENT	614.00	SQYD		$	
1840	02159		TEMP DITCH	44.00	LF		$	
1850	02160		CLEAN TEMP DITCH	44.00	LF		$	
1860	24867EC		CONTAMINATED SOIL REMOVAL P100 (REVISED: 6-14-16)	3,750.00	TON		$	

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PROPOSAL BID ITEMS

Report Date 6/22/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1870	02200		ROADWAY EXCAVATION	234,640.00	CUYD		$	
1880	02203		STRUCTURE EXCAV-UNCLASSIFIED	287.00	CUYD		$	
1890	02223		GRANULAR EMBANKMENT	8,370.00	CUYD		$	
1900	02242		WATER	1,110.00	MGAL		$	
1910	02262		FENCE-WOVEN WIRE TYPE 1	3,038.00	LF		$	
1920	02351		GUARDRAIL-STEEL W BEAM-S FACE	6,887.50	LF		$	
1930	02360		GUARDRAIL TERMINAL SECTION NO 1	9.00	EACH		$	
1940	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	5.00	EACH		$	
1950	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		$	
1960	02369		GUARDRAIL END TREATMENT TYPE 2A	8.00	EACH		$	
1970	02381		REMOVE GUARDRAIL	7,075.50	LF		$	
1980	02391		GUARDRAIL END TREATMENT TYPE 4A	4.00	EACH		$	
1990	02397		TEMP GUARDRAIL	400.00	LF		$	
2000	02404		SEPTIC TANK TREATMENT	2.00	EACH		$	
2010	02429		RIGHT-OF-WAY MONUMENT TYPE 1	240.00	EACH		$	
2020	02432		WITNESS POST	240.00	EACH		$	
2030	02475		PLUG WATER WELL	2.00	EACH		$	
2040	02488		CHANNEL LINING CLASS IV	6,734.00	CUYD		$	
2050	02545		CLEARING AND GRUBBING 132 ACRES	1.00	LS		$	
2060	02555		CONCRETE-CLASS B CHANNEL LINING	3.00	CUYD		$	
2070	02555		CONCRETE-CLASS B FENCE	15.28	CUYD		$	
2080	02555		CONCRETE-CLASS B GRAVITY RETAINING WALL	201.50	CUYD		$	
2090	02562		TEMPORARY SIGNS	1,450.00	SQFT		$	
2100	02585		EDGE KEY	479.50	LF		$	
2110	02596		FABRIC-GEOTEXTILE TYPE I	9,222.00	SQYD		$	
2120	02599		FABRIC-GEOTEXTILE TYPE IV	73,600.00	SQYD		$	
2130	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	64,399.00	SQYD	$2.00	$	$128,798.00
2140	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
2150	02651		DIVERSIONS (BY-PASS DETOURS)	1.00	LS		$	
2160	02651		DIVERSIONS (BY-PASS DETOURS) NO. 2	1.00	LS		$	
2170	02651		DIVERSIONS (BY-PASS DETOURS) NO. 3	1.00	LS		$	
2180	02651		DIVERSIONS (BY-PASS DETOURS) NO. 4	1.00	LS		$	
2190	02653		LANE CLOSURE	11.00	EACH		$	
2200	02654		TRUCK MOUNTED ATTENUATOR	2.00	EACH		$	
2210	02671		PORTABLE CHANGEABLE MESSAGE SIGN	5.00	EACH		$	
2220	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
2230	02690		SAFELOADING	45.00	CUYD		$	
2240	02696		SHOULDER RUMBLE STRIPS-SAWED	3,080.00	LF		$	
2250	02701		TEMP SILT FENCE	30,129.00	LF		$	
2260	02703		SILT TRAP TYPE A	127.00	EACH		$	
2270	02704		SILT TRAP TYPE B	127.00	EACH		$	
2280	02705		SILT TRAP TYPE C	127.00	EACH		$	
2290	02706		CLEAN SILT TRAP TYPE A	127.00	EACH		$	
2300	02707		CLEAN SILT TRAP TYPE B	127.00	EACH		$	

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PROPOSAL BID ITEMS

Report Date 6/22/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2310	02708		CLEAN SILT TRAP TYPE C	127.00	EACH		$	
2320	02711		SEDIMENTATION BASIN	3,215.00	CUYD		$	
2330	02712		CLEAN SEDIMENTATION BASIN	3,215.00	CUYD		$	
2340	02720		SIDEWALK-4 IN CONCRETE	3,102.00	SQYD		$	
2350	02726		STAKING	1.00	LS		$	
2360	02731		REMOVE STRUCTURE BILLBOARD-P147	1.00	LS		$	
2370	02731		REMOVE STRUCTURE BILLBOARD-P176	1.00	LS		$	
2380	02731		REMOVE STRUCTURE BILLBOARD-P178	1.00	LS		$	
2390	02731		REMOVE STRUCTURE BILLBOARD-P181	1.00	LS		$	
2400	02731		REMOVE STRUCTURE BILLBOARD-P186	1.00	LS		$	
2410	02731		REMOVE STRUCTURE BILLBOARD-P197	1.00	LS		$	
2420	02731		REMOVE STRUCTURE BILLBOARD-P205	1.00	LS		$	
2430	02731		REMOVE STRUCTURE BRIDGE STA. 3935+25	1.00	LS		$	
2440	02731		REMOVE STRUCTURE CULVERT@STA. 3964+13 (REVISED: 6-17-16)	1.00	LS		$	
2450	02731		REMOVE STRUCTURE CULVERT @ STA. 3996+59 (REVISED: 6-17-16)	1.00	LS		$	
2460	02731		REMOVE STRUCTURE CULVERT @ STA. 4024+54 (REVISED: 6-17-16)	1.00	LS		$	
2470	02731		REMOVE STRUCTURE CULVERT @ STA. 217+14 FRONTAGE ROAD (REVISED: 6-17-16)	1.00	LS		$	
2480	02731		REMOVE STRUCTURE P174 (REVISED: 6-17-16)	1.00	LS		$	
2490	02731		REMOVE STRUCTURE P179 (REVISED: 6-17-16)	1.00	LS		$	
2500	02731		REMOVE STRUCTURE P182 (REVISED: 6-17-16)	1.00	LS		$	
2510	02731		REMOVE STRUCTURE P200 (REVISED: 6-17-16)	1.00	LS		$	
2520	02775		ARROW PANEL	5.00	EACH		$	
2530	02898		RELOCATE CRASH CUSHION	20.00	EACH		$	
2540	03171		CONCRETE BARRIER WALL TYPE 9T	3,465.00	LF		$	
2550	04741		POLE BASE IN MEDIAN WALL	7.00	EACH		$	
2560	04810		ELECTRICAL JUNCTION BOX	7.00	EACH		$	
2570	04935		TEMP SIGNAL	1.00	LS		$	
2580	04953		TEMP RELOCATION OF SIGNAL HEAD	82.00	EACH		$	
2590	05950		EROSION CONTROL BLANKET	11,307.00	SQYD		$	
2600	05952		TEMP MULCH	412,679.00	SQYD		$	
2610	05953		TEMP SEEDING AND PROTECTION	307,969.00	SQYD		$	
2620	05963		INITIAL FERTILIZER	19.00	TON		$	

