

**SECTION 905 -- PROPOSAL (CONTINUED)**

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO.   1   DATED   3/16/2016        ADDENDUM NO.        DATED         
 ADDENDUM NO.   2   DATED   3/16/2016        ADDENDUM NO.        DATED       

Number	Description
1	Revised Table of Contents; Revised NTB Nos. 6028, 6031, & 6047; Add NTB No. 6224; Revised Bid Items; Added or Revised Plan Sheet Nos. 2, 10-11, 16, 24, 30, 32, 36, 39, 43, 59, 2002, 8001, & 8192; Amendment EBS Download Required.
2	Revised Table of Contents; Revised NTB No 6030; Add NTB Nos.6225, & 6226; Replace SP No. 907-604-6 with SP No. 907-604-7 with Supplement; Revised Bid Items; Amendment EBS Download Required.

TOTAL ADDENDA:   2    
 (Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE \_\_\_\_\_

\_\_\_\_\_  
 Contractor

BY \_\_\_\_\_  
 Signature

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of \_\_\_\_\_ and the names, titles and business addresses of the executives are as follows:

_____ President	_____ Address
_____ Secretary	_____ Address
_____ Treasurer	_____ Address

The following is my (our) itemized proposal.

IM-0055-02(246)/106023309

Hinds County(ies)

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
TABLE OF CONTENTS**

**PROJECT: IM-0055-02(246)/106023309 - Hinds**

Section 901 - Advertisement

Section 904 - Notice to Bidders

#1	Governing Specifications
#3	Final Cleanup
#640	Fiber Reinforced Concrete
#927	Use of Fly Ash in Stone Matrix Asphalt (SMA)
#1405	Errata & Modifications to 2004 Standard Specifications
#1928	Federal Bridge Formula
#2382	Status of ROW, w/ Attachments
#3131	Temporary Traffic Paint
#3581	Storm Water Discharge Associated w/ Construction Activities (>5 Acres)
#3704	Use of Precast Drainage Units
#3893	Petroleum Products Base Price
#4189	Rumble Stripe
#4214	Safety Apparel
#4300	Exposure to Severe Sulfate Areas Below Ground Level
#4473	Alternate Crushed Stone Base Bid Items
#4526	Electronic Addendum Process
#4565	Manual on Uniform Traffic Control Devices (MUTCD)
#5044	Questions Regarding Bidding
#5053	Contractor Correspondence
#5252	Terminal End Sections
#5266	Disadvantaged Business Enterprise, w/ Supplement
#5405	Traffic Control Devices
#5412	Weight Limits
#5556	DUNS Requirement for Federal Funded Projects
#5824	Adjustments for Bituminous Materials
#5865	Non-Quality Control / Quality Assurance Concrete
#5866	Payroll Requirements
#5896	DBE Forms, Participation and Payment
#6024	Contract Time
#6025	Specialty Items
#6026	Placement of Fill Material in Federally Regulated Areas
#6027	A+B Bidding
#6028	Liquidated Damages
#6029	Cooperation between Contractors
#6030	MDOT Furnished Materials
#6031	Lane Closure Restrictions
#6032	Additional Erosion Control Requirements
#6033	AT&T Utility
#6034	Atmos Utility
#6035	Portable Construction Lighting

**PROJECT: IM-0055-02(246)/106023309 - Hinds**

#6036	Existing Traffic Control
#6037	Gulf South Utility
#6038	Mowing and Litter Pickup
#6039	Location & Configuration of OTN Nodes
#6040	Traffic Management Center (TMC) Modifications
#6041	Traffic Recorder Classification Permanent System
#6042	Work Restrictions
#6043	Waiting Periods
#6044	Sign Trusses
#6045	Substitution for Jacked or Bored Concrete Pipe
#6046	Maintenace of Existing Traffic and Erosion Control
#6047	Ramp Restrictions
#6048	Contractor-Provided PDA Testing of Retaining Wall Piling
#6138	Construction Access
#6224	Frontage Road Closures
#6225	Joint Sealant
#6226	Quicklime
906	Required Federal Contract Provisions -- FHWA 1273, w/Supplements

Section 907 - Special Provisions

907-101-4	Definitions
907-102-12	Bidding Requirements and Conditions
907-103-11	Award and Execution
907-104-5	Scope of Work
907-104-6	Partnering Process
907-105-8	Control of Work
907-107-13	Legal Relations and Responsibility to Public, w/Supplement
907-107-14	Contractor's Protection Plan, w/ Supplement
907-108-37	Prosecution and Progress, w/ Supplement
907-109-8	Measurement and Payment
907-110-2	Wage Rates
907-216-1	Solid Sodding
907-225-5	Grassing
907-226-3	Temporary Grassing
907-227-10	Hydroseeding
907-234-5	Siltation Barriers
907-237-4	Wattles
907-245-2	Triangular Silt Dikes
907-246-3	Sandbags & Rockbags
907-249-1	Riprap for Erosion Control
907-251-3	Maintenance of Existing Erosion Control Devices
907-270-1	Temporary Site Drainage
907-304-13	Granular Courses
907-307-4	Lime Treated Courses
907-308-4	Portland Cement Treated Courses, w/Supplement
907-311-3	Lime-Fly Ash Treated Courses
907-401-5	Stone Matrix Asphalt (SMA), w/ Supplement

**PROJECT: IM-0055-02(246)/106023309 - Hinds**

907-401-7	Asphalt Pavements
907-402-6	Open Graded Friction Course, w/ Supplement
907-403-13	Stone Matrix Asphalt (SMA), w/ Supplement
907-403-14	Asphalt Pavements
907-406-4	Cold Milling
907-407-2	Tack Coat
907-413-5	Sawing & Sealing Transverse Joints in Asphalt Pavement
907-503-2	Replacement of Concrete Pavement
907-601-1	Structural Concrete
907-603-8	Culverts & Storm Drains
907-604-7	Trench Drains, w/ Supplement
907-605-3	Underdrains
907-606-8	High Tension Cable Barrier
907-618-9	Placement of Temporary Traffic Stripe
907-618-13	Temporary Construction Signs
907-618-16	Service Patrol
907-619-2	Glare Paddles
907-619-5	Changeable Message Signs
907-619-6	Impact Attenuators
907-622-6	Engineer's Field Office Building
907-626-25	Thermoplastic Traffic Markings
907-630-13	Sign Supports
907-631-1	Flowable Fill
907-637-5	ITS Equipment Cabinets
907-639-8	Traffic Signal and ITS Equipment Poles
907-642-5	Solid State Traffic Activated Controllers Type 8 A
907-644-2	Optical Emergency Vehicle Priority Control System
907-649-5	Video Vehicle Detection
907-650-9	On-Street Video Equipment
907-656-11	Dynamic Message Sign
907-657-12	Fiber Optic Cable (OSP)
907-658-8	Networking Equipment
907-659-4	Traffic Management Center (TMC) Modifications
907-660-7	Communications Node
907-668-1	Traffic Signal Conduit
907-670-2	ITS Radar Detection System
907-680-1	Portable Construction Lighting
907-681-2	Submittal Data
907-681-6	Wire and Conduit Testing
907-682-12	Branch Circuit Wire
907-682-13	Roadway Lighting System
907-687-16	Traffic Recorder Classification System
907-699-5	Construction Stakes
907-701-5	Hydraulic Cement, w/ Supplement
907-702-5	Specifications for Bituminous Materials
907-703-12	Aggregates, w/ Supplement
907-707-5	Joint Material

