

**STATE OF MISSOURI
HIGHWAYS and TRANSPORTATION COMMISSION**

JEFFERSON CITY, MISSOURI

CONSTRUCTING OR IMPROVING
Contract I.D. 180216-C03

THIS JOB SHALL BE CONSTRUCTED UNDER
FEDERAL PROJECT NUMBER(S): I-70-1(205)

Job J4I3198 Route I-70 JACKSON County

BIDDER CHECKLIST
FINAL CHECKLIST BEFORE SUBMITTING BID

1. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Missouri Standard Specifications for Highway Construction, and Rule 7 CSR 10-15.010, "Prequalifications to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website.
2. All bids shall be submitted electronically using "Bid Express Secure Internet Bidding" at www.bidx.com. Any paper bid submitted will be considered irregular per section 102.8 of the Missouri Standard Specifications for Highway Construction.
3. Please read all items in the bidding document carefully. The EBSX files from MoDOT's website may be used for the itemized bid.
4. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated, and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation.
5. The bidder shall submit a Bid Guaranty meeting the requirements of Sec 102 of the Missouri Standard Specifications for Highway Construction. If submitting a project specific or annual bid bond, bidders must use the MoDOT provided bid bond forms. The project specific bond form is included in the request for bid. The project specific and annual bid bond forms are also available on MoDOT's website. Annual bid bonds shall be executed by June 15th of each year.
6. Submit the Subcontractor Disclosure Form in accordance with the bidding documents. For bids of more than \$2,000,000, each bidder shall submit with each bid a disclosure of the subcontracts that have a subcontract value that is equal or greater than twenty percent of the total project bid or subcontracts that are greater than or equal to \$2,000,000. If that information is not available at the time of bid the bidder shall submit the "Subcontractor Disclosure Form" pages with MoDOT on or before 4:00 p.m. of the third business day after the bid opening date.
7. Submit the DBE Identification Submittal in accordance with the bidding documents for Federal Projects Only.
8. Alternate Pavements; to exercise this option, separate pay items, descriptions and quantities are included in the itemized proposal for each of the two alternates. The bidder shall bid only one of the two alternates and leave the contract unit price column blank for any pay item listed for the other alternate.
9. When submitting a bid, your bid will still come through with "red" folders. You should make sure that it is not the Schedule of Items folder or the

Signature and Identity of Bidder folder. Click on the yellow checkmark (Check Bid) at the top and it will list any errors in the bid. To view itemized folders, click the Tree View. This will show the status of the individual folders.

Below is a list of common mistakes made by bidders leading to non-responsive bids. Please refer to the Standard Specifications for the appropriate procedures for completing and submitting a bid.

- a) Submitting a paper bid for a project
- b) Using a different bid bond form than the one provided
- c) Improper use of the Maximum Monetary Value Award Provision
-only used if bidding more than one project and should be
in only one bid proposal
- d) Not obtaining a digital ID in advance of the letting
(obtaining a digital ID may take 5 business days)

All questions concerning the bid document preparation shall be directed to the Central Office - Design Division at (573) 751-2876. Project specific questions shall be directed to the project contact listed in the Job Special Provisions.

TABLE OF CONTENTS

Notice to Contractors

Proposed Work.....	item (1)
Compliance With Contract Provisions.....	item (2)
Period of Performance.....	item (3)
Liquidated Damages.....	item (4)
Itemized Bid.....	item (5)
Trainees.....	item (6)
DBE Certification*.....	item (7)
Acceptance of Provision for Price Adjustment for Fuel.....	item (8a)
Acceptance of Provision for Asphalt Cement Price Index....	item (8b)
Max. Monetary Value of Awards Accepted this Bid Opening...	item (9)
Combination Bids.....	item (10)
Certification for Federal Jobs.....	item (11a)
Certification for State Jobs.....	item (11b)
Antidiscrimination.....	item (12)
Preference to Missouri Firms in Awarding of Contracts.....	item (13)
Subcontractor Disclosure Form*.....	item (14)
Signature and Identity of Bidder.....	item (15)
Bid Guaranty*.....	item (16)

*These forms are also available on MoDOT's Website, www.modot.org under Information on the Bid Opening Info page of the Contractor Resources site.

NOTICE TO CONTRACTORS

Electronic bids submitted through the Bid Express website for the proposed work will be received by the Missouri Highways and Transportation Commission until 11:00 o'clock a.m. (prevailing local time) on 02/16/2018.