PROPOSAL BID ITEMS

Report Date 6/22/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2630	05964		20-10-10 FERTILIZER	31.90	TON		$	
2640	05985		SEEDING AND PROTECTION	615,938.00	SQYD		$	
2650	05990		SODDING	18,202.00	SQYD		$	
2660	05992		AGRICULTURAL LIMESTONE	381.80	TON		$	
2670	05997		TOPSOIL FURNISHED AND PLACED	58.00	CUYD		$	
2680	06510		PAVE STRIPING-TEMP PAINT-4 IN	158,570.00	LF		$	
2690	06513		PAVE STRIPING-TEMP PAINT-12 IN	840.00	LF		$	
2700	06514		PAVE STRIPING-PERM PAINT-4 IN	114,627.00	LF		$	
2710	06515		PAVE STRIPING-PERM PAINT-6 IN	9,649.00	LF		$	
2720	06565		PAVE MARKING-THERMO X-WALK-6 IN	1,491.00	LF		$	
2730	06568		PAVE MARKING-THERMO STOP BAR-24IN	856.00	LF		$	
2740	06569		PAVE MARKING-THERMO CROSS-HATCH	18,883.00	SQFT		$	
2750	06573		PAVE MARKING-THERMO STR ARROW	3.00	EACH		$	
2760	06574		PAVE MARKING-THERMO CURV ARROW	67.00	EACH		$	
2770	06575		PAVE MARKING-THERMO COMB ARROW	21.00	EACH		$	
2780	06588		PAVEMENT MARKER TY IVA-BY TEMP	1,338.00	EACH		$	
2790	06600		REMOVE PAVEMENT MARKER TYPE V	415.00	EACH		$	
2800	08100		CONCRETE-CLASS A	3.51	CUYD		$	
2810	08150		STEEL REINFORCEMENT	163.00	LB		$	
2820	08257		HANDRAIL-PEDESTRIAN ALUMINUM	622.00	LF		$	
2830	08901		CRASH CUSHION TY VI CLASS BT TL2	20.00	EACH		$	
2840	08902		CRASH CUSHION TY VI CLASS B TL3	1.00	EACH		$	
2850	10020NS		FUEL ADJUSTMENT	173,665.00	DOLL	$1.00	$	$173,665.00
2860	10030NS		ASPHALT ADJUSTMENT	281,175.00	DOLL	$1.00	$	$281,175.00
2870	20191ED		OBJECT MARKER TY 3	5.00	EACH		$	
2880	20210EP69		COHESIVE PILE CORE	1,280.00	CUYD		$	
2890	20211ES706		BORE & JACK PIPE	380.00	LF		$	
2900	20327ES212		EROSION CONTROL BLANKET (SPECIAL)	363.00	SQYD		$	
2910	20394ES835		PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL	1,383.00	LF		$	
2920	20432ES112		REMOVE CRASH CUSHION	3.00	EACH		$	
2930	20465EC		CLEAN CULVERT	1.00	LS		$	
2940	21289ED		LONGITUDINAL EDGE KEY	27,300.00	LF		$	
2950	22520EN		PAVE MARKING-THERMO YIELD BAR-36 IN	30.00	LF		$	
2960	22664EN		WATER BLASTING EXISTING STRIPE	159,410.00	LF		$	
2970	22884EN		CONC MED BARRIER TY 14E	1,365.00	LF		$	
2980	23026ED		ARCHITECTURAL TREATMENT	191.00	SQYD		$	
2990	23086EN		CONCRETE MEDIAN BARRIER TY 9C	350.00	LF		$	
3000	23158ES505		DETECTABLE WARNINGS	550.00	SQFT		$	
3010	23274EN11F		TURF REINFORCEMENT MAT 1	956.00	SQYD		$	
3020	24489EC		INLAID PAVEMENT MARKER	428.00	EACH		$	
3030	24668EC		STEEL ENCASEMENT PIPE 8 INCH	380.00	LF		$	
3040	24814EC		PIPELINE INSPECTION	11,736.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3740	00078		CRUSHED AGGREGATE SIZE NO 2	62.00	TON		$	

161033

PROPOSAL BID ITEMS

Report Date 6/22/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3750	00440		ENTRANCE PIPE-15 IN	181.00	LF		$	
3760	00443		ENTRANCE PIPE-24 IN	49.00	LF		$	
3770	00460		CULVERT PIPE-12 IN	4.00	LF		$	
3780	00462		CULVERT PIPE-18 IN	360.00	LF		$	
3790	00464		CULVERT PIPE-24 IN	134.00	LF		$	
3800	00466		CULVERT PIPE-30 IN	247.00	LF		$	
3810	00468		CULVERT PIPE-36 IN	4.00	LF		$	
3820	00469		CULVERT PIPE-42 IN	162.00	LF		$	
3830	00472		CULVERT PIPE-60 IN	16.00	LF		$	
3840	00472		CULVERT PIPE-60 IN CMP	12.00	LF		$	
3850	00520		STORM SEWER PIPE-12 IN	45.00	LF		$	
3860	00521		STORM SEWER PIPE-15 IN	399.00	LF		$	
3870	00522		STORM SEWER PIPE-18 IN	12,415.00	LF		$	
3880	00524		STORM SEWER PIPE-24 IN	2,643.00	LF		$	
3890	00526		STORM SEWER PIPE-30 IN	1,957.00	LF		$	
3900	00528		STORM SEWER PIPE-36 IN	454.00	LF		$	
3910	00529		STORM SEWER PIPE-42 IN	318.00	LF		$	
3920	00532		STORM SEWER PIPE-60 IN	71.00	LF		$	
3930	01000		PERFORATED PIPE-4 IN	1,506.00	LF		$	
3940	01002		PERFORATED PIPE-8 IN	530.00	LF		$	
3950	01005		PERFORATED PIPE EDGE DRAIN-4 IN	33,616.00	LF		$	
3960	01010		NON-PERFORATED PIPE-4 IN	1,471.00	LF		$	
3970	01020		PERF PIPE HEADWALL TY 1-4 IN	19.00	EACH		$	
3980	01022		PERF PIPE HEADWALL TY 1-8 IN	9.00	EACH		$	
3990	01024		PERF PIPE HEADWALL TY 2-4 IN	3.00	EACH		$	
4000	01028		PERF PIPE HEADWALL TY 3-4 IN	29.00	EACH		$	
4010	01032		PERF PIPE HEADWALL TY 4-4 IN	11.00	EACH		$	
4020	01204		PIPE CULVERT HEADWALL-18 IN	16.00	EACH		$	
4030	01208		PIPE CULVERT HEADWALL-24 IN	13.00	EACH		$	
4040	01210		PIPE CULVERT HEADWALL-30 IN	3.00	EACH		$	
4050	01212		PIPE CULVERT HEADWALL-36 IN	3.00	EACH		$	
4060	01214		PIPE CULVERT HEADWALL-42 IN	4.00	EACH		$	
4070	01220		PIPE CULVERT HEADWALL-60 IN	1.00	EACH		$	
4080	01433		SLOPED BOX OUTLET TYPE 1-18 IN	1.00	EACH		$	
4090	01442		SLOPED AND PARALLEL HEADWALL-12 IN	1.00	EACH		$	
4100	01450		S & F BOX INLET-OUTLET-18 IN	2.00	EACH		$	
4110	01452		S & F BOX INLET-OUTLET-30 IN	2.00	EACH		$	
4120	01456		CURB BOX INLET TYPE A	132.00	EACH		$	
4130	01480		CURB BOX INLET TYPE B	3.00	EACH		$	
4140	01496		DROP BOX INLET TYPE 3	29.00	EACH		$	
4150	01499		DROP BOX INLET TYPE 4	2.00	EACH		$	
4160	01517		DROP BOX INLET TYPE 5F	1.00	EACH		$	
4170	01529		DROP BOX INLET TYPE 6D	2.00	EACH		$	
4180	01544		DROP BOX INLET TYPE 11	9.00	EACH		$	
4190	01550		DROP BOX INLET TYPE 12A	12.00	LF		$	
4200	01559		DROP BOX INLET TYPE 13G	7.00	EACH		$	
4210	01568		DROP BOX INLET TYPE 13S	1.00	EACH		$	
4220	01577		DROP BOX INLET TYPE 14	7.00	EACH		$	
4230	01650		JUNCTION BOX	6.00	EACH		$	
4240	01691		FLUME INLET TYPE 2	2.00	EACH		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4250	01740		CORED HOLE DRAINAGE BOX CON-4 IN	85.00	EACH		$	
4260	01756		MANHOLE TYPE A	14.00	EACH		$	
4270	01767		MANHOLE TYPE C	4.00	EACH		$	
4280	02200		ROADWAY EXCAVATION	1,366.00	CUYD		$	
4290	01616		CONC MED BARR BOX INLET TY 14B1 (REVISED: 6-17-16)	5.00	EACH		$	
4300	20932ND		CONC MEDIAN BARRIER BOX INLET TY 14A1 (REVISED: 6-17-16)	1.00	EACH		$	

Section: 0004 - BRIDGE-RETAINING WALL 27557

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4310	01000		PERFORATED PIPE-4 IN	320.00	LF		$	
4320	02223		GRANULAR EMBANKMENT	1,101.00	CUYD		$	
4330	02998		MASONRY COATING	428.00	SQYD		$	
4340	08003		FOUNDATION PREPARATION	1.00	LS		$	
4350	08100		CONCRETE-CLASS A	246.00	CUYD		$	
4360	08150		STEEL REINFORCEMENT	27,660.00	LB		$	
4370	21532ED		RAIL SYSTEM TYPE III	218.00	LF		$	
4380	23026ED		ARCHITECTURAL TREATMENT	200.00	SQYD		$	