**PROJECT: IM-0055-02(246)/106023309 - Hinds**

907-708-6	Non-Metal Drainage Structures
907-709-1	Metal Pipe
907-710-1	Fast Dry Solvent Traffic Paint
907-711-4	Synthetic Structural Fiber Reinforcement
907-713-5	Admixtures for Concrete
907-714-3	Stabilizing Fibers
907-714-8	Miscellaneous Materials
907-715-4	Roadside Development Materials
907-720-2	Pavement Marking Materials
907-804-19	Concrete Bridges and Structures
907-823-8	Preformed Joint Seal, w/ Attachments
907-825-3	Soil Nail Retaining Walls
906-7	Training Special Provisions

Section 905 - Proposal, Proposal Bid Items, Combination Bid Proposal  
Certification of Performance - Prior Federal-Aid Contracts  
Certification Regarding Non-Collusion, Debarment and Suspension  
SAM.GOV Registration and DUNS Number  
Section 902 - Contract Form  
Section 903 - Contract Bond Forms  
Form -- OCR-485

Pile Data Form

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET  
OF SECTION 905 AS ADDENDA)

03/16/2016 04:11 PM

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 – NOTICE TO PROPOSERS NO. 6030

CODE: (SP)

DATE: 03/16/2016

SUBJECT: MDOT Furnished Materials

PROJECT: IM-0055-02(246) / 106023309 – Hinds County

Bidders are hereby advised that the Department is furnishing the following materials to the Contractor. It is the intent of the Department for these materials to be incorporated into the project where applicable, but it is not a requirement. The Contractor shall take ownership and remove the following materials at these locations as soon as possible but no later than the dates shown below. Should the Contractor fail to remove the items by the dates shown, the next monthly estimate will be held until they are removed. The materials listed below are based on a recent inventory done by the Department. The Department will coordinate a site visit for potential bidders on 3/08/16 at 8:00 A.M. starting at the Whitfield Project Office for verification of these materials. Each Contractor will be allowed a maximum of two (2) participants.

After receiving bids, there will be no consideration for adjustment in contract price pertaining to these MDOT furnished materials.

- A. Ford Pit Stockpile (located adjacent to the West Frontage Rd, just past the Byram Interchange in Byram, MS). Remove materials by May 31, 2016. See Attachment A for listing of materials.
- B. Mississippi Surplus Property Bldg. (located at Pearl, MS). Remove materials by May 31, 2016. See Attachment B for listing of materials.
- C. MDOT Whitfield Project Office (located at Hwy 468, Pearl, MS). Remove materials by December 31, 2016. See Attachment C for listing of materials.
- D. Project Site: Remove materials by end of Project. A maintenance release will not be issued until all of the materials are removed. See Attachment D for listing of materials.
- E. Gulf Coast Pre-stress (located in Pass Christian, MS). Remove materials by June 30, 2016. See Attachment E for listing of materials. (No Charge delivery upon request)
- F. Asphalt Aggregate Stockpile (located at US 51 & Gallatin). Remove materials by October 31, 2016. See attachment F for listing of materials.

**Attachment A  
Ford Pit & Inside Right-of-Way**

42" Cast in Place Shoulder Barrier Wall Reinforcement

Description	Pieces	LF per Piece	
Barrier Mat, L	652	20.5	
Barrier Mat, R	651	20.5	
Barrier Mat, C	742	21.75	
Barrier Mat	206	20.51	
Anchor Mat Right, L and/or R	1177	19.75	
Anchor Mat Right, C	589	20.5	
Anchor Mat Left1 L and/or right	1325	19.75	
Anchor Mat Left, C	752	20.5	
Top Foundation Mat, L and/or R	1544	20.5	
Top Foundation mat, C	670	21.75	
Bottom Foundation Mat, L	635	20.5	
Bottom Foundation Mat, R	580	20.5	
Bottom Foundation Mat, C	672	21.75	
Moment Anchor Mat, L	623	20.5	
Moment Anchor Mat ,R	645	20.5	
Moment Anchor Mat, C	626	21.75	

**Sheet Pile**

Description	Number of Pairs- (36" total width)	LF per Pair	Total SF
PZ 27	869	30	78210

**Reinforcement**

Structure	Weight (lbs)
Retaining Wall D	49594

**Pipe**

Description	Sections	LF per Section	Total LF
18" Corrugated Plastic pipe	28	20	560

**Emergency Detour Traffic Control Items**

Description	Sign Number	Unit	Quantity
Emergency Detour Signs w/ stand	M4-9	Each	8
8' Single Faced Barricade		Each	8

<b><u>Attachment B</u></b>			
<b>Items stored at State Surplus Office in Pearl, MS</b>			
<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Remarks</u>
Lighting Assembly, Light	EACH	146	Pay Item 683-B108
Lighting Assembly, Arm	EACH	146	Pay Item 683-B108
Lighting Assembly, Hardware (covers, bolts, nuts, caps)	EACH	Varies	Pay Item 683-B108
Lighting Assembly, Underpass Fixture	EACH	6	Pay Item 683-C010
Lighting Assembly, Underpass Bulb	EACH	6	Pay Item 683-C010
Structure Mounted Junction Box	EACH	1	Pay Item 682-E002
Fiber Optic Cable	LF	48294	Pay Item 907-657-A001
Fiber Optic Closure Kits	EACH	17	Pay Item 907-657-A001
Fiber Optic Splice	EACH	19	Pay Item 907-657-A001
#8 Stranded Copper Wire	LF	15000	Pay Item 666-B032
#6 Stranded Copper Wire	LF	6000	Pay Item 682-A001 and Pay item 666-028
#6 Stranded Copper Wire	LF		
#4 Stranded Copper Wire	LF	93	Pay Item 666-B038 and Pay Item 682-A025
#4 Stranded Copper Wire	LF		
#2 Stranded Copper Wire	LF	22000	Pay Item 682-A015 and Pay Item 682-B016
#2 Stranded Copper Wire	LF		
#1/0 Stranded Copper Wire	LF	1600	Pay Item 682-A004 and Pay Item 682-B005
#1/0 Stranded Copper Wire	LF		
#2/0 Stranded Copper Wire	LF	4299	Pay Item 682-A020
Vehicle Impact Attenuator, 60 mph	EACH	14	Pay Item 629-A002
Traffic Cameras	EACH	3	Previously MDOT property removed from previous project to be reinstalled on project



<b><u>Attachment B Continued</u></b>			
<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Remarks</u>
Gomaco Median Footer Mold	EACH	1	Slip form footer mold for median barrier wall
Power Curber/Smeco Trimmer	EACH	1	trimmer for soil cement to trim out moment slab key for shoulder barrier walls
Power Curber/Smeco Trimmer Head for Barrier Wall	EACH	1	extra head for trimmer
Power Curber/Smeco Trimmer motor	EACH		extra motor for trimmer
Carbide Teeth for Trimmer	EACH	60	extra teeth for trimmer
Bullet Teeth for Trimmer	EACH	24	extra teeth for trimmer
14" Concrete Pile Cushions	EACH	347	
Metal Drain Forms for Shoulder Barrier Wall	EACH	17	
2" Stand Chairs for Barrier Wall	LF	6975	for retaining walls
3" Stand Chairs for Barrier Wall	LF	3775	for retaining walls
2" Slab Bolsters Upper for Barrier Wall	LF	9850	for retaining walls
3" Slab Bolsters Upper for Barrier Wall	LF	2545	for retaining walls
4.25" Slab Bolster Upper for Barrier Wall	LF	7295	for retaining walls
1" Fiber Expansion Material	EACH	173	173 full sheets
Concrete Maturity Loggers	EACH	300	
Concrete Maturity Readers	EACH	3	
36"x48" Ramp 35 MPH sign	EACH	2	
48"x60" Ramp 40 MPH sign	EACH	4	
36"x36" Speed Reduction 60 MPH	EACH	1	
36"x48" Speed Limit 60 MPH	EACH	1	
24"x24" Interstate Shield I-55	EACH	3	
24"x12" South for Interstate	EACH	3	
Minor Hardware (Overhead Sign Assemblies)			
Fiber Optic Wire (new roll)	LF	7093	
1/0 wire (new roll)	LF	800	
4 AWG wire (partial roll)	LF	467	
4 AWG wire (partial roll)	LF	440	
2 AWG wire (partial roll)	LF	3060	
2 AWG wire (partial roll)	LF	3060	
# 8 AWG wire	LF	2500	