Bid bonds will be received at the office of the Secretary to the Commission in the Missouri Department of Transportation Central Office Building, 105 West Capitol Avenue, Jefferson City, Missouri; delivered by US Mail should be mailed to: Missouri Highways and Transportation Commission, Attention: State Design Engineer/Bid Bond, P.O. Box 270, Jefferson City, MO 65102 or delivered by parcel delivery services, (such as UPS, Fed Ex, DHL, etc.) should be shipped to Missouri Highways and Transportation Commission, Attention: State Design Engineer/Bid Bond, 105 West Capitol Avenue, Jefferson City, MO 65102.

(1) PROPOSED WORK: The proposed work, hereinafter called the work, includes:

****(1): Job J4I3198 Route I-70 JACKSON County. Bridge rehabilitation and ADA improvements on 8th Street, 9th Street, 10th Street and Chestnut Ave, the total length of improvement being 0.437 miles.

If more than one Job Number is listed for this call, then combination bids will be required on the Jobs listed above.

(2) COMPLIANCE WITH CONTRACT PROVISIONS: The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction, 2017," and "Missouri Standard Plans for Highway Construction, 2017", their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted. All questions concerning the bid document preparation shall be directed to the Central Office - Design Division at (573) 751-2876.

(3) PERIOD OF PERFORMANCE: If the bid is accepted, the bidder shall continuously and diligently prosecute the work in such order and manner as will ensure the completion of the work within the time specified in the Job Special Provisions in accordance with Sec 108.

(4) LIQUIDATED DAMAGES: The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages as specified in the Job Special Provisions to be recovered in accordance with Sec 108.

(5) ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and

completion of the work, as follows:

Line Number	Item Number	Quantity	Unit	Unit Price	Extension Price
Section 0001					
Roadway Items - J4I3198					
0010	2022010	1	LS		
	REMOVAL OF IMPROVEMENTS				
0020	2063000	334.000	CUYD		
	CLASS 3 EXCAVATION				
0030	2063500	9.000	EA		
	CULVERT CLEANOUT				
0040	2079909	19.900	STA		
	MISC. LINEAR GRADING FOR IMPROVEMENTS				
0050	2101006A	1.000	100F		
	SUBGRADE COMPACTION (6-INCH DEPTH)				
0060	3040504	671.000	SQYD		
	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)				
0070	4011207	3.700	TONS		
	BITUMINOUS PAVEMENT MIXTURE PG70-22, (BP-1)				
0080	4030103	391.000	TONS		
	ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP125C MIX)				
0090	4030208	240.000	TONS		
	ASPHALTIC CONCRETE MIXTURE PG 70-22 (SP190C MIX)				
0100	4071005	425.000	GAL		
	TACK COAT				
0110	5021308	24.000	SQYD		
	CONCRETE PAVEMENT (8 IN. NON-REINFORCED, 15 FT. JOINTS)				
0120	6039902	8.000	EA		
	WATER ADJUSTING WATER VALVES AND MANHOLES				
0130	6044011	6.000	EA		
	PIPE COLLAR, TYPE A				
0140	6044012	1.000	EA		
	PIPE COLLAR, TYPE B				
0150	6049901	1	LS		
	MISC. 4 IN. TRENCH DRAIN SYSTEM				
0160	6049905	29.000	SQYD		
	MISC. DECORATIVE ROCK				
0170	6071012A	10.000	LF		
	CHAIN-LINK FENCE (60 IN.)				
0180	6079903	89.000	LF		
	MISC. 72 IN. ORNAMENTAL STEEL FENCE				
0190	6079903	4.000	LF		
	MISC. 84 IN. BLACK VINYL CHAIN-LINK FENCE				
0200	6081010	136.300	SQYD		
	CONCRETE CURB RAMP				
0210	6081012	111.000	SQFT		
	TRUNCATED DOMES				
0220	6083006	1.600	SQYD		
	6 IN. CONCRETE MEDIAN STRIP				
0230	6085008	285.500	SQYD		
	PAVED APPROACH, 8 IN.				