Section: 0005 - BRIDGE-27550

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4390	02231		STRUCTURE GRANULAR BACKFILL	348.00	CUYD		$	
4400	02998		MASONRY COATING	936.00	SQYD		$	
4410	03299		ARMORED EDGE FOR CONCRETE	175.00	LF		$	
4420	08001		STRUCTURE EXCAVATION-COMMON	40.00	CUYD		$	
4430	08019		CYCLOPEAN STONE RIP RAP	2,930.00	TON		$	
4440	08033		TEST PILES	57.00	LF		$	
4450	08046		PILES-STEEL HP12X53	930.00	LF		$	
4460	08094		PILE POINTS-12 IN	28.00	EACH		$	
4470	08100		CONCRETE-CLASS A	313.60	CUYD		$	
4480	08104		CONCRETE-CLASS AA	654.60	CUYD		$	
4490	08130		MECHANICAL REINF COUPLER #5	8.00	EACH		$	
4500	08133		MECHANICAL REINF COUPLER #8	16.00	EACH		$	
4510	08135		MECHANICAL REINF COUPLER #10	32.00	EACH		$	
4520	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	40.00	EACH		$	
4521	08141		MECHANICAL REINF COUPLER #6 EPOXY COATED (ADDED: 6-22-16)	626.00	EACH		$	
4530	08150		STEEL REINFORCEMENT	59,004.00	LB		$	
4540	08151		STEEL REINFORCEMENT-EPOXY COATED	170,930.00	LB		$	
4550	08633		PRECAST PC I BEAM TYPE 3	1,605.00	LF		$	
4560	20637ED		DRILLED SHAFT-ROCK 48 IN (REVISED: 6-22-16)	118.00	LF		$	
4570	21532ED		RAIL SYSTEM TYPE III	363.00	LF		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4580	21777EN		DRILLED SHAFT COMMON-54 IN (REVISED: 6-22-16)	239.30	LF		$	
4581	23813EC		DECK DRAIN (ADDED: 6-22-16)	4.00	EACH		$	

Section: 0006 - BRIDGE-CULVERT 27551

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4600	02223		GRANULAR EMBANKMENT	155.00	CUYD		$	
4610	08003		FOUNDATION PREPARATION	1.00	LS		$	
4620	08100		CONCRETE-CLASS A	132.00	CUYD		$	
4630	08150		STEEL REINFORCEMENT	12,390.00	LB		$	

Section: 0007 - BRIDGE-CULVERT 27552

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4640	02223		GRANULAR EMBANKMENT	675.00	CUYD		$	
4650	08001		STRUCTURE EXCAVATION-COMMON	410.00	CUYD		$	
4660	08003		FOUNDATION PREPARATION	1.00	LS		$	
4670	08100		CONCRETE-CLASS A	180.00	CUYD		$	
4680	08150		STEEL REINFORCEMENT	18,550.00	LB		$	

Section: 0008 - BRIDGE-CULVERT 27553

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4690	02223		GRANULAR EMBANKMENT	220.00	CUYD		$	
4700	08003		FOUNDATION PREPARATION	1.00	LS		$	
4710	08100		CONCRETE-CLASS A	198.00	CUYD		$	
4720	08150		STEEL REINFORCEMENT	15,120.00	LB		$	

Section: 0009 - BRIDGE-CULVERT 27554

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4730	02223		GRANULAR EMBANKMENT	235.00	CUYD		$	
4740	08003		FOUNDATION PREPARATION	1.00	LS		$	
4750	08100		CONCRETE-CLASS A	240.00	CUYD		$	
4760	08150		STEEL REINFORCEMENT	20,890.00	LB		$	

Section: 0010 - BRIDGE-CULVERT 27556

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0170	02223		GRANULAR EMBANKMENT	485.00	CUYD		$	
0180	08003		FOUNDATION PREPARATION	1.00	LS		$	
0190	08100		CONCRETE-CLASS A	516.00	CUYD		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0200	08150		STEEL REINFORCEMENT	74,580.00	LB		$	

Section: 0011 - BRIDGE-RETAINING WALL 27558

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0210	01000		PERFORATED PIPE-4 IN	550.00	LF		$	
0220	02223		GRANULAR EMBANKMENT	793.00	CUYD		$	
0230	02998		MASONRY COATING	408.00	SQYD		$	
0240	08002		STRUCTURE EXCAV-SOLID ROCK	736.00	CUYD		$	
0250	08003		FOUNDATION PREPARATION	1.00	LS		$	
0260	08100		CONCRETE-CLASS A	273.00	CUYD		$	
0270	08150		STEEL REINFORCEMENT	31,200.00	LB		$	
0280	08257		HANDRAIL-PEDESTRIAN ALUMINUM	380.00	LF		$	
0290	23026ED		ARCHITECTURAL TREATMENT	282.00	SQYD		$	

Section: 0012 - BRIDGE-RETAINING WALL 27559

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0300	01000		PERFORATED PIPE-4 IN	502.00	LF		$	
0310	02223		GRANULAR EMBANKMENT	1,056.00	CUYD		$	
0320	02998		MASONRY COATING	403.00	SQYD		$	
0330	08003		FOUNDATION PREPARATION	1.00	LS		$	
0340	08100		CONCRETE-CLASS A	265.00	CUYD		$	
0350	08150		STEEL REINFORCEMENT	29,200.00	LB		$	
0360	08257		HANDRAIL-PEDESTRIAN ALUMINUM	400.00	LF		$	
0370	21532ED		RAIL SYSTEM TYPE III	400.00	LF		$	
0380	23026ED		ARCHITECTURAL TREATMENT	110.00	SQYD		$	

Section: 0013 - BRIDGE-RETAINING WALL 27560

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0390	01000		PERFORATED PIPE-4 IN	292.00	LF		$	
0400	02223		GRANULAR EMBANKMENT	346.00	CUYD		$	
0410	02998		MASONRY COATING	172.00	SQYD		$	
0420	08003		FOUNDATION PREPARATION	1.00	LS		$	
0430	08100		CONCRETE-CLASS A	113.00	CUYD		$	
0440	08150		STEEL REINFORCEMENT	13,600.00	LB		$	
0450	08257		HANDRAIL-PEDESTRIAN ALUMINUM	204.00	LF		$	
0460	21532ED		RAIL SYSTEM TYPE III	204.00	LF		$	

Section: 0014 - BRIDGE-CULVERT 27555

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0470	02223		GRANULAR EMBANKMENT	330.00	CUYD		$	
0480	08003		FOUNDATION PREPARATION	1.00	LS		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0490	08100		CONCRETE-CLASS A	273.00	CUYD		$	
0500	08150		STEEL REINFORCEMENT	27,260.00	LB		$	

Section: 0015 - UTILITY-GAS

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0510	16003		G ENCASEMENT STEEL BORED RANGE 2	446.00	LF		$	
0520	16009		G ENCASEMENT STEEL OPEN CUT RANGE 2	899.70	LF		$	
0530	16010		G ENCASEMENT STEEL OPEN CUT RANGE 3	152.50	LF		$	
0540	16015		G PIPE POLYETHYLENE/PLASTIC 02 INCH	5,611.00	LF		$	
0550	16017		G PIPE POLYETHYLENE/PLASTIC 04 INCH	8,963.00	LF		$	
0560	16018		G PIPE POLYETHYLENE/PLASTIC 06 INCH	1,135.00	LF		$	
0570	16036		G SERVICE SHORT SIDE 1 OR 1-1/4 INCH	2.00	EACH		$	
0580	16038		G SERVICE SHORT SIDE 2 INCH	8.00	EACH		$	
0590	16039		G SERVICE SHORT SIDE 3/4 INCH	10.00	EACH		$	
0600	16041		G TIE-IN POLYETHYLENE/PLASTIC 02 INCH	16.00	EACH		$	
0610	16043		G TIE-IN POLYETHYLENE/PLASTIC 04 INCH	21.00	EACH		$	
0620	16044		G TIE-IN POLYETHYLENE/PLASTIC 06 INCH	3.00	EACH		$	
0630	16049		G VALVE POLYETHYLENE/PLASTIC 02 INCH	32.00	EACH		$	
0640	16050		G VALVE POLYETHYLENE/PLASTIC 03 INCH	4.00	EACH		$	
0650	16051		G VALVE POLYETHYLENE/PLASTIC 04 INCH	65.00	EACH		$	
0660	16052		G VALVE POLYETHYLENE/PLASTIC 06 INCH	2.00	EACH		$	
0670	16064		G VALVE BOX ADJUST	103.00	EACH		$	
0680	16065		G LINE MARKER	173.00	EACH		$	
0690	24573EN		GAS LINE RELOCATION (STA. 3933+09)	1.00	LS		$	
0700	24573EN		GAS LINE RELOCATION (STA. 3935+75)	1.00	LS		$	