<b><u>Attachment C</u></b>		
<b>Items Stored at the Whitfield Project Office</b>		
<u>Description</u>	<u>Unit</u>	<u>Quantity</u>
Knowles Materials Reinforcing Steel Overhead Structure No. 20 Drilled Shaft	LBS	3220
Sign Assembly No. 1 Pieces	EACH	1
Sign Assembly No. 2 Pieces	EACH	1
Sign Assembly No. 3 Pieces	EACH	1
Sign Assembly No. 4 Pieces	EACH	1
Sign Assembly No. 5 Pieces	EACH	1
Sign Assembly No. 6 Pieces	EACH	1
Sign Assembly No. 7 Pieces	EACH	1
Sign Assembly No. 8 Pieces	EACH	1
Sign Assembly No. 9 Pieces	EACH	1
Sign Assembly No. 10 Pieces	EACH	1
Sign Assembly No. 11 Pieces	EACH	1
Sign Assembly No. 12 Pieces	EACH	1
Sign Assembly No. 13 Pieces	EACH	1
Sign Assembly No. 14 Pieces	EACH	1
Sign Assembly No. 15 Pieces	EACH	1
Sign Assembly No. 16 Pieces	EACH	1
Sign Assembly No. 17 Pieces	EACH	1
Sign Assembly No. 18 Pieces	EACH	1
Sign Assembly No. 19 Pieces	EACH	1
Sign Assembly No. 20 Pieces	EACH	1
Sign Assembly No. 21 Pieces	EACH	1
Sign Assembly No. 22 Pieces	EACH	1

<b><u>Attachment D</u></b>			
<b>Items Located on ROW</b>			
<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Remarks</u>
Traffic Signal Eq. pole	EACH	1	Pay Item 907-639-A009 at Siwell Interchange SE
Traffic Signal Eq. pole	EACH	1	Pay Item 907-639-A007 Located at Siwell Interchange SE
Traffic Signal Eq. pole	EACH	1	Pay Item 907-639-A006 Located at Siwell Interchange SE
Traffic Signal Eq. pole	EACH	2	Pay Item 907-639-A002 Located at Siwell Interchange SE
Traffic Signal pole, Type II, 17' shaft 40' & 45' arm	EACH	1	Siwell Interchange SE
Detector Poles, 35'	EACH	4	Siwell Interchange SE
Lighting Assembly, pole	EACH	146	Pay Item 683-B108 Located at Siwell Interchange SE
Underground pullbox Type A	EACH	4	Siwell Interchange SE
Underground pullbox Type F	EACH	1	Siwell Interchange SE
Pullbox, Type 1	EACH	3	Pay Item 647-A001 Located at Siwell Interchange SE
Pullbox, Type 2	EACH	18	Pay Item 647-A005 Located at Siwell Interchange SE
Pullbox, Type 3	EACH	1	Pay Item 647-A002 Located at Siwell Interchange SE
Camera Pole (Removed from McDowell Rd.)	EACH	1	Located at Siwell Rd. (should be relocated to McDowell Rd.)
18" RCP	LF	24	Located at Siwell Rd.

<b>Attachment D Continued</b>			
15" RCP	LF	104	Located at Siwell Rd.
22"x13" Arch Pipe	LF	48	Located at Siwell Rd.
22"x13" FES	EACH	2	Located at Siwell Rd.
29"x18" Arch Pipe	LF	88	Located at Siwell Rd.
29"x18" FES	EACH	1	Located at Siwell Rd.
30" RCP	LF	8	Located at Siwell Rd.
36"x23" Arch Pipe	LF	80	Located at Siwell Rd.
36"x23" FES	EACH	1	Located at Siwell Rd.
<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Remarks</u>
Granular Material 9C	CY	3570	Located at Siwell Rd.
RAP	CY	Unknown	Located in a stockpile at Elton Rd.
6" Perforated Sewer Pipe	LF	3000	Located at Siwell Rd.
6" Non-Perforated Sewer Pipe	LF	250	Located at Siwell Rd.

<b><u>Attachment E</u></b>		
<b>Items Stored at Gulf Coast Pre-stress yard in Pass Christian, MS</b>		
<u>Description</u>	<u>Unit</u>	<u>Quantity</u>
14"x14" Prestressed Concrete Piling (36') w/dowels	LF	6336
14"x14" Prestressed Concrete Piling (38') w/dowels	LF	3876

<b><u>Attachment F</u></b>		
<b>Asphalt Aggregate Stockpile US 51 and Gallatin</b>		
<b><u>Material</u></b>	<b><u>Unit</u></b>	<b><u>Quantity</u></b>
3/8" Rock	TONS	4659.35
1/2" Rock	TONS	9378.92
3/4" Rock	TONS	7878.07
Sand	TONS	3071.63

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 6225**

**CODE: (SP)**

**DATE: 03/16/2016**

**SUBJECT: Joint Sealant**

**PROJECT: IM-0055-02(246) / 106023309 – Hinds County**

Bidders are hereby advised of the following regarding the Joint Sealant item of work:

Joint Sealant will be required on the top lift of SMA throughout the project as specified in section 907-401.03.12.

Joint Sealant will also be required on the top two lifts of SMA at the saw cuts called for on TS-2 and TS-3. The Saw Cut and Joint Sealant is required where median construction ties to the existing northbound construction. It is not shown on TS-2 and TS-3 but will be required in the same manner on the southbound side where the southbound construction ties to the previously constructed median.

The Summary of Quantities sheets in the Plans indicate the quantity for 907-403-S004, Joint Sealant, to be 30 miles. This is in error. The correct quantity for 907-403-S004, Joint Sealant, shall be 77 miles which has been corrected on the bid sheets.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 6226**

**CODE: (SP)**

**DATE: 03/16/2016**

**SUBJECT: Quicklime**

**PROJECT: IM-0055-02(246) / 106023309 – Hinds County**

Bidders are hereby advised of the following regarding the Quicklime item of work:

The footnote on the Summary of Quantities sheet SQ-2 in the Plans indicates the quantity for 907-307-PP001, 12” Soil-Lime Water Mixing, Class C, includes 887 Tons of Quicklime. This is in error. The quantity for 907-307-PP001, 12” Soil-Lime Water Mixing, Class C, should actually include 7980 Tons of Quicklime.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENT TO SPECIAL PROVISION NO. 907-604-7**

**DATE: 03/15/2015**

**SUBJECT: Trench Drains**

Delete the first sentence of the third paragraph of Subsection 907-604.02.1 on page 1 and substitute the following.

The precast channels must have a radius or trapezoidal bottom and a minimum channel flow width of eight inches (8").



# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SPECIAL PROVISION NO. 907-604-7**

**CODE: (SP)**

**DATE: 11/20/2012**

**SUBJECT: Trench Drains**

Section 604, Manholes, Inlets and Catch Basins, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable for Trench Drains only.

## **SECTION 907-604 -- TRENCH DRAINS**

**907-604.01--Description.** This work shall consist of **furnishing and installing** a pre-engineered trench drain **system** in accordance with the plan details, standard specifications, and this special provision. The drain **system** shall **consist of a pre-fabricated channel** encased in concrete per the plan detail. The drain **system** shall be constructed to form a channel for the collection and flow of storm water. Grates shall be installed to allow water to pass into the channel and to allow vehicular traffic to move over the drains.

### **907-604.02--Materials.**

**907-604.02.1--Drain Channel.** The drain channel shall be constructed on plastic, fiberglass, or polymer concrete. The minimum width and depth of the drain channel below the drain grate, or minimum required flow rate, will be shown on the plan detail. Connections to structures shall not restrict the hydraulic flow of the drain channel.

The drain **channel** shall have a smooth interior face.

The precast channels must have a radius or trapezoidal bottom and a minimum channel flow width of four inches (4"). The drain channel must be smooth to the touch and have interconnecting end profiles to obtain channel alignment within 1/16 inch.

Trench drain channel must conform to the requirements listed in Table 1.

**Table 1**

<b>Physical Property</b>	<b>Requirement</b>	<b>Test Method</b>
Lateral/Vertical Deflection	Pass	See Below
Compressive Strength	11,000 psi minimum	ASTM C 579
Moisture Absorption	1% maximum after 24 hr. immersion	ASTM D 570
Freeze/Thaw	1% maximum weight loss after 300 cycles	ASTM C 666
Chemical Resistance	Hydrocarbons / Automotive fluids -- No weight loss	ASTM C 267

Weathering Resistance	No cracking after 2000-hour exposure	ASTM D 2565
Burning Rate	HB	ASTMD 635

**Lateral Deflection.** The channel body shall be tested without the grate in a typical section of the length and width described in the catalog and supplied to the Contractor. The channel body must have a maximum lateral deflection of 1/4 inch when test loaded by 350 pounds per square foot applied over the entire sidewall of the channel body. Validation of the deepest channel body will validate all shallower channel bodies manufactured with the same design.

**Vertical Deflection.** The grate and channel body shall be tested as a unit in accordance with AASHTO Designation: M 306, with the following modifications.

- test block dimensions are nine inches (9”) long by 75% of the trench grate width;
- proof pressure is 200 psi applied for one minute duration;
- acceptance criteria is no breaking, buckling, or bowing and a maximum deflection of 1/8 inch; and
- each grate width must be validated.

Prefabricated drain channels shall be made from components that are anchored by the placement of concrete to encase the anchoring lugs that are integral to the channel components. Prefabricated drain channels shall interlock with adjoining channels.

Unless otherwise indicated, Class B concrete shall meet the requirements of Section 804 shall be used Concrete shall be placed in a monolithic pour between inlet structures. Construction joints will only be allowed if approved by the Engineer. If joints are allowed, they shall be constructed with a concrete lug or keyway approved by the Engineer.

**907-604.02.2--Grates and Frames.** The grates for the trench drains must have openings consisting of a minimum of 60 percent of the total top surface area of the grate, with no individual opening or slot having a dimension greater than two inches (2”) when measured in the direction of the grated line drain flow line.

Grates or frames must have studs for anchoring to the surrounding concrete. Studs must extend at least three inches (3”) from the grate or frame. The anchor studs must be spaced 24 inches or less along the length of the grate or frame on both sides. Studs must either be integrally cast with or may be welded to the grate or frame. Welded studs must have a 360 degree flash.

Grates and frames must be either grey iron casting in accordance with ASTM Designation: A 48, Class 35B, or ductile iron casting in accordance with ASTM Designation: A 536, Grade 80-55-06.

All grates and frames must have a load capacity meeting or exceeding AASHTO HS-20 for bridge construction. The grates supplied must meet AASHTO M 306-09, with the following modifications:

- proof load contact area width is 75% of trench flow width to a maximum contact width of

nine inches (9");

- proof load contact length is nine inches (9") for all trench widths; and
- proof load is 494 psi for a maximum proof load of 40,000 pounds over a 9-inch x 9-inch contact area.

Grate retaining devices shall not obstruct the flow of water into the channel or through the channel. The grate shall fit into the frame without rocking.

Frames shall be anchored into the surrounding concrete by metal extensions attached to the frame at all four corners. Frames which extend past the channel sidewall and bear on the adjacent concrete shall include vent holes to help release entrapped air during concrete consolidation. Vent holes shall be a large enough for visually observe proper consolidation of the concrete.

**907-604.03--Construction Requirements.** The Contractor shall submit the trench drain manufacturer's recommendations for installation to the Engineer prior to beginning installation. The submittal shall include a quantity listing of all materials required for the construction of the trench drain. The submittal shall be delivered to the Engineer at least ten calendar days prior to beginning the construction of the trench drain.

A representative of the trench drain manufacturer shall be present to advise the Engineer of the adequacy of the first trench drain units that are installed. The installation of the trench drain units shall not begin until the manufacturer's representative is present at the site of installation.

Connection to an existing structure may require the use of a transitional fitting and/or sections of pipe to provide a suitable connection without damage to the grate, drain and structure. Connections to structures shall be approved by the Engineer prior to construction.

When the trench drain begins or terminates without a connection to other pipes or drainage structures, the trench drain end shall be sealed or plugged with a cap suitable to the Engineer. The seal shall provide a waterproof connection. Unless otherwise detailed in the plans, outlet/inlet end attachments to connect existing or required pipe to the trench drain shall be standard manufactured attachments that are compatible with the trench drain and the outlet/inlet pipe. Unless otherwise detailed in the plans, adequate sized pipe shall be used to connect existing or required structure to the trench drain.

Excavation shall be kept as nearly as possible to the minimum width, depth, and length shown on the plan detail.

Trench drains shall be installed to the lines and grades shown on the plans or as directed by the Engineer. The trench opening should be protected during installation by a removable wood strip, heavy duty tape, or other suitable material, affixed to the opening to prevent infiltration of material into the drain. After finishing, any protective covering shall be removed and any debris that entered the trench shall be removed.

The furnishing and placement of the concrete backfill shall be in accordance with the requirements of Sections 601 and 804. The prefabricated trench drain components shall be supported or held in place in such a manner as to permit flow of the concrete backfill material around the drain. Unless otherwise shown, the concrete encasement adjacent and beneath the drain channel shall be a minimum thickness of six inches (6"). Drain channels shall be positioned in the excavated trench so that, when finished, the surrounding concrete backfill will encase the channel. Concrete backfill shall be placed in the trench against undisturbed material at the sides and bottom of the trench and in a manner that will prevent floating or shifting of the trench drain components and voids in, or segregation of, the concrete. Where necessary, earth plugs shall be constructed and compacted at the ends of the planned concrete backfill to contain the concrete within the trench. Concrete shall be finished flush with the adjacent finish grade. The surface of the concrete shall be textured with a broom or burlap drag to produce a durable skid-resistant surface.

Under no circumstances shall any portion of the trench drain slot extend above the paving material or curb and gutter section.

**907-604.04--Method of Measurement.** Trench drain will be measured by the linear foot along the top of the trench drain. Connections to other structures (i.e. elbows, pipe, joints, etc.) will not be measured for payment unless shown otherwise on the plan detail. Excavation and backfill will not be measured for separate payment.