0240	6086004	831.300	SQYD	CONCRETE SIDEWALK, 4 IN.
0250	6089905	95.500	SQYD	MISC. 4 IN. TINTED and STAMPED CONCRETE MEDAIN
0260	6091010	160.000	LF	CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S
0270	6091042	287.000	LF	CONCRETE GUTTER TYPE B
0280	6092011	8.000	LF	INTEGRAL CURB (6 IN. HEIGHT AND UNDER) TYPE A
0290	6092012	323.000	LF	INTEGRAL CURB (6 IN. HEIGHT AND UNDER) TYPE B
0300	6099903	77.000	LF	MISC. 4 IN. MODIFIED CURB & GUTTER TYPE B-2
0310	6099903	43.000	LF	MISC. 4 IN. MOUNTABLE CURB AND GUTTER
0320	6099903	713.000	LF	MISC. 6 IN. MODIFIED CURB AND GUTTER TYPE B
0330	6099903	167.000	LF	MISC. 6 IN. MODIFIED CURB AND GUTTER TYPE B-1
0340	6123000A	2.000	EA	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
0350	6141025	1.000	EA	GRATE AND BEARING PLATE (3 FT. 1 IN. X 2 FT. 1 IN. OR 940 MM X 635 MM)
0360	6141120	25.000	EA	CURVED VANE GRATE AND FRAME (2 FT. X 2 FT. OR 600MM X 600MM)
0370	6143014	1.000	EA	MANHOLE FRAME AND COVER, TYPE 4
0380	6149902	1.000	EA	MISC. REMOVABLE STEEL CURB
0390	6161005	1887.000	SQFT	CONSTRUCTION SIGNS
0400	6161008	8.000	EA	ADVANCED WARNING RAIL SYSTEM
0410	6161009	22.000	EA	FLAG ASSEMBLY
0420	6161025	160.000	EA	CHANNELIZER (TRIM LINE)
0430	6161031	36.000	EA	TYPE III MOVEABLE BARRICADE WITH LIGHT
0440	6161033	42.000	EA	DIRECTIONAL INDICATOR BARRICADE
0450	6161040	3.000	EA	FLASHING ARROW PANEL
0460	6161055	42.000	EA	SEQUENTIAL FLASHING WARNING LIGHT
0470	6161098A	4.000	EA	CHANGEABLE MESSAGE SIGN WITHOUT COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
0480	6169902	12.000	EA	MISC. ADA COMPLIANT MOVEABLE BARRICADE

0490	6181000	1 LS	
MOBILIZATION			
0500	6205902A	340.000 LF	
6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS			
0510	6205903A	340.000 LF	
6 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS			
0520	6206000C	790.000 LF	
4 IN. WHITE STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS			
0530	6206001C	640.000 LF	
4 IN. YELLOW STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS			
0540	6221001	2168.000 SQYD	
COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3 IN. THICK OR LESS)			
0550	6224010	1075.000 SQYD	
MODIFIED COLDMILLING (DEPTH TRANSITIONS)			
0560	6274000	1 LS	
CONTRACTOR FURNISHED SURVEYING AND STAKING			
0570	7259903	7.000 LF	
MISC. 8 IN. PIPE GROUP B			
0580	7269902	75.000 EA	
MISC. 15 IN. CLASS III REINFORCED CONCRETE PIPE			
0590	7269903	184.000 LF	
MISC. 12 IN. CLASS III REINFORCED CONCRETE PIPE			
0600	7310048	6.000 FT	
PRECAST CONCRETE MANHOLE - 48 IN.			
0610	7311022	107.000 FT	
PRECAST CONCRETE DROP INLET 2 FT X 2 FT			
0620	7311032	4.000 FT	
PRECAST CONCRETE DROP INLET 3 FT X 2 FT			
0630	8051000A	0.400 ACRE	
SEEDING - COOL SEASON MIXTURES			
0640	8061007A	48.000 EA	
CURB INLET CHECK			
0650	8061016	53.000 CUYD	
SEDIMENT REMOVAL			
0660	8061019	490.000 LF	
SILT FENCE			

Section 0001 Total

Section 0002

Guardrail/Guard Cable Items - J4I3198

0670	6061065	65.000 LF	
MGS GUARDRAIL, 6 FT. POSTS, 1 FT. - 6.75 IN. SPACING			
0680	6061068	2.000 EA	
MGS BRIDGE APPROACH TRANSITION SECTION (EXTENDED CURB)			