Section: 0016 - SEWER

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0710	15015		S ENCASEMENT STEEL BORED RANGE 2	61.00	LF		$	
0720	15016		S ENCASEMENT STEEL BORED RANGE 3	126.00	LF		$	
0730	15017		S ENCASEMENT STEEL BORED RANGE 4	100.00	LF		$	
0740	15021		S ENCASEMENT STEEL OPEN CUT RANGE 2	79.00	LF		$	
0750	15022		S ENCASEMENT STEEL OPEN CUT RANGE 3	504.00	LF		$	
0760	15023		S ENCASEMENT STEEL OPEN CUT RANGE 4	159.00	LF		$	
0770	15032		S FORCE MAIN DUCTILE IRON 04 INCH	2,270.00	LF		$	
0780	15033		S FORCE MAIN DUCTILE IRON 06 INCH	1,080.00	LF		$	
0790	15050		S FORCE MAIN PE/PLASTIC 03 INCH	1,651.00	LF		$	
0800	15051		S FORCE MAIN PE/PLASTIC 04 INCH	1,425.00	LF		$	
0810	15052		S FORCE MAIN PE/PLASTIC 06 INCH	2,715.00	LF		$	
0820	15069		S FORCE MAIN TAP SLEEVE/VALVE RNG 1	4.00	EACH		$	
0830	15072		S FORCE MAIN TIE-IN 03 INCH	3.00	EACH		$	
0840	15073		S FORCE MAIN TIE-IN 04 INCH	3.00	EACH		$	
0850	15074		S FORCE MAIN TIE-IN 06 INCH	2.00	EACH		$	
0860	15084		S FORCE MAIN VALVE GATE	5.00	EACH		$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0870	15090		S LATERAL SHORT SIDE 06 INCH	14.00	EACH		$	
0880	15091		S LATERAL SPECIAL	14.00	EACH		$	
0890	15092		S MANHOLE	6.00	EACH		$	
0900	15092		S MANHOLE INSTALL ON EX LINE	3.00	EACH		$	
0910	15093		S MANHOLE ABANDON/REMOVE	10.00	EACH		$	
0920	15094		S MANHOLE ADJUST TO GRADE	16.00	EACH		$	
0930	15101		S MANHOLE WITH DROP	7.00	EACH		$	
0940	15104		S PIPE DUCTILE IRON 08 INCH	1,751.00	LF		$	
0950	15112		S PIPE PVC 08 INCH	1,626.00	LF		$	
0960	15119		S PUMP STATION	1.00	EACH		$	
0970	15120		S SPECIAL ITEM	2.00	EACH		$	
0980	15121		S STRUCTURE ABANDON	1.00	EACH		$	
0990	15121		S STRUCTURE ABANDON LIFT STATION	1.00	EACH		$	
1000	15122		S STRUCTURE REMOVAL	1.00	EACH		$	
1010	15122		S STRUCTURE REMOVAL LIFT STATION	1.00	EACH		$	
1020	15123		S LINE MARKER	20.00	EACH		$	

Section: 0017 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1030	06405		SBM ALUMINUM PANEL SIGNS	280.00	SQFT		$	
1040	06406		SBM ALUM SHEET SIGNS .080 IN	612.00	SQFT		$	
1050	06407		SBM ALUM SHEET SIGNS .125 IN	307.00	SQFT		$	
1060	06411		STEEL POST TYPE 2	2,384.00	LF		$	
1070	06412		STEEL POST MILE MARKERS	4.00	EACH		$	
1080	06441		GMSS GALV STEEL TYPE C	1,958.00	LB		$	
1090	06490		CLASS A CONCRETE FOR SIGNS	3.50	CUYD		$	
1100	06491		STEEL REINFORCEMENT FOR SIGNS	684.00	LB		$	
1110	20419ND		ROADWAY CROSS SECTION	6.00	EACH		$	
1120	24631EC		BARCODE SIGN INVENTORY	158.00	EACH		$	

Section: 0018 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1130	04792		CONDUIT-1 IN	190.00	LF		$	
1140	04793		CONDUIT-1 1/4 IN	1,980.00	LF		$	
1150	04795		CONDUIT-2 IN	740.00	LF		$	
1160	04811		ELECTRICAL JUNCTION BOX TYPE B	28.00	EACH		$	
1170	04820		TRENCHING AND BACKFILLING	2,455.00	LF		$	
1180	04830		LOOP WIRE	10,060.00	LF		$	
1190	04844		CABLE-NO. 14/5C	12,570.00	LF		$	
1200	04845		CABLE-NO. 14/7C	435.00	LF		$	
1210	04850		CABLE-NO. 14/1 PAIR	10,110.00	LF		$	
1220	04885		MESSENGER-10800 LB	1,025.00	LF		$	
1230	04886		MESSENGER-15400 LB	1,395.00	LF		$	

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1240	04895		LOOP SAW SLOT AND FILL	3,565.00	LF		$	
1250	04931		INSTALL CONTROLLER TYPE 170	4.00	EACH		$	
1260	04932		INSTALL STEEL STRAIN POLE	22.00	EACH		$	
1270	04950		REMOVE SIGNAL EQUIPMENT	2.00	EACH		$	
1280	06472		INSTALL SPAN MOUNTED SIGN	10.00	EACH		$	
1290	20093NS835		INSTALL PEDESTRIAN HEAD-LED	18.00	EACH		$	
1300	20188NS835		INSTALL LED SIGNAL-3 SECTION	30.00	EACH		$	
1310	20189NS835		INSTALL LED SIGNAL-5 SECTION	2.00	EACH		$	
1320	20266ES835		INSTALL LED SIGNAL- 4 SECTION	9.00	EACH		$	
1330	20408ES835		INSTALL LED BEACON-12 IN	10.00	EACH		$	
1340	21743NN		INSTALL PEDESTRIAN DETECTOR	18.00	EACH		$	
1350	23157EN		TRAFFIC SIGNAL POLE BASE	105.60	CUYD		$	
1360	23222EC		INSTALL SIGNAL PEDESTAL	4.00	EACH		$	
1370	23982EC		INSTALL ANTENNA	4.00	EACH		$	
1380	24525EC		ADVANCE WARNING FLASHER	1.00	EACH		$	
1390	24526ED		INSTALL-BEACON CONTROLLER-2 CIRCUIT	1.00	EACH		$	

Section: 0019 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1400	04700		POLE 30 FT MTG HT	39.00	EACH		$	
1410	04701		POLE 40 FT MTG HT	11.00	EACH		$	
1420	04723		BRACKET 10 FT	32.00	EACH		$	
1430	04724		BRACKET 12 FT	5.00	EACH		$	
1440	04725		BRACKET 15 FT	6.00	EACH		$	
1450	04730		BRACKET C	7.00	EACH		$	
1460	04740		POLE BASE	43.00	EACH		$	
1480	04750		TRANSFORMER BASE	43.00	EACH		$	
1490	04761		LIGHTING CONTROL EQUIPMENT	2.00	EACH		$	
1500	04773		HPS LUMINAIRE HIGH MAST	7.00	EACH		$	
1510	04780		FUSED CONNECTOR KIT	100.00	EACH		$	
1520	04797		CONDUIT-3 IN	760.00	LF		$	
1530	04800		MARKER	3.00	EACH		$	
1550	04820		TRENCHING AND BACKFILLING	4,800.00	LF		$	
1560	04832		WIRE-NO. 12	6,450.00	LF		$	
1570	04833		WIRE-NO. 8	4,320.00	LF		$	
1580	04860		CABLE-NO. 8/3C DUCTED	630.00	LF		$	
1590	04940		REMOVE LIGHTING	1.00	LS		$	
1600	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	13.00	EACH		$	
1620	20410ED		MAINTAIN LIGHTING	1.00	LS		$	
1630	21543EN		BORE AND JACK CONDUIT	745.00	LF		$	
1640	24589ED		LED LUMINAIRE	43.00	EACH		$	
1650	24851EC		CABLE-NO. 10/3C DUCTED	5,440.00	LF		$	