**907-604.05--Basis of Payment.** Trench drain, measured as prescribed above, will be paid for at the contract unit price per linear foot, which shall be full compensation for fabricating, furnishing and installing the trench drain components, furnishing and installing connections to other structures or pipe, all concrete, excavation, backfill, satisfactory disposal of surplus materials, and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

907-604-A: \_\_\_-inch Trench Drain -per linear foot

Reconstruction of approximately 8 miles of I-55 from South of the Byram Interchange to North of McDowell Road (Phase 2) known as Federal Aid Project No. IM-0055-02(246) / 106023309 in Hinds County.

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
<b>Roadway Items</b>					
0010	201-A001		1	Lump Sum	Clearing and Grubbing
0020	202-B022		25,809	Linear Feet	Removal of Concrete Median Barrier
0030	202-B023		88,826	Linear Feet	Removal of Concrete Median Barrier, Precast
0040	202-B025		459	Square Yard	Removal of Concrete Paved Ditch
0050	202-B036		298	Square Yard	Removal of Concrete Slope Paving
0060	202-B042		19	Each	Removal of Flared End Section, All Sizes
0070	202-B057		95	Each	Removal of Inlets, All Sizes
0080	202-B063		2	Each	Removal of Overhead Sign Including Panels, Truss, Supports & Footing
0090	202-B064		3,049	Linear Feet	Removal of Pipe, 8" And Above
0100	202-B070		137	Each	Removal of Sign Including Post & Footing
0110	202-B072		1,000	Square Yard	Removal of Soil Cement Treated Base, All Depths
0120	202-B078		340,959	Square Yard	Removal of Pavement, All Types and Depths
0130	202-B102		2,942	Linear Feet	Removal of Guard Rail
0150	202-B142		7	Each	Removal of Junction Box
0160	202-B149		4	Mile	Removal of Traffic Stripe
0170	202-B189		17	Each	Removal of Impact Attenuator
0180	202-B196		5,000	Linear Feet	Removal of Debris and Sand From Pipe, All Sizes
0190	202-B247		2	Each	Removal of Pull Box
0200	202-B248		1	Each	Removal of Manhole
0210	202-B295		400	Linear Feet	Removal of Trench Drain, All Sizes, All Types
0220	202-B297		1	Each	Removal of Existing Demarcation Cabinet and Equipment
0230	203-A004	(E)	1,000	Cubic Yard	Unclassified Excavation, LVM, AH
0240	203-B004	(E)	1,000	Cubic Yard	Rock Excavation, LVM, AH
0250	203-EX035	(E)	500,065	Cubic Yard	Borrow Excavation, AH, FME, Class B9-6
0260	203-G003	(E)	419,997	Cubic Yard	Excess Excavation, FM, AH
0270	206-A001	(S)	8,502	Cubic Yard	Structure Excavation
0280	209-A004		89,643	Square Yard	Geotextile Stabilization, Type V, Non-Woven
0290	211-B001	(E)	33,680	Cubic Yard	Topsoil for Slope Treatment, Contractor Furnished
0300	213-C001		64	Ton	Superphosphate
0310	217-A001		3,306	Square Yard	Ditch Liner
0320	219-A001		186	Thousand Gallon	Watering [\$20.00]
0330	220-A001		64	Acre	Insect Pest Control [\$30.00]

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0340	221-A001	(S)	2,240	Cubic Yard	Portland Cement Concrete Paved Ditch
0350	223-A001		1,000	Acre	Mowing [\$50.00]
0360	224-A001		2,680	Square Yard	Soil Reinforcing Mat
0370	234-A001		1,305	Linear Feet	Temporary Silt Fence
0380	239-A001		400	Linear Feet	Temporary Slope Drains
0390	423-A001		28	Mile	Rumble Strips, Ground In
0400	501-E001		288	Linear Feet	Expansion Joints, Without Dowels
0410	502-A001	(C)	298	Square Yard	Reinforced Cement Concrete Bridge End Pavement
0420	503-C007		75,080	Linear Feet	Saw Cut, Full Depth
0430	503-E002		16	Each	Tie Bars, No. 5 Deformed Drilled and Epoxied or Grouted
0440	602-A001	(S)	26,573	Pounds	Reinforcing Steel
0450	603-CA002	(S)	8,306	Linear Feet	18" Reinforced Concrete Pipe, Class III
0460	603-CA003	(S)	1,128	Linear Feet	24" Reinforced Concrete Pipe, Class III
0470	603-CA004	(S)	184	Linear Feet	30" Reinforced Concrete Pipe, Class III
0480	603-CA005	(S)	208	Linear Feet	36" Reinforced Concrete Pipe, Class III
0490	603-CA006	(S)	104	Linear Feet	42" Reinforced Concrete Pipe, Class III
0500	603-CA126	(S)	72	Linear Feet	18" Reinforced Concrete Pipe, Class V, Jacked or Bored
0510	603-CB001	(S)	9	Each	18" Reinforced Concrete End Section
0520	603-CB002	(S)	7	Each	24" Reinforced Concrete End Section
0530	603-CB003	(S)	2	Each	30" Reinforced Concrete End Section
0540	603-CB005	(S)	1	Each	42" Reinforced Concrete End Section
0550	603-CE001	(S)	848	Linear Feet	22" x 13" Concrete Arch Pipe, Class A III
0560	603-CE002	(S)	2,536	Linear Feet	29" x 18" Concrete Arch Pipe, Class A III
0570	603-CE003	(S)	248	Linear Feet	36" x 23" Concrete Arch Pipe, Class A III
0580	603-CE004	(S)	248	Linear Feet	44" x 27" Concrete Arch Pipe, Class A III
0590	603-CE006	(S)	240	Linear Feet	58" x 36" Concrete Arch Pipe, Class A III
0600	603-CF002	(S)	5	Each	29" x 18" Concrete Arch Pipe End Section
0610	603-CF004	(S)	1	Each	44" x 27" Concrete Arch Pipe End Section
0620	603-CF006	(S)	2	Each	58" x 36" Concrete Arch Pipe End Section
0630	603-SB003	(S)	6	Each	18" Branch Connections, Stub into Concrete Box Culvert
0640	603-SB020	(S)	1	Each	18" Branch Connections, Stub into Concrete Pipe
0650	604-A001		32,696	Pounds	Castings
0660	604-B001		31,329	Pounds	Gratings
0670	605-AA005	(S)	10,634	Square Yard	Geotextile for Subsurface Drainage, Type V, Non-Woven