Section 0002 Total

Section 0003

Lighting Items - J4I3198

0690	9013003	230.000	LF
	CONDUIT, 3 IN. RIGID, IN TRENCH		
0700	9014502	10.000	LF
	CONDUIT, 2 IN. RIGID, EXTERNAL ON STRUCTURE		
0710	9017006	430.000	LF
	CABLE, 6 AWG 1 CONDUCTOR		
0720	9017110	160.000	LF
	CABLE, 10 AWG 1 CONDUCTOR, POLE AND BRACKET		
0730	9017206	220.000	LF
	WIRE, 6 AWG, BARE NEUTRAL		
0740	9019901	1	LS
	MISC. CONDUIT, 3 IN. RIGID, EXTERNAL ON STRUCTURE		
0750	9019902	12.000	EA
	MISC. KCMO CABLE RETAINER ASSEMBLY		
0760	9019902	12.000	EA
	MISC. KCMO FUSE KIT		
0770	9019902	7.000	EA
	MISC. KCMO JUNCTION BOX TYPE II		
0780	9019902	3.000	EA
	MISC. KCMO LIGHTING CONTROLLER 120/240V 2 CIRCUIT		
0790	9019902	1.000	EA
	MISC. KCMO POLE FOUNDATION		
0800	9019902	12.000	EA
	MISC. KCMO RELOCATE LIGHT POLE		
0810	9019902	2.000	EA
	MISC. RELOCATE LIGHT POLE		
0820	9019903	540.000	LF
	MISC. KCMO 3C-#10 AWG POLE WIRING		
0830	9019903	2760.000	LF
	MISC. KCMO 3C-#6 AWG WIRING		
0840	9019903	170.000	LF
	MISC. KCMO CONDUIT, 2 IN. RIGID IN TRENCH		
0850	9019903	210.000	LF
	MISC. KCMO CONDUIT, 2 IN. RIGID, PUSHED		

Section 0003 Total

Section 0004

Signing Items - J4I3198

0860	9031010	0.900	CUYD
	CONCRETE FOOTINGS, EMBEDDED		
0870	9031220	540.000	LB
	PIPE POSTS		
0880	9035004A	30.000	SQFT
	SH-FLAT SHEET		
0890	9039902	6.000	EA
	MISC. RELOCATION OF EXISTING SIGN ASSEMBLIES		

Section 0004 Total

Section 0005

Bridge A02921 Items - J4I3198

0900	2161000	898.000	SQYD
	SCARIFICATION OF BRIDGE DECKS		
0910	2163000	2252.000	SQFT
	PARTIAL REMOVAL OF EXISTING BRIDGE DECKS		
0920	2164500	90.000	LF
	REMOVAL OF EXISTING EXPANSION JOINTS & ADJACENT CONCRETE		
0930	6079903	436.000	LF
	MISC. (72") DECORATIVE PEDESTRIAN FENCE		
0940	7034226	1011.000	SQYD
	REINFORCED CONCRETE SLAB OVERLAY		
0950	7034610	469.000	LF
	CORRAL CURB		
0960	7034620	94.000	SQYD
	FORM LINERS		
0970	7040102	90.000	SQFT
	SUBSTRUCTURE REPAIR (UNFORMED)		
0980	7040104	100.000	SQFT
	REPAIRING CONCRETE DECK (HALF-SOLING)		
0990	7040113	3305.000	SQFT
	CLEAN AND EPOXY SEAL		
1000	7071000	1	LS
	CONDUIT SYSTEM ON STRUCTURE		
1010	7110200	1	LS
	PROTECTIVE COATING - CONCRETE BENTS AND PIERS (EPOXY)		
1020	7172001	69.000	LF
	STRIP SEAL EXPANSION JOINT SYSTEM		

Section 0005 Total

Section 0006

Bridge L09371 Items - J4I3198

1030	2161500	19756.000	SQFT
	REMOVAL OF SEAL COAT		
1040	2163000	5538.000	SQFT
	PARTIAL REMOVAL OF EXISTING BRIDGE DECKS		
1050	2164500	88.000	LF
	REMOVAL OF EXISTING EXPANSION JOINTS & ADJACENT CONCRETE		
1060	6079903	941.000	LF
	MISC. (72") DECORATIVE PEDESTRIAN FENCE		
1070	7034226	2320.000	SQYD
	REINFORCED CONCRETE SLAB OVERLAY		
1080	7034610	987.000	LF
	CORRAL CURB		
1090	7034620	198.000	SQYD
	FORM LINERS		
1100	7040102	110.000	SQFT
	SUBSTRUCTURE REPAIR (UNFORMED)		
1110	7040104	100.000	SQFT