Section: 0020 - WATERLINE - MCWD

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3050	02220		FLOWABLE FILL	237.00	CUYD		$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3060	02289		DOUBLE VEHICULAR WOVEN WIRE GATE	1.00	EACH		$	
3070	14003		W CAP EXISTING MAIN	8.00	EACH		$	
3080	14007		W ENCASEMENT STEEL BORED RANGE 2	165.00	LF		$	
3090	14008		W ENCASEMENT STEEL BORED RANGE 3	330.00	LF		$	
3100	14013		W ENCASEMENT STEEL OPEN CUT RANGE 2	250.00	LF		$	
3110	14014		W ENCASEMENT STEEL OPEN CUT RANGE 3	610.00	LF		$	
3120	14019		W FIRE HYDRANT ASSEMBLY	1.00	EACH		$	
3130	14023		W FLUSHING ASSEMBLY	6.00	EACH		$	
3140	14028		W METER 3/4 INCH	22.00	EACH		$	
3150	14056		W PIPE PVC 02 INCH	55.00	LF		$	
3160	14057		W PIPE PVC 03 INCH	1,185.00	LF		$	
3170	14057		W PIPE PVC 03 INCH RSTRND JOINT	185.00	LF		$	
3180	14058		W PIPE PVC 04 INCH	1,185.00	LF		$	
3190	14058		W PIPE PVC 04 INCH RSTRND JOINT	185.00	LF		$	
3200	14059		W PIPE PVC 06 INCH	4,730.00	LF		$	
3210	14059		W PIPE PVC 06 INCH RSTRND JOINT	585.00	LF		$	
3220	14060		W PIPE PVC 08 INCH	1,835.00	LF		$	
3230	14085		W SERV PE/PLST SHORT SIDE 3/4 IN	22.00	EACH		$	
3240	14089		W TAPPING SLEEVE AND VALVE SIZE 1	8.00	EACH		$	
3250	14091		W TIE-IN 02 INCH	1.00	EACH		$	
3260	14094		W TIE-IN 06 INCH	1.00	EACH		$	
3270	14103		W VALVE 03 INCH	2.00	EACH		$	
3280	14104		W VALVE 04 INCH	1.00	EACH		$	
3290	14105		W VALVE 06 INCH	6.00	EACH		$	
3300	14106		W VALVE 08 INCH	4.00	EACH		$	
3310	14155		W TIE-IN 01 INCH	1.00	EACH		$	

Section: 0021 - WATERLINE-SAYLERSVILLE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3320	14003		W CAP EXISTING MAIN	6.00	EACH		$	
3330	14008		W ENCASEMENT STEEL BORED RANGE 3	217.50	LF		$	
3340	14009		W ENCASEMENT STEEL BORED RANGE 4	149.50	LF		$	
3350	14014		W ENCASEMENT STEEL OPEN CUT RANGE 3	609.50	LF		$	
3360	14015		W ENCASEMENT STEEL OPEN CUT RANGE 4	189.00	LF		$	
3370	14019		W FIRE HYDRANT ASSEMBLY	5.00	EACH		$	
3380	14021		W FIRE HYDRANT REMOVE	5.00	EACH		$	
3390	14023		W FLUSHING ASSEMBLY	1.00	EACH		$	
3400	14025		W METER 1 INCH	2.00	EACH		$	
3410	14027		W METER 2 INCH	13.00	EACH		$	
3420	14028		W METER 3/4 INCH	15.00	EACH		$	
3430	14030		W METER RELOCATE	36.00	EACH		$	
3440	14031		W METER VAULT	1.00	EACH		$	
3450	14035		W PIPE DUCTILE IRON 04 INCH WITH NITRILE GASKETS	1,780.00	LF		$	
3460	14036		W PIPE DUCTILE IRON 06 INCH	222.00	LF		$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3470	14036		W PIPE DUCTILE IRON 06 INCH WITH NITRILE GASKETS	3,295.00	LF		$	
3480	14037		W PIPE DUCTILE IRON 08 INCH	280.00	LF		$	
3490	14037		W PIPE DUCTILE IRON 08 INCH WITH NITRILE GASKETS	3,107.00	LF		$	
3500	14056		W PIPE PVC 02 INCH	354.00	LF		$	
3510	14058		W PIPE PVC 04 INCH	315.00	LF		$	
3520	14059		W PIPE PVC 06 INCH	50.00	LF		$	
3530	14060		W PIPE PVC 08 INCH	2,370.00	LF		$	
3540	14068		W PIPE POLYETHYLENE/PLASTIC 04 INCH	1,281.00	LF		$	
3550	14069		W PIPE POLYETHYLENE/PLASTIC 06 INCH	3,230.00	LF		$	
3560	14070		W PIPE POLYETHYLENE/PLASTIC 08 INCH	1,822.00	LF		$	
3570	14080		W SERV PE/PLST LONG SIDE 3/4 IN	2.00	EACH		$	
3580	14081		W SERVICE RELOCATE	30.00	EACH		$	
3590	14082		W SERV PE/PLST SHORT SIDE 1 IN	2.00	EACH		$	
3600	14084		W SERV PE/PLST SHORT SIDE 2 IN	16.00	EACH		$	
3610	14085		W SERV PE/PLST SHORT SIDE 3/4 IN	27.00	EACH		$	
3620	14089		W TAPPING SLEEVE AND VALVE SIZE 1	7.00	EACH		$	
3630	14094		W TIE-IN 06 INCH	13.00	EACH		$	
3640	14095		W TIE-IN 08 INCH	19.00	EACH		$	
3650	14104		W VALVE 04 INCH	4.00	EACH		$	
3660	14105		W VALVE 06 INCH	23.00	EACH		$	
3670	14106		W VALVE 08 INCH	15.00	EACH		$	
3680	14113		W VALVE BOX ADJUST	31.00	EACH		$	
3690	14144		W LINE MARKER	22.00	EACH		$	

Section: 0022 - TRAINEES

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3700	02742		TRAINEE PAYMENT REIMBURSEMENT 1-CEMENT MASON	1,200.00	HOUR		$	
3710	02742		TRAINEE PAYMENT REIMBURSEMENT 1-GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR		$	

Section: 0023 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3720	02568		MOBILIZATION	1.00	LS		$	
3730	02569		DEMOBILIZATION	1.00	LS		$	

11C

SPECIAL NOTE FOR DRILLED SHAFTS

1.0 DESCRIPTION. Furnish all equipment, materials and labor necessary for constructing reinforced concrete drilled shafts in cylindrically excavated holes according to the details shown on the plans or as the Engineer directs. Construct the shaft to the lines and dimensions shown on the plans, or as the Engineer directs. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.0 MATERIALS.

2.1 Concrete. Use Class A Modified concrete unless otherwise shown on the plans. The slump at the time of placement shall be 6.5 to 9.5 inches, the coarse aggregate shall be size 67, 68, 78, 8 or 9M, and the water/cementitious material ratio shall not exceed 0.45. Include water reducing and retarding admixtures. Type F high range water reducers used in combination with retarding admixtures or Type G high range water reducers fully meeting trial batch requirements are permitted and Class F fly ash is permitted in conformance with Section 601. Design the mix such that the concrete slump exceeds 4 inches at 4 hours after batching. If the estimated concrete transport, plus time to complete placement, exceeds 4 hours, design the concrete to have a slump that exceeds 4 inches or more for the greater time after batching and demonstrate that the slump requirement can be achieved after the extended time period using a trial batch.

Perform trial batches prior to beginning drilled shaft construction in order to demonstrate the adequacy of the proposed concrete mix. Demonstrate that the mix to be used will meet the requirements for temperature, slump, air content, water/cementitious material ratio, and compressive strength. Use the ingredients, proportions and equipment (including batching, mixing, and delivery) to be used on the project. Make at least 2 independent consecutive trial batches of 3 cubic yards each using the same mix proportions and meeting all specification requirements for mix design approval. Submit a report containing these results for slump, air content, water/cement ratio, temperature, and compressive strength and mix proportions for each trial batch to the Engineer for review and approval. Failure to demonstrate the adequacy of the concrete mix, methods, or equipment to the Engineer is cause for the Engineer to require appropriate alterations in concrete mix, equipment, and/or method by the Contractor to eliminate unsatisfactory results. Perform additional trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment.

2.2 Steel Reinforcement. Provide Grade 60 deformed bars conforming to Section 811 of the Standard Specifications. Rail steel is permitted for straight bars only. Place according to Section 602 of the Standard Specifications, this Special Note, and the plans. Use non-corrosive centering devices and feet to maintain the specified reinforcement clearances.