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0680	605-W001	(GY)	1,094	Cubic Yard	Filter Material for Combination Storm Drain and/or Underdrains, Type A, FM
0690	605-W002	(GY)	7,635	Cubic Yard	Filter Material for Combination Storm Drain and/or Underdrains, Type B, FM
0700	605-Z002		19	Each	Underdrain Appurtenances, Small Animal Guard
0710	605-Z004		19	Each	Underdrain Appurtenances, Sign
0720	605-Z005		19	Each	Underdrain Appurtenances, Concrete Apron, Precast or Cast-In-Place
0730	606-B007		9,350	Linear Feet	Guard Rail, Class A, Type 1, 'W' Beam, Metal Post
0740	606-D012		3	Each	Guard Rail, Bridge End Section, Type I
0750	606-E002		1	Each	Guard Rail, Terminal End Section, Flared
0760	606-E003		16	Each	Guard Rail, Terminal End Section, Non-Flared
0770	609-D002	(S)	455	Linear Feet	Combination Concrete Curb and Gutter Type 2
0780	613-D004		5	Each	Adjustment of Inlet
0790	615-A012	(S)	26,628	Linear Feet	Concrete Type IV Modified, 42" Height, Cast-in-Place Median Barrier
0800	615-A015	(S)	20	Linear Feet	Concrete Bridge End Barrier, 32"
0810	615-A020	(S)	38,579	Linear Feet	Concrete Type III Modified Cast-in-Place Median Barrier, 42" High
0820	616-A001	(S)	120	Square Yard	Concrete Median and/or Island Pavement, 4-inch
0830	616-A003	(S)	32	Square Yard	Concrete Median and/or Island Pavement, 10-inch
0840	619-A1002		71	Mile	Temporary Traffic Stripe, Continuous White
0850	619-A2002		60	Mile	Temporary Traffic Stripe, Continuous Yellow
0860	619-A3006		63	Mile	Temporary Traffic Stripe, Skip White
0870	619-A4006		9	Mile	Temporary Traffic Stripe, Skip Yellow
0880	619-A5001		107,133	Linear Feet	Temporary Traffic Stripe, Detail
0890	619-A6001		7,721	Linear Feet	Temporary Traffic Stripe, Legend
0900	619-A6002		4,018	Square Feet	Temporary Traffic Stripe, Legend
0910	619-C6001		3,420	Each	Red-Clear Reflective High Performance Raised Marker
0920	619-D1001		73	Square Feet	Standard Roadside Construction Signs, Less than 10 Square Feet
0930	619-D2001		605	Square Feet	Standard Roadside Construction Signs, 10 Square Feet or More
0940	619-D4001		126	Square Feet	Directional Signs
0950	619-F1001		2,500	Linear Feet	Concrete Median Barrier, Precast
0960	619-F2001		24,580	Linear Feet	Remove and Reset Concrete Median Barrier, Precast
0970	619-G4005		612	Linear Feet	Barricades, Type III, Double Faced
0980	619-G5001		1,479	Each	Free Standing Plastic Drums
0990	619-J1003		17	Unit	Impact Attenuator, 60 MPH
1000	619-J2002		5	Unit	Impact Attenuator, 60 MPH, Replacement Package

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
1010	620-A001		1	Lump Sum	Mobilization
1020	627-K001		5,912	Each	Red-Clear Reflective High Performance Raised Markers
1030	627-L001		2,554	Each	Two-Way Yellow Reflective High Performance Raised Markers
1040	629-A003		15	Each	Vehicular Impact Attenuator, 70 MPH
1050	630-A001		199	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness
1060	630-A002		1,469	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness
1070	630-B001		330	Square Feet	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Ground Mounted
1080	630-B002		3,611	Square Feet	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Overhead Mounted
1090	630-C001		52	Linear Feet	Steel U-Section Posts, 2.0 lb/ft
1100	630-C004		908	Linear Feet	Steel U-Section Posts, 3.0 to 3.5 lb/ft
1110	630-D002		131	Linear Feet	Structural Steel Beams, S4 x 7.7
1120	630-D003		170	Linear Feet	Structural Steel Beams, W6 x 9
1130	630-E001		199	Pounds	Structural Steel Angles & Bars, 3" x 3" x 1/4" Angles
1140	630-E004		1,135	Pounds	Structural Steel Angles & Bars, 7/16" x 2 1/2" Flat Bar
1150	630-F001		269	Each	Delineators, Guard Rail, White
1160	630-F002		28	Each	Delineators, Guard Rail, Yellow
1170	630-F006		86	Each	Delineators, Post Mounted, Single White
1180	630-F007		33	Each	Delineators, Post Mounted, Single Yellow
1190	630-F008		94	Each	Delineators, Post Mounted, Double White
1200	630-F009		7	Each	Delineators, Post Mounted, Double Yellow
1210	630-G006		6	Each	Type 3 Object Markers, OM-3R or OM-3L
1220	630-K001		99	Linear Feet	Welded & Seamless Steel Pipe Posts, 3"
1230	630-K002		324	Linear Feet	Welded & Seamless Steel Pipe Posts, 3 1/2"
1240	630-K003		393	Linear Feet	Welded & Seamless Steel Pipe Posts, 4"
1250	630-K004		143	Linear Feet	Welded & Seamless Steel Pipe Posts, 5"
1260	635-A001		1,488	Linear Feet	Vehicle Loop Assemblies
1270	636-A001		1,610	Linear Feet	Shielded Cable, AWG #18, 4 Conductor
1280	638-A005		5	Each	Loop Detector Amplifier, Card Rack Mounted, 4 Channel
1290	640-A016		12	Each	Traffic Signal Heads, Type 1 LED
1300	640-A018		2	Each	Traffic Signal Heads, Type 3 LED
1310	640-A056		6	Each	Traffic Signal Heads, Type 2 FYA LED
1314	646-A001		1	Lump Sum	Removal of Existing Traffic Signal Equipment
1340	647-A002		1	Each	Pullbox, Type 3



Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
1350	647-A003		13	Each	Pullbox, Type 4
1360	647-A004		7	Each	Pullbox, Type 5
1370	647-A005		34	Each	Pullbox, Type 2
1380	653-B001		54	Square Feet	Street Name Sign, Encapsulated Lens
1390	666-B015		475	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor
1400	666-B023		55	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 8, 3 Conductor
1410	666-B028		1,700	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #6, 3 Conductor
1420	666-B038		5,260	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #4, 3 Conductor
1430	666-B040		3,695	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #8, 3 Conductor
1440	666-B043		340	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #2, 4 Conductor
1450	666-B054		1,475	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 8 Conductor
1460	666-B055		290	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #3/0, 3 Conductor
1470	666-C006		170	Linear Feet	Electric Cable, Aerial Supported, IMSA 20-1, AWG 14, 5 Conductor
1480	666-C017		297	Linear Feet	Electric Cable, Aerial Supported, IMSA 20-1, AWG 14, 8 Conductor
1490	668-A018		825	Linear Feet	Traffic Signal Conduit, Underground, Type 4, 2"
1500	668-A020		95	Linear Feet	Traffic Signal Conduit, Underground, Type 4, 3"
1510	668-A029		4,845	Linear Feet	Traffic Signal Conduit, Underground, Rolled Pipe, 2"
1520	668-B024		1,280	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"
1530	668-B025		665	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 3"
1540	682-A001		1,150	Linear Feet	Underground Branch Circuit, AWG 1, 3 Conductor
1550	682-A004		125	Linear Feet	Underground Branch Circuit, AWG 1/0, 3 Conductor
1560	682-A015		21,495	Linear Feet	Underground Branch Circuit, AWG 2, 3 Conductor
1570	682-A020		100	Linear Feet	Underground Branch Circuit, AWG 2/0, 3 Conductor
1580	682-A025		2,620	Linear Feet	Underground Branch Circuit, AWG 4, 3 Conductor
1590	682-A031		8,920	Linear Feet	Underground Branch Circuit, AWG 6, 3 Conductor
1600	682-A036		330	Linear Feet	Underground Branch Circuit, AWG 8, 3 Conductor
1610	682-B002		100	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 1, 3 Conductor
1620	682-B005		65	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 1/0, 3 Conductor
1630	682-B016		1,145	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 2, 3 Conductor
1640	682-B021		100	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 2/0, 3 Conductor
1650	682-B025		150	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 4, 3 Conductor
1660	682-B031		100	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 6, 3 Conductor
1670	682-B036		100	Linear Feet	Underground Branch Circuit, Jacked or Bored, AWG 8, 3 Conductor
1680	682-D001		6	Each	Underground Pull Box