REPAIRING CONCRETE DECK (HALF-SOLING)			
1120	7040113	7704.000	SQFT
CLEAN AND EPOXY SEAL			
1130	7071000	1	LS
CONDUIT SYSTEM ON STRUCTURE			
1140	7110200	1	LS
PROTECTIVE COATING - CONCRETE BENTS AND PIERS (EPOXY)			
1150	7172001	64.000	LF
STRIP SEAL EXPANSION JOINT SYSTEM			
Section 0006 Total			

Section 0007			
Bridge L09381 Items - J4I3198			
1160	2161000	1279.000	SQYD
SCARIFICATION OF BRIDGE DECKS			
1170	2163000	3227.000	SQFT
PARTIAL REMOVAL OF EXISTING BRIDGE DECKS			
1180	2164500	90.000	LF
REMOVAL OF EXISTING EXPANSION JOINTS & ADJACENT CONCRETE			
1190	6079903	552.000	LF
MISC. (72") DECORATIVE PEDESTRIAN FENCE			
1200	7034226	1423.000	SQYD
REINFORCED CONCRETE SLAB OVERLAY			
1210	7034610	598.000	LF
CORRAL CURB			
1220	7034620	117.000	SQYD
FORM LINERS			
1230	7040102	100.000	SQFT
SUBSTRUCTURE REPAIR (UNFORMED)			
1240	7040104	100.000	SQFT
REPAIRING CONCRETE DECK (HALF-SOLING)			
1250	7040113	3734.000	SQFT
CLEAN AND EPOXY SEAL			
1260	7071000	1	LS
CONDUIT SYSTEM ON STRUCTURE			
1270	7110200	1	LS
PROTECTIVE COATING - CONCRETE BENTS AND PIERS (EPOXY)			
1280	7172001	70.000	LF
STRIP SEAL EXPANSION JOINT SYSTEM			
Section 0007 Total			

Section 0008			
Bridge L09391 Items - J4I3198			
1290	2161000	1227.000	SQYD
SCARIFICATION OF BRIDGE DECKS			
1300	2163000	2923.000	SQFT
PARTIAL REMOVAL OF EXISTING BRIDGE DECKS			
1310	2164500	88.000	LF

REMOVAL OF EXISTING EXPANSION JOINTS & ADJACENT CONCRETE			
1320	6079903	484.000	LF
MISC. (72") DECORATIVE PEDESTRIAN FENCE			
1330	6081012	11.000	SQFT
TRUNCATED DOMES			
1340	7034219A	27.000	LF
BARRIER CURB (TYPE D)			
1350	7034226	1309.000	SQYD
REINFORCED CONCRETE SLAB OVERLAY			
1360	7034610	514.000	LF
CORRAL CURB			
1370	7034620	101.000	SQYD
FORM LINERS			
1380	7040101	300.000	SQFT
SUBSTRUCTURE REPAIR (FORMED)			
1390	7040102	90.000	SQFT
SUBSTRUCTURE REPAIR (UNFORMED)			
1400	7040104	100.000	SQFT
REPAIRING CONCRETE DECK (HALF-SOLING)			
1410	7040113	3947.000	SQFT
CLEAN AND EPOXY SEAL			
1420	7071000	1	LS
CONDUIT SYSTEM ON STRUCTURE			
1430	7110200	1	LS
PROTECTIVE COATING - CONCRETE BENTS AND PIERS (EPOXY)			
1440	7172001	109.000	LF
STRIP SEAL EXPANSION JOINT SYSTEM			

Section 0008 Total

Section 0009

Bridge L09392 Items - J4I3198

1450	2161000	438.000	SQYD
SCARIFICATION OF BRIDGE DECKS			
1460	2163000	1242.000	SQFT
PARTIAL REMOVAL OF EXISTING BRIDGE DECKS			
1470	2164500	20.000	LF
REMOVAL OF EXISTING EXPANSION JOINTS & ADJACENT CONCRETE			
1480	7034219A	404.000	LF
BARRIER CURB (TYPE D)			
1490	7034226	500.000	SQYD
REINFORCED CONCRETE SLAB OVERLAY			
1500	7040102	30.000	SQFT
SUBSTRUCTURE REPAIR (UNFORMED)			
1510	7040104	100.000	SQFT
REPAIRING CONCRETE DECK (HALF-SOLING)			
1520	7040113	2726.000	SQFT
CLEAN AND EPOXY SEAL			
1530	7071000	1	LS
CONDUIT SYSTEM ON STRUCTURE			

1540	7110200	1	LS	
	PROTECTIVE COATING - CONCRETE BENTS AND PIERS (EPOXY)			

1550	7172001	20.000	LF	
	STRIP SEAL EXPANSION JOINT SYSTEM			

Section 0009 Total				

Item Total				\$0.00

DBE CERTIFICATION

(6) Trainees: (Applies to Federal Projects only) The number of trainee hours provided under this contract will be 0 slots at 1000 hours per slot or 0 hours.