2.3 Casings. Provide casing meeting the requirements of ASTM A 252 Grade 2 or better unless otherwise specified. Ensure casing is smooth, clean, watertight, true and straight, and of ample strength to withstand handling, installation, and extraction stresses and the pressure of both concrete and the surrounding earth materials. Ensure the outside diameter of casing is not less than the specified diameter of shaft.

Use only continuous casings. Cut off the casing at the prescribed elevation and trim to within tolerances prior to acceptance. Extend casing into bedrock a sufficient distance to stabilize the shaft excavation against collapse, excessive deformation, and/or flow of water if required and/or shown on the plans.

Install from the work platform continuous casing meeting the design thickness requirements, but not less than 3/8 inch, to the elevations shown on the plans. When drilled

shafts are located in open water areas, extend casings above the water elevation to the plan tip elevation to protect the shaft concrete from water action during concrete placement and curing. All casing is permanent unless temporary casing is specified in the contract drawings or documents. Permanent casing is incidental to the applicable drilled shaft unit bid price unless noted otherwise in the contract. Temporary casing may be required for drilled shafts not socketed into bedrock. If temporary surface casings are used, extend each casing up to the work platform. Remove all temporary surface casing prior to final acceptance unless otherwise permitted by the Central Office Construction Engineer.

Ensure casing splices have full penetration butt welds conforming to the current edition of AWS D1.1 with no exterior or interior splice plates and produce true and straight casing.

2.4 Slurry. When slurry is to be used for installation of the Drilled Shaft, submit a detailed plan for its use and disposal. The plan should include, but not be limited to the following:

1) Material properties
2) Mixing requirements and procedures
3) Testing requirements
4) Placement procedures
5) Disposal techniques

Obtain the Central Office Division of Construction's approval for the slurry use and disposal plan before installing drilled shafts.

2.5 Tremies. Provide tremies of sufficient length, weight, and diameter to discharge concrete at the shaft base elevation. Ensure the tremie diameter is least 6 times the maximum size coarse aggregate to be used in the concrete mix and no less than 10 inches. Provide adequate wall thickness to prevent crimping or sharp bends that restrict concrete placement. Support tremies used for depositing concrete in a dry drilled shaft excavation so that the free fall of the concrete does not cause the shaft excavation to cave or slough. Maintain a clean and smooth tremie surface to permit both flow of concrete and unimpeded withdrawal during concrete placement. Do not allow any aluminum parts to contact the concrete. Construct tremies used to deposit concrete for wet excavations so that they are watertight and will readily discharge concrete.

2.6 Concrete Pumps. Provide pump lines with a minimum diameter of 5 inches and watertight joints.

2.7 Drop Chutes. Do not use aluminum drop chutes.

3.0 CONSTRUCTION.

3.1 Preconstruction.

3.1.1 Prequalification. The Department will require prequalification by the Division of Construction Procurement before accepting a bid for the construction of Drilled Shafts.

3.1.2 Pre-Bid Inspection. Inspect both the project site and all subsurface information, including any soil or rock samples, prior to submitting a bid. Contact the Geotechnical Branch (502-564-2374) to schedule a viewing of the subsurface information. Failure to inspect the project site and view the

subsurface information will result in the forfeiture of the right to file a claim based on site conditions and may result in disqualification from the project.

3.1.3 Drilled Shaft Installation Plan. Upon request, the Department will review a Drilled Shaft Installation Plan. Submit the plan no later than 45 calendar days prior to constructing drilled shafts. Items covered in this plan should include, but not be limited to the following:

1) Name and experience record of jobsite drilled shaft superintendent and foremen in charge of drilled shaft operations for each shift.
2) List and size of proposed equipment including cranes, drills, augers, bailing buckets, final cleaning equipment, de-sanding equipment, slurry pumps, core sampling equipment, tremies or concrete pumps, casings, etc.
3) Details of overall construction operation sequence and the sequence of shaft construction in the bents or groups.
4) Details of shaft excavation methods including methods to over-ream or roughen shaft walls, if necessary.
5) Details of slurry when the use of slurry is anticipated. Include methods to mix, circulate, and de-sand the proposed slurry. Provide details of proposed testing, test methods, sampling methods, and test equipment.
6) Details of proposed methods to clean shaft and inside of casing after initial excavation.
7) Details of reinforcement handling, lifting, and placement including support and method to center in shaft. Also include rebar cage support during concrete placement and temporary casing removal.
8) Details of concrete placement including procedures for concrete tremie or pump. Include initial placement, raising during placement, and overfilling of the shaft to expel contaminated concrete.
9) Required submittals including shop drawings and concrete design mixes.
10) Other information shown in the plans or requested by the Engineer.
11) Special considerations for wet construction.
12) Details of environmental control procedures to protect the environment from discharge of excavation spoil, slurry (natural and mineral), and concrete over-pour.

The Division of Construction will review the submitted procedure and provide comments and recommendations. The Contractor is responsible for satisfactory construction and ultimate performance of the Drilled Shaft.

3.2 General Construction. Construct drilled shafts as indicated in the plans or described in this Special Note by either the dry or wet method. When the plans describe a particular method of construction, use this method unless the Engineer permits otherwise. When the plans do not describe a particular method, propose a method on the basis of its suitability to the site conditions. Approval of this proposed method is contingent upon the satisfactory results of the technique shaft.

The construction of the first drilled shaft or technique shaft will be used to determine if the methods and equipment used by the contractor are sufficient to produce a completed shaft meeting the requirements of the plans and specifications. Ability to control dimensions and alignment of excavations within tolerances; to seal the casing into impervious materials; to prevent caving or deterioration of subsurface materials by the use of slurry or other means; to

properly clean the completed shaft excavation; to construct excavations in open water areas when required by the plans; to establish methods for belling or over-reaming when required by the plans; to determine the elevation of ground water; to satisfactorily handle, lift, place, and support the reinforcement cage; to satisfactorily place concrete meeting the specifications within the prescribed time frame; and to satisfactorily execute any other necessary construction operations will be evaluated during construction of the first shaft(s). Revise the methods and equipment as necessary at any time during the construction of the first shaft when unable to satisfactorily carry out any of the necessary operations described above or unable to control the dimensions and alignment of the shaft excavation within tolerances. Accurately locate technique so they may be used in the finished structure unless directed otherwise in the contract document or by the Engineer.

If at any time the Contractor fails to satisfactorily demonstrate, to the satisfaction of the Engineer, the adequacy of methods or equipment and alterations are required, additional technique shafts will be required at no additional cost to the Department and with no extension of contract time. Additional technique shafts shall be located as near as possible to the proposed production shafts but in a location as not to interfere with other construction activities. Once approval has been given to construct production shafts, no changes will be permitted in the methods or equipment used to construct the satisfactory shaft without written approval of the Engineer.

Do not make a claim against the Department for costs of construction delays, or any materials, labor, or equipment that may be necessary due to the Contractor's failure to furnish drilled shafts of a length sufficient to obtain the required bearing values, or for variations in length due to subsurface conditions that may be encountered. Soundings, boring logs, soil profiles, or other subsurface data included in the Contract documents are used by the Department for design and making preliminary estimates of quantities and should be used only at the risk of the Contractor for determining equipment, materials, or labor necessary for drilling shafts as required by the contract.

When necessary, set temporary removable surface casing. Use surface casing of sufficient length to prevent caving of the surface soils and to aid in maintaining shaft position and alignment. Pre-drilling with slurry and/or over-reaming to the outside diameter of the casing may be required to install the surface casing at some sites.

Provide equipment capable of constructing shafts to the deepest shaft depth shown in the plans plus 15 feet, 20 percent greater than the longest shaft (measured from the ground or water surface to the tip of the shaft), or 3 times the shaft diameter, whichever is greater. Blasting excavation methods are not permitted.

Use permanent casing unless otherwise noted in the Contract. Place casing as shown on the plans before beginning excavation. If full penetration cannot be attained, the Engineer may direct that excavation through the casing be accomplished and the casing advanced until reaching the plan tip elevation. In some cases, over-reaming to the outside diameter of the casing may be required before placing the casing. Cut off the casing at the prescribed elevation and leave the remainder of the casing in place. Do not use vibratory hammers for casing installation within 50 feet of shafts that have been completed less than 24 hours.