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
1690	682-D003		4	Each	Structure Mounted Pull Box
1700	683-B108		146	Each	Lighting Assembly, Low Mast, Type 50-1-0-400
1710	684-A003		205	Cubic Yard	Pole Foundation, 24" Diameter
1720	684-B003		16	Linear Feet	Slip Casing, 24" Diameter
1730	815-A009	(S)	451	Ton	Loose Riprap, Size 300
1740	815-D001	(S)	8	Cubic Yard	Concrete Slope Paving
1750	815-E001	(S)	705	Square Yard	Geotextile under Riprap
1760	907-216-A001		9,317	Square Yard	Solid Sodding
1770	907-225-A001		127	Acre	Grassing
1780	907-225-B001		64	Ton	Agricultural Limestone
1790	907-225-C001		253	Ton	Mulch, Vegetative Mulch
1800	907-226-A001		127	Acre	Temporary Grassing
1810	907-234-D001		44	Each	Inlet Siltation Guard
1820	907-234-E001		5	Each	Reset Inlet Siltation Guard
1830	907-237-A003		4,000	Linear Feet	Wattles, 20"
1840	907-245-A001		1,305	Linear Feet	Triangular Silt Dike
1850	907-246-B002		4,738	Each	Rockbags
1860	907-249-A001		470	Ton	Riprap for Erosion Control
1870	907-251-A001		1	Lump Sum	Maintenance of Existing Erosion Control Devices
1880	907-270-A001		1	Lump Sum	Temporary Site Drainage
1890	907-304-B005	(GT)	124,950	Ton	Granular Material, Class 9, Group C
1900	907-304-B007	(GT)	20,160	Ton	Granular Material, Class 5, Group E
1910	907-304-D003	(GT)	1,769	Ton	Granular Material, Size 57
1920	907-307-C003	(M)	177,271	Square Yard	6" Soil-Lime-Water Mixing, Class C
1930	907-307-D001		2,394	Ton	Lime
1940	907-307-PP001	(M)	354,541	Square Yard	12" Soil-Lime-Water Mixing, Class C
1950	907-307-S001	(A3)	44,319	Gallon	Bituminous Curing Seal
1960	907-402-A004	(BA1)	21,926	Ton	Open Graded Friction Course, 9.5-mm Mixture
1970	907-402-B001	(A3)	39,864	Gallon	Bituminous Tack Coat
1980	907-403-A017	(BA1)	8,577	Ton	9.5-mm, ST, Asphalt Pavement
1990	907-403-A018	(BA1)	5,695	Ton	12.5-mm, ST, Asphalt Pavement
2000	907-403-A019	(BA1)	66,048	Ton	19-mm, ST, Asphalt Pavement
2010	907-403-A027	(BA1)	17,915	Ton	9.5-mm, HT, Asphalt Pavement

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
2020	907-403-A028	(BA1)	375	Ton	12.5-mm, HT, Asphalt Pavement
2030	907-403-A029	(BA1)	152,570	Ton	19-mm, HT, Asphalt Pavement
2040	907-403-AA001	(BA1)	42,078	Ton	Stone Matrix Asphalt, 9.5 mm Mixture
2050	907-403-AA002	(BA1)	34,577	Ton	Stone Matrix Asphalt, 12.5 mm Mixture
2060	907-403-B021	(BA1)	4,100	Ton	12.5-mm, HT, Asphalt Pavement, Leveling
2070	907-403-S004		77	Mile	Joint Sealant
2080	907-406-D001		58,155	Square Yard	Fine Milling of Bituminous Pavement, All Depths
2090	907-407-A001	(A2)	95,368	Gallon	Asphalt for Tack Coat
2100	907-413-E001		706	Linear Feet	Sawing and Sealing Transverse Joints in Asphalt Pavement
2110	907-503-M001		86,500	Square Yard	Repair of Failed Areas in Asphalt and/or Concrete Pavement
2120	907-601-A001	(S)	7	Cubic Yard	Class "B" Structural Concrete
2130	907-601-B003	(S)	274	Cubic Yard	Class "B" Structural Concrete, Minor Structures
2140	907-603-ALT01	(S)	144	Linear Feet	18" Type A Alternate Pipe
2150	907-604-A001	(S)	1,389	Linear Feet	8" Trench Drain
2160	907-605-O001	(S)	12,330	Linear Feet	6" Perforated Sewer Pipe for Underdrains, SDR 23.5
2170	907-605-P001	(S)	900	Linear Feet	6" Non-perforated Sewer Pipe for Underdrains, SDR 23.5
2180	907-606-G001		2,240	Linear Feet	Cable Barrier
2190	907-606-H001		2	Each	Cable Barrier Terminal Section
2200	907-618-1M001		1	Lump Sum	Service Patrol
2210	907-618-A001		1	Lump Sum	Maintenance of Traffic
2220	907-619-E3001		7	Each	Changeable Message Sign
2230	907-619-J3001		13	Each	Remove and Reset Impact Attenuator
2240	907-619-P1001		45,000	Linear Feet	Glare Paddles
2250	907-622-A002		1	Each	Engineer's Field Office Building, Type 3
2260	907-626-A005		32	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip White
2270	907-626-B005		4,419	Linear Feet	6" Thermoplastic Double Drop Traffic Stripe, Continuous White
2280	907-626-C003		50	Mile	6" Thermoplastic Double Drop Edge Stripe, Continuous White
2290	907-626-D006		9	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip Yellow
2300	907-626-E006		23	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow
2310	907-626-F003		18	Mile	6" Thermoplastic Double Drop Edge Stripe, Continuous Yellow
2320	907-626-G006		43,095	Linear Feet	Thermoplastic Double Drop Detail Stripe, White
2330	907-626-G007		12,725	Linear Feet	Thermoplastic Double Drop Detail Stripe, Yellow
2340	907-626-H005		144	Square Feet	Thermoplastic Legend, White
2350	907-626-H009		4,973	Linear Feet	Thermoplastic Double Drop Legend, White

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
2360	907-626-H010		2,203	Square Feet	Thermoplastic Double Drop Legend, White
2370	907-626-U004		16	Mile	6" Thermoplastic Traffic Stripe, Skip White, 40-mil min.
2380	907-626-V004		19	Mile	6" Thermoplastic Traffic Stripe, Continuous White, 40-mil min.
2390	907-626-X004		18	Mile	6" Thermoplastic Traffic Stripe, Continuous Yellow, 40-mil min.
2400	907-626-Y002		21,096	Linear Feet	Thermoplastic Detail Traffic Stripe, White, 6" Equivalent Length, 40-mil min.
2410	907-630-I001		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 1, Contractor Designed
2420	907-630-I002		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 2, Contractor Designed
2430	907-630-I003		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 3, Contractor Designed
2440	907-630-I004		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 4, Contractor Designed
2450	907-630-I005		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 5, Contractor Designed
2460	907-630-I006		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 6, Contractor Designed
2470	907-630-I007		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 7, Contractor Designed
2480	907-630-I008		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 8, Contractor Designed
2490	907-630-I009		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 9, Contractor Designed
2500	907-630-I010		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 10, Contractor Designed
2510	907-630-I012		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 11, Contractor Designed
2520	907-630-I013		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 12, Contractor Designed
2530	907-630-I014		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 13, Contractor Designed
2540	907-630-I015		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 14, Contractor Designed
2550	907-630-I016		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 15, Contractor Designed
2560	907-630-I017		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 16, Contractor Designed
2570	907-630-I018		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 17, Contractor Designed
2580	907-630-I019		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 18, Contractor Designed
2590	907-630-I020		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 19, Contractor Designed
2600	907-630-I021		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 20, Contractor Designed
2610	907-630-I022		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 21, Contractor Designed
2620	907-630-I023		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 22, Contractor Designed
2630	907-631-A001		1,350	Cubic Yard	Flowable Fill, Excavatable
2640	907-631-B001		95	Cubic Yard	Flowable Fill, Non-Excavatable
2650	907-637-A001		8	Each	Equipment Cabinet, Type B
2660	907-639-A002		2	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 50' Arm
2670	907-639-A006		1	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 30' Arm
2680	907-639-A007		1	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 40' Arm