(7) Bidder's Certificaton for DBE Program and Contract Goal

(Applies to Federal Projects only.)

(A) DBE Contract Goal: By submitting this bid, the bidder certifies that the bidder is familiar with the DBE Program Requirements in the General Provisions. The contract goal for the amount of work to be awarded is 8.00 % of the total federal project price. The bidder shall also complete the DBE Identification Submittal form in accordance with the General Provisions. This form is available on MoDOT's Website, www.modot.org on the Bid Opening Info page of the Contractor Resources site.

(B) DBE Participation: The bidder certifies that it will utilize DBE's as follows:

% OF TOTAL FEDERAL CONTRACT

NOTE: Bidder must fill in the above blank. If no percentage is specified, the bidder certifies that it agrees to and will comply with the contract goal. If a percentage below the contract goal is specified, then the bidder must submit complete documentation of good faith efforts to meet the DBE contract goal, immediately below.

The DBE Identification Submittal form will be submitted via

(C) Certification of Good Faith Efforts to Obtain DBE Participation: By submitting its signed bid, the bidder certifies under penalty of perjury and other provisions of law, that the bidder took each of the following steps to try to obtain sufficient DBE participation to achieve the Commission's proposed DBE Contract Goal:

CONTRACT PROVISIONS

(8a) ACCEPTANCE OF PROVISION FOR PRICE ADJUSTMENT FOR FUEL: Bidders have the option to accept the provision for Price Adjustment for Fuel in accordance with Sec. 109.14 . The bidder must select "Yes" for those items of work in which they choose to accept the provision. No price adjustments will be made, due to fuel price changes, for bidders who do not accept this provision. This provision does not apply to Seal Coat.

EXCAVATION PRODUCTION

ASPHALT PAVING PRODUCTION AND HAULING

CONCRETE PAVING PRODUCTION AND HAULING

AGGREGATE BASE HAULING

(8b) ACCEPTANCE FOR PROVISION FOR ASPHALT CEMENT PRICE INDEX, SEAL COAT PRICE INDEX, ASPHALT UNDERSEAL PRICE INDEX, OR POLYMER MODIFIED EMULSION MEMBRANE PRICE INDEX: Bidders have the option to accept the provision for Asphalt Cement Price Index, Seal Coat Price Index, Asphalt Underseal Price Index, and/or Polymer Modified Emulsion Membrane Price Index (when used in conjunction with an Ultrathin Bonded Asphalt Wearing Surface treatment) in accordance with the General Provisions. The bidder must mark each box below if they choose to accept the provision. No price adjustments will be made, due to asphalt price changes, for bidders who do not accept this provision.

ASPHALT CEMENT

SEAL COAT

ASPHALT UNDERSEAL

POLYMER MODIFID EMULSION MEMBRANE (UBAWS)

(9) MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING: Bidders have the option to specify the maximum monetary value of awards that they will accept for the total of all bids they have submitted in the bid opening, Sec 102.7.2. If the bidder is submitting only one bid, or if the bidder does not want to specify a maximum monetary value for submitted bids, this section should not be completed. If a submitted bid upon correction exceeds the indicated maximum monetary amount, the bid may be declared non-responsive. If a bidder's submitted bids show different values for the maximum monetary value, the lowest value will govern.

MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING

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(Note: this amount should be entered in only one of the bids for this bid opening)

(10) COMBINATION BIDS: (Applies only if combination bids are specified. See cover and/or notice to contractor(s).) Combination bids will be in accordance with Sec 102.12. By selecting "All or None" the bidder desires to combine all projects in accordance with Sec 102.12.2.1.

(11a) CERTIFICATIONS FOR FEDERAL JOBS: (Applies to Federal Projects only.) By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty and material misrepresentation or omission of fact within the bid submission.

(11b) CERTIFICATIONS FOR STATE JOBS: (Applies to State Projects only.) By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.2 (regarding diseligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.5 (regarding Missouri Domestic Products Procurement Act).

Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

Does the bidder make certification for the above items listed in 11(a) or 11 (b)? **Yes** **No**

By selecting "No" the bidder REFUSES to make one or more certifications for the above items 11a or 11b. The bidder shall provide a statement of explanation for the refusal in the space below or by fax to the Design Division @ Fax no. 573-522-2281.