3.2.1 Dry Construction Method. Use the dry construction method only at sites where the ground water table and soil conditions (generally stiff to hard clays or rock above the water table) make it feasible to construct the shaft in a relatively dry excavation and where the sides and bottom of the shaft are stable and may be visually inspected by the Engineer prior to placing the concrete. The dry construction method consists of drilling the shaft excavation, removing accumulated seepage water and loose material from the excavation, and placing the shaft concrete in a relatively dry excavation.

3.2.2 Wet Construction Method. Use the wet construction method at all sites where it is impractical to excavate by the dry method. The wet construction method consists of drilling the shaft excavation below the water table, keeping the shaft filled with water (including natural slurry formed during the drilling process) or slurry as defined in part 2.4 of this Special Note, desanding and cleaning the slurry as required, final cleaning of the excavation by means of a bailing bucket, air lift, submersible pump or other approved devices and placing the shaft concrete (with a tremie or concrete pump beginning at the shaft bottom) which displaces the water or slurry as concrete is placed.

Where drilled shafts are located in open water areas, construct the shafts by the wet method using casings extending from above water elevation to the plan casing tip elevation to protect the shaft concrete from water action during placement and curing. Install the casing in a manner that will produce a positive seal at the bottom of the casing.

3.3 Slurry. When the Contractor elects to use slurry, adjust construction operations so that the slurry is in contact with the bottom 5 feet of the shaft for less than 4 hours unless the Engineer approves otherwise. If the 4-hour limit is exceeded, over-ream the bottom 5 feet of shaft.

3.4 Cleaning. Over-reaming, cleaning, or wire brushing the sidewalls of the shaft excavation and permanent casings may be necessary to remove the depth of softening or to remove excessive slurry cake buildup as indicated by sidewall samples or other test methods employed by the Engineer. Over-ream around the perimeter of the excavation a minimum depth of 1/2 inch and maximum depth of 3 inches.

3.5 Subsurface Exploration. Take subsurface exploration borings when shown on the plans or as the Engineer directs to determine the character of the material that the shaft extends through and the material directly below the shaft excavation. Complete subsurface exploration borings prior to beginning excavation for any drilled shaft in a group. Unless directed otherwise, extend subsurface exploration borings a minimum depth of 3 shaft diameters but not less than 10 feet below the bottom of the anticipated tip of drilled shaft excavation as shown on the plans. For subsurface exploration borings where soil sampling is required use thin-wall tube samples and perform standard penetration tests according to the Department's current Geotechnical Manual. When shafts extend into bedrock, soil samples are not required unless otherwise specified. Perform rock core drilling according to the Department's Geotechnical Manual. When the Engineer directs, perform additional subsurface exploration borings prior to drilled shaft construction. Measure soil samples and/or rock cores and visually identify and describe them on the subsurface log according to the Department's current Geotechnical Manual. Subsurface exploration borings must be performed by contractors/consultants prequalified by the Department's Division of Professional Services for Geotechnical Drilling Services at the time that field work begins.

The Engineer or geotechnical branch representative may be on-site during the subsurface exploration process to evaluate the soil and/or rock core samples. The Engineer or geotechnical branch representative will determine the need to extend the borings to depths greater than the depths previously specified. Handle, label, identify, and store soil and/or rock samples according to the Department's current Geotechnical Manual and deliver them with the subsurface logs to the geotechnical branch's rock core lab in Frankfort within 24-hours of completing the borings, unless directed otherwise.

The Engineer will inspect the soil samples and/or cores and determine the final depth of required excavation (final drilled shaft tip elevation) based on evaluation of the material's suitability. The Engineer will establish the final tip elevations for shaft locations, other than

those for which subsurface exploration borings have been performed, based on the results of the subsurface exploration. Within 15 calendar days after completion of the subsurface exploration borings, the Engineer will notify the contractor of the final tip elevations for shaft locations.

3.6 Excavations. The plans indicate the expected depths, the top of shaft elevations, and the estimated bottom of shaft elevations between which the drilled shaft are to be constructed. Drilled shafts may be extended deeper when the Engineer determines that the material encountered while drilling the shaft excavation is unsuitable and/or is not the same as anticipated in the design of the drilled shaft. Drilled shafts may be shortened when the Engineer determines the material encountered is better than that anticipated.

Begin drilled shaft excavation the excavation, excavation inspection, reinforcement placement, and concrete placement can be completed as one continuous operation. Do not construct new shafts within 24 hours adjacent to recently completed shafts if the center-to-center spacing is less than 3 shaft diameters.

Dispose of excavated material removed from the shaft according to the Standard Specifications or the contract documents.

Do not allow workmen to enter the shaft excavation for any reason unless both a suitable casing has been installed and adequate safety equipment and procedures have been provided to the workmen entering the excavation. Recommended Procedures for the Entry of Drilled Shaft Foundation Excavations, prepared by ADSC: The International Association of Foundation Drilling provides guideline recommendations for down-hole entry of drilled excavations.

3.7 Obstructions. Remove subsurface obstructions at drilled shaft locations. Such obstructions may include man-made materials such as old concrete foundations or natural materials such as boulders. Blasting is not permitted.

3.8 Inspections of Excavations. Provide equipment for checking the dimensions and alignment of each shaft excavation. Determine the dimensions and alignment of the shaft excavation under the observation and direction of the Engineer. Provide equipment necessary to verify shaft cleanliness for the method of inspection selected by the Engineer.

Measure final shaft depths with a weighted tape or other approved methods after final cleaning. Ensure the base of each shaft has less than ½ inch of sediment at the time of concrete placement. For dry excavations, do not allow the depth of water to exceed 3 inches for tremie or pump methods of concrete placement. Verify shaft cleanliness to the Engineer using direct visual inspection or other method the Engineers determines acceptable. Video camera or underwater inspection procedures may be used if specified in the plans. Inspect the side surfaces of rock sockets to ensure they are rough and of such condition to ensure bond between the shaft concrete and the rock. Calipers, bent rods, or other devices may be used to inspect the diameter and roughness of rock sockets. When the Engineer directs, mechanically roughen surfaces found to be smooth.

3.9 Reinforcing Steel Cage Fabrication and Placement. Assemble the reinforcing steel cage, consisting of longitudinal bars, ties, spirals, cage stiffener bars, spacers, centering devices, and other necessary appurtenances and place as a prefabricated unit immediately after the shaft excavation is inspected and accepted, and just prior to concrete placement.

Tie the reinforcing steel with 100 percent double-wire ties and provide support so that it will remain within allowable tolerances for position. Locate splices as shown on the plans. Splice no more than 50 percent of the longitudinal reinforcing within 2-lap splice lengths of any location or within 3 feet of the splice location if approved mechanical connectors are used. All splices are to be in accordance with plan details. Use bands, temporary cross ties,

etc. as required to provide a reinforcement cage of sufficient rigidity to prevent racking, permanent deformations, etc. during installation.

Use concrete centering devices or other approved non-corrosive centering devices at sufficient intervals along the length of the reinforcement cage to ensure concentric spacing for the entire cage length. As a minimum, provide a set of non-corrosive centering devices at intervals not exceeding 5 feet throughout the length of the shaft. When the size of the longitudinal reinforcement exceeds one inch in diameter the minimum spacing may be increased to 10 feet. As a minimum, provide a set of centering devices within 2 feet of the top and 2 feet of the bottom of the shaft. In addition provide one set of centering devices 2 feet above and 2 feet below each change in shaft diameter. Provide feet (bottom supports) at the bottom of the shaft on vertical bars. As a minimum, provide non-corrosive centering devices at 60 degree intervals around the circumference of the shaft to maintain the required reinforcement clearances. Ensure the centering devices maintain the specified annular clearance between the outside of the reinforcing cage and the side of the excavated hole or casing.

Concrete centering devices and feet will be constructed of concrete equal in quality and durability to the concrete specified for the shaft. Use epoxy coated centering devices fabricated from reinforcing steel. Use feet (bottom supports) of adequate size and number to assure the rebar cage is the proper distance above the bottom as determined by part 3.11 3) of this Special Note. The feet are not intended to support the weight of the cage. In the event that the shaft has been excavated below the anticipated tip elevation, extend the reinforcing cage at the tip (low) end by lap splices, mechanical connectors, or welded splices conforming to the Standard Specifications. In this instance, splices need not be staggered and 100 percent of the reinforcing bars may be spliced at a given location. The bottom 12 inches of the shaft may not be reinforced when below plan tip elevation.