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
2690	907-639-A009		1	Each	Traffic Signal Equipment Pole, Type II, 17' Shaft, 60' Arm
2700	907-639-A115		1	Each	Traffic Signal Equipment Pole, Type III, 17' Shaft, 45' & 45' Arms
2710	907-639-C002		3	Cubic Yard	Pole Foundations, 36" Diameter
2720	907-639-C004		9	Cubic Yard	Pole Foundations, 30" Diameter
2730	907-639-E001		3	Each	Camera Pole with Foundation, 50' Pole
2740	907-639-F001		4	Each	Detector Pole with Foundation, 35' Pole
2750	907-642-A003		2	Each	Solid State Traffic Actuated Controllers, Type 8A
2758	907-644-A001		5	Each	Optical Detector
2760	907-644-B001		1,110	Linear Feet	Optical Detector Cable
2762	907-644-C002		4	Each	Phase Selector, 4 Channel
2770	907-649-A004		3	Each	Video Detection System, 1 Sensor, Type 2
2780	907-649-D002		3	Each	Multi-Sensor Detection System, 1 Sensor
2790	907-650-A003		14	Each	On Street Video Equipment, PTZ Type
2800	907-656-A001		2	Each	Dynamic Message Sign, Type 1
2810	907-656-B001		1	Lump Sum	Dynamic Message Sign Training
2820	907-657-A001		39,675	Linear Feet	Fiber Optic Cable, 72 SM
2830	907-657-B001		4,185	Linear Feet	Fiber Optic Drop Cable, 12 SM
2840	907-658-A005		21	Each	Network Switch, Type A
2850	907-658-A007		1	Each	Network Switch, Type C
2860	907-659-A001		1	Lump Sum	Traffic Management Center Modifications
2870	907-659-C001		1	Lump Sum	Traffic Management Center Modifications - Training
2880	907-660-A001		1	Each	OTN Node
2890	907-660-C001		1	Lump Sum	OTN Node Training
2900	907-660-PP001		1	Lump Sum	Communications Hut Modification, Per Plans
2910	907-668-E002		150	Linear Feet	Traffic Signal Conduit Bank, Underground, Rolled Pipe, 2 @ 2"
2920	907-670-A001		8	Each	ITS Radar Detection System
2930	907-681-A1002		19	Each	Wire Testing
2940	907-681-B1001		121	Each	Conduit Testing
2950	907-682-A1001		100	Linear Feet	Branch Circuit Wire, AWG #1, 3 Conductor
2960	907-682-A1002		1,950	Linear Feet	Branch Circuit Wire, AWG #1/0, 3 Conductor
2970	907-682-A1004		2,420	Linear Feet	Branch Circuit Wire, AWG #2, 3 Conductor
2980	907-682-A1007		1,200	Linear Feet	Branch Circuit Wire, AWG #4, 3 Conductor
2990	907-682-A1011		670	Linear Feet	Branch Circuit Wire, AWG #6, 3 Conductor
3000	907-682-A1013		660	Linear Feet	Branch Circuit Wire, AWG #8, 3 Conductor

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
3010	907-682-A1031		100	Linear Feet	Branch Circuit Wire, AWG #2/0, 3 Conductor
3020	907-687-A018		1	Each	Traffic Recorder Classification Permanent System
3030	907-699-A002		1	Lump Sum	Roadway Construction Stakes
3040	907-906001		2,080	Hours	Trainees [\$5.00]
<b>ALTERNATE GROUP AA NUMBER 1</b>					
3050	907-304-F002	(GT)	116,588	Ton	Size 610 Crushed Stone Base
<b>ALTERNATE GROUP AA NUMBER 2</b>					
3060	907-304-F003	(GT)	116,588	Ton	3/4" and Down Crushed Stone Base
<b>ALTERNATE GROUP AA NUMBER 3</b>					
3070	907-304-F004	(GT)	116,588	Ton	Size 825B Crushed Stone Base
<b>ALTERNATE GROUP BB NUMBER 1</b>					
3080	907-308-A001		1,596	Ton	Portland Cement
3090	907-308-B002	(M)	177,271	Square Yard	Soil-Cement-Water Mixing, Optional Mixers, Design Soil
3100	907-308-S001	(A3)	44,319	Gallon	Bituminous Curing Seal
<b>ALTERNATE GROUP BB NUMBER 2</b>					
3110	907-311-A003	(M)	177,271	Square Yard	Processing Lime and Fly Ash Treated Course, 6" Thick
3120	907-311-B001		1,197	Ton	Lime
3130	907-311-C001		4,787	Ton	Fly Ash, Class C
3140	907-311-S001	(A3)	44,319	Gallon	Bituminous Curing Seal
<b>ALTERNATE GROUP CC NUMBER 1</b>					
3150	907-308-A001		4,388	Ton	Portland Cement
3160	907-308-B001	(M)	354,541	Square Yard	Soil-Cement-Water Mixing, Optional Mixers, Base
3170	907-308-S001	(A3)	88,636	Gallon	Bituminous Curing Seal
<b>ALTERNATE GROUP CC NUMBER 2</b>					
3180	907-311-A003	(M)	354,541	Square Yard	Processing Lime and Fly Ash Treated Course, 6" Thick
3190	907-311-B001		2,394	Ton	Lime
3200	907-311-C001		9,573	Ton	Fly Ash, Class C
3210	907-311-S001	(A3)	88,636	Gallon	Bituminous Curing Seal
<b>Bridge Items</b>					
3220	206-A001	(S)	1,038	Cubic Yard	Structure Excavation
3230	802-A001	(S)	5,000	Square Feet	Permanent Steel Sheet Piling
3240	803-C002	(S)	23,540	Linear Feet	14" x 14" Prestressed Concrete Piling
3250	803-D007	(S)	11,460	Linear Feet	HP 14 x 89 Steel Piling
3260	803-I001	(S)	3	Each	PDA Test Pile
3270	805-A001	(S)	427,669	Pounds	Reinforcement

<b>Line No.</b>	<b>Item Code</b>	<b>Adj Code</b>	<b>Quantity</b>	<b>Units</b>	<b>Description [Fixed Unit Price]</b>
3280	813-E009	(S)	343	Linear Feet	42" Concrete Bridge Median Barrier Railing
3290	907-804-A014	(S)	5,772	Cubic Yard	Bridge Concrete, Class B
3300	907-823-A002		287	Linear Feet	Preformed Joint Seal, Type II
3310	907-824-PP097		80	Linear Feet	Bridge Repair, End Wall Repair, Per Plans
3320	907-824-PP098		160	Square Feet	Bridge Repair, Remove & Replace Bridge Deck, Per Plans
3330	907-825-A001	(S)	1,252	Square Feet	Soil Nail Retaining Walls
3340	907-825-B001	(S)	5	Each	Soil Nail Verification Tests