(12) ANTIDISCRIMINATION: The Commission hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the

grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

(13) PREFERENCE TO MISSOURI FIRMS IN AWARDING OF CONTRACTS: (Applies to State Projects only.) The bidder's attention is directed to Section 34.355 RSMo Supp 2000, et seq, which requires that preference be given in awarding contracts to firms, corporations, or individuals doing business as Missouri firms, corporations, or individuals, or which maintain Missouri offices or places of business, when the quality of performance promised is equal, or better, and the price quoted is the same, or less.

The law also requires that a contractor or bidder domiciled outside the State of Missouri shall be required, in order to be the successful bidder, to submit a bid which is the same percent less than the lowest bid submitted by a responsible contractor or bidder domiciled in Missouri as would be required for the Missouri domiciled contractor or bidder to succeed over the bidding contractor or bidder domiciled outside Missouri in a like contract or bid being let in his domiciliary state. A contractor or bidder domiciled outside Missouri shall also be required to submit an audited financial statement as would be required of a Missouri domiciled contractor or bidder on a like contract or bid being let in the domiciliary state of that contractor or bidder.

For firms, corporations or individuals domiciled outside the State of Missouri, it is requested they submit the following information:

List the state of domicile

List address of all Missouri offices or places of business

I acknowledge that I have read, understand and completed the above Contract Provisions.

SUBCONTRACTOR DISCLOSURE

(14) SUBCONTRACTOR DISCLOSURE The bidder shall submit with this bid any subcontracts that meet the requirements of Sec 102. List below the name of each subcontractor that will be furnishing labor, labor and materials, the category of work that the subcontractor will be performing (e.g. asphalt, concrete, earthwork, bridges...), and the dollar value of the subcontract. Select "NONE" if there are no subcontractors that need to be disclosed.

If the information is not available at the time of bid, the bidder shall submit the "Subcontractor Disclosure Form", located on MoDOT's website, on or before 4:00 p.m. of the third business day after the bid opening date, directly to the Design Division, Missouri Department of Transportation, 105 W. Capitol Avenue, P.O. Box 270, Jefferson City, Missouri 65102-0270. Telefax transmittal to MoDOT will be permitted at fax no. 573-522-2281 or emailed to subcontractor.disclosure@modot.mo.gov. The complete signed original documents do not need to be mailed to MoDOT, but the bidder shall have it available if requested by the Design Division or the engineer.

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

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SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

Submitted:

SIGNATURE AND IDENTITY OF BIDDER

(15) SIGNATURE AND IDENTITY OF BIDDER

BY SUBMITTING THIS BID ELECTRONICALLY, I HEREBY ACKNOWLEDGE THAT ALL REQUIREMENTS INCLUDED IN THE HARD COPY REQUEST FOR BID, AND AMENDMENTS ARE A PART OF THIS BID AND CONTRACT.

*** AN ELECTRONIC PROPOSAL SUBMITTED AND SIGNED WITH A DIGITAL ID, UNDER THE PROVISION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION, WILL BE CONSIDERED VALID AND BINDING. ***

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION, ACTING THROUGH THE MISSOURI DEPARTMENT OF TRANSPORTATION.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

Yes No

Select "No" ONLY if the bidder REFUSES to make this certification. The bidder may provide an explanation for the refusal with this submittal in the space below or by fax to the Design Division @ fax no. 573-522-2281.

USE OF ANOTHER PERSON'S DIGITAL ID IN THIS BIDDING PROCESS VIOLATES THE LAWS OF MISSOURI.

I acknowledge that I have read, understood and completed the above Electronic Bid Submission Certification.

BID BOND

(16) BID GUARANTY: The bidder shall submit a Bid Guaranty meeting the requirements of Section 102 of the Missouri Standard Specifications for Highway Construction. MoDOT's bid bond forms are available on MoDOT's website.

Annual bid bonds shall be submitted to MoDOT by June 15th of each year. If utilizing a paper annual or project specific bid bond as a Bid Guaranty

for this project the bidder shall mark the box below.

**Pay by: Paper Annual or Project Specific Bid Bond.

If submitting a cashier's/certified check, the Bid Bond folder will not turn green.

ELECTRONIC BID BOND

The bidder shall complete the following bond verification process if utilizing an electronic project bid bond or electronic annual bid bond as a Bid Guaranty for this project.