During concrete placement, support the reinforcing cage at or near the top of shaft such that the concrete feet are positioned approximately one inch above the bottom of shaft excavation. Not sooner than 24 hours after the completion of concrete placement, remove temporary supports. Provide the needed equipment, including extra cranes if necessary, to provide this cage support.

Prior to placing the reinforcement cage, demonstrate to the satisfaction of the Engineer that the fabrication and handling methods to be used will result in a reinforcing cage placed in the proper position, with the proper clearances, and without permanent bending, squashing, or racking of the reinforcement cage. During this demonstration bring the cage to an upright position, lower into a shaft excavation, and support as if for concrete placement.

Check the elevation of the top of the reinforcing cage before and after the concrete is placed. If the reinforcing cage is not maintained within the specified tolerances, correct to the satisfaction of the Engineer. Do not construct additional shafts until the contractor has modified his reinforcing cage support to obtain the required tolerances.

3.10 Concrete Placement. Place concrete according to the applicable portions of the Standard Specifications and with the requirements set forth herein. Do not apply the provisions of the Special Note 6U for Structural Mass Concrete.

Place concrete as soon as practical after reinforcing steel placement but no later than 4 hours after completion of the shaft excavation. Place concrete continuously from the bottom to above the top elevation of the shaft. For shafts that extend above ground or water surface, place concrete continuously after the shaft is full until good quality concrete is evident at the top of the shaft. Form any portion of the shaft above ground with a removable form or other approved method to the dimensions shown on the plans.

For shafts constructed in the wet with the top of the shaft below the water surface and below top of casing, place concrete to approximately one shaft diameter but no less than 2 feet above the top of shaft elevation. Remove contaminated concrete and deleterious material, as

determined by the Engineer, accumulated above the top of shaft elevation immediately after completing concrete placement. Deleterious material and contaminated concrete may be airlifted under a head of water or slurry provided that the head is maintained at or near the exterior water surface elevation. Carefully remove any concrete remaining above plan top of shaft after curing and excess casing removal.

Place concrete either by free fall, through a tremie, or concrete pump. Use the free fall placement method in dry holes only. The maximum height of free fall placement is 20 feet. Do not allow concrete placed by free fall to contact either the reinforcing cage or hole sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Place concrete in the shaft in one continuous operation. Maintain a minimum slump of 4 inches or more throughout the placement for 4 hours after batching. Adjust approved admixtures in the concrete mix for the conditions encountered on the job so that the concrete remains in a workable plastic state throughout the placement. Perform slump loss tests to demonstrate that the concrete will maintain a 4-inch or greater slump for a period of time equal to the estimated transport plus the 2-hour placement time, but not less than 4 hours.

When the Engineer determines the concrete placement methods and/or equipment during construction of any technique and/or production shafts to be inadequate, make appropriate alterations to eliminate unsatisfactory results.

Drilled shafts not meeting the concrete placement requirements of this Special Note or contract plans are unacceptable. Correct all unacceptable completed shafts to the satisfaction of the Engineer.

3.10.1 Tremie Placement. Tremies may be used for concrete placement in either wet or dry holes. Extend the tremie to the shaft base elevation before starting underwater placement. Valves, bottom plates, or plugs may be used only if concrete discharge can begin approximately 2 inches above the excavation bottom. Remove plugs from the excavation unless otherwise approved by the Engineer. Maintain tremie discharge at or near the bottom of excavation as long as practical during concrete placement. Immerse tremie discharge end as deep as practical in the concrete but not less than 10 feet.

If at any time during the concrete pour the tremie line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete surface, the entire drilled shaft is considered defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as directed by the Engineer, and repour the shaft.

3.10.2 Pumped Concrete. Concrete pumps and lines may be used for concrete placement in either wet or dry excavations. Do not begin concrete placement until the pump line discharge orifice is at the shaft base elevation.

For wet excavations, use a plug or similar device to separate the concrete from the fluid in the hole until pumping begins. Remove the plug unless otherwise approved by the engineer.

Ensure the discharge orifice remains at least 10 feet below the surface of the fluid concrete. When lifting the pump line during concrete placement, reduce the line pressure until the orifice has been repositioned at a higher level in the excavation.

If at any time during the concrete pour the pump line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete level, the Department will consider the shaft defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as the Engineer directs, and repour the shaft.

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3.10.3 Drop Chutes. Drop chutes may be used to direct placement of free fall concrete in excavations where the maximum depth of water does not exceed one inch. Do not use the free fall method of placement in wet excavations. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. Reduce the height of free fall and/or reduce the rate of concrete flow into the excavation if the concrete placement causes the shaft excavation to cave or slough, or if the concrete strikes the reinforcing cage or sidewall. When the Engineer determines free fall placement cannot be accomplished satisfactorily, use either tremie or pumping to accomplish the pour.

3.11 Construction Tolerances. The following construction tolerances apply to drilled shafts unless otherwise stated in the contract document:

1) Construct drilled shaft within 3 inches of plan position in the horizontal plane at the top of the shaft.
2) Do not vary the vertical alignment of a shaft excavation from the plan alignment by more than 1/4 inch per foot of depth or 6 inches total.
3) Maintain the top of the reinforcing steel cage no more than 6 inches above and no more than 3 inches below plan position.
4) All casing diameters shown on the plans refer to O.D. (outside diameter) dimensions. The casing dimensions are subject to American Pipe Institute tolerances applicable to regular steel pipe. A casing larger in diameter than shown in the plans may be used, at no additional cost, with prior approval by the Department.
5) Maintain the top of shaft concrete within ± 3 inches from the plan top of shaft elevation, measured after excess shaft concrete has been removed.
6) Design excavation equipment and methods so that the completed shaft excavation will have a planar bottom. Maintain the cutting edges of excavation equipment normal to the vertical axis of the equipment within a tolerance of ± 3/8 inch per foot of diameter. The tip elevation of the shaft has a tolerance of ± 6 inches from final shaft tip elevation unless otherwise specified in the plans.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. Correct all unacceptable shaft excavations and completed shafts to the satisfaction of the Engineer. When a shaft excavation is completed with unacceptable tolerances, present corrective measures designed by a registered Professional Engineer for approval.

4.0 MEASUREMENT.

4.1 Drilled Shafts. The Department will not measure for payment any trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment; concrete required to fill an oversized casing or oversized excavation; obstruction removal; over-reaming or sidewall cleaning; inspection work or inspection equipment; materials or work necessary, including engineering analyses and redesign, to alter unacceptable work methods or to complete corrections for unacceptable work; and will consider them incidental to the Drilled Shaft. Unless noted otherwise in the contract documents, casing is incidental to the drilled shaft.

4.1.1 Drilled Shaft, Common. The Department will measure the length, in linear feet, of drilled shaft above the top of rock elevation shown on the plans. The

Department will consider this quantity Drilled Shaft, Common regardless of the character of material actually encountered.

4.1.2 Drilled Shafts, Solid Rock. The Department will measure the length, in linear feet, of drilled shaft below the top of rock elevation shown on plans. The Department will consider this quantity Drilled Shafts, Solid Rock regardless of the character of material actually encountered during excavation.

4.2 Technique Shaft. The Department will pay for technique shaft at the contract unit price per each as detailed on the plans or as directed by the Engineer. This will constitute full compensation for all costs incurred during installation as described herein for 'Drilled Shaft' or in the contract documents. No additional compensation beyond the number of technique shafts allowed for in the plans will be permitted for additional technique shafts required because of failure to demonstrate adequacy of methods.

4.3 Rock Coring and Rock Sounding. The Department will measure Rock Sounding and Rock Coring shown on the plans, as specified in part 3.5 of this Special Note, and as the Engineer directs, in linear feet to the nearest 0.1-foot. If soil samples are specified in the contract documents they will be incidental to the unit price bid for Rock Sounding. The Department will not measure or pay for subsurface exploration performed deeper than the elevations indicated on the plans and/or in this Special Note, unless directed by the Engineer, and will consider it incidental to these items of work. Additionally, the Department will consider all mobilization, equipment, labor, incidental items, and operations necessary to complete the boring operations incidental to these items of work.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
-----	Drilled Shaft, Diameter*, Common	Linear Foot
-----	Drilled Shaft, Diameter*, Solid Rock	Linear Foot
-----	Technique Shaft	Each
20745ED	Rock Sounding	Linear Foot
20746ED	Rock Coring	Linear Foot

* *See Plan Sheets for sizes of shafts.*

The Department will consider payment as full compensation for all work required in this note.

June 15, 2012