**Bond ID:

**Surety Registry Agency:

**Bond Pct:

Surety State:

FIELDS WITH THE ** INDICATOR ARE REQUIRED FIELDS IF SUBMITTING YOUR BID VIA BID EXPRESS

Job No.: J413198
Route: 70
County: Jackson

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

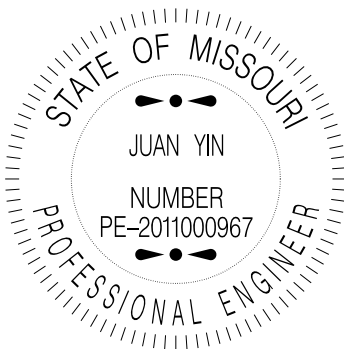
(Job Special Provisions shall prevail over General Special Provisions whenever in conflict therewith.)

- A. General
- B. Contract Liquidated Damages
- C. Work Zone Traffic Management
- D. Supplemental Revisions
- E. Project Contact for Contractor/Bidder Questions
- F. Utilities
- G. Emergency Provisions and Incident Management
- H. Liquidated Damages for Winter Months
- I. Contractor Quality Control and Daily Reporting
- J. DBE Program Requirements
- K. Stormwater Compliance Requirements
- L. ADA Compliance and Final Acceptance of Constructed Facilities
- M. Airport Requirements
- N. Relocation of Existing Sign Assemblies
- O. Decorative Rock
- P. KCMO (Kansas City Missouri) Street Lighting
- Q. Black Vinyl-Coated Chain-Link Fence
- R. 4" Tinted & Stamped Concrete Median
- S. Trench Drain System
- T. Special Group B Pipe
- U. Reinforced Concrete Pipe
- V. Modified Curb and Gutter
- W. Relocate Existing Light Pole
- X. External on Structure
- Y. Fertilizing, Seeding, and Mulch
- Z. Removable Steel Curb
- AA. Ornamental Steel Fence
- AB. Linear Grading for Improvements

Job No.: J413198

Route: 70

County: Jackson

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636</p>
	<p>If a seal is present on this sheet, JSP's have been electronically sealed and dated.</p>
	<p>JOB NUMBER: J413198 JACKSON COUNTY, MO DATE PREPARED: 12/26/17</p>
	<p>ADDENDUM DATE:</p>

Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL

JOB
SPECIAL PROVISIONS

A. GENERAL - FEDERAL JSP-09-02C

1.0 Description. The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations, and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. State Wage Rates, Information on the Required Federal Aid Provisions, and the current Federal Wage Rates are available on the Missouri Department of Transportation web page at www.modot.org under "Bidding". Effective Wage Rates will be posted 10 days prior to the applicable bid opening. These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

1.2 The following documents are available on the Missouri Department of Transportation web page at www.modot.org under "Business"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to July 2017 Missouri Standard Plans
For Highway Construction

These supplemental bidding documents contain all current revisions to the published versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

B. CONTRACT LIQUIDATED DAMAGES

1.0 Description. Liquidated Damages for failure or delay in completing the work on time for this contract shall be in accordance with Sec 108.8. The liquidated damages include separate amounts for road user costs and contract administrative costs incurred by the Commission.

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Job No.: J4I3198
Route: 70
County: Jackson

Notice to Proceed: May 8, 2018
Completion Date: May 31, 2019

2.1 Calendar Days. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Job Number	Calendar Days	Daily Road User Cost
J4I3198	N/A	\$3,200.00

2.2 Bridge Closures. Bridges L0937, L0938 and L0939 (8th, 9th and 10th Streets) cannot be closed concurrently. The contractor shall work on these three bridges one at a time. Bridge A0282 (Chestnut) can be closed and worked on while one of the above mentioned bridges is under construction.

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, or does not comply with Section 2.2 the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$1,000.00** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

4.0 Liquidated Damages for Road User Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged road user costs in accordance with Sec 108.8 in the amount specified in Section 2.1 for each calendar day, or partial day thereof, that the work is not fully completed. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

C. WORK ZONE TRAFFIC MANAGEMENT

1.0 Description. Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

1.1 Work Zone Specialist (WZS). The Traffic Management Plan shall name an individual, either employed by the contractor or hired by the contractor, to act as the Work Zone Specialist (WZS) throughout the entirety of the project. Any change in personnel for the WZS shall be submitted in written form to the engineer. This individual will be a trained Work Zone Specialist in accordance with Standard Specifications Section 616.3.3 and will be directly involved with daily traffic management and traffic management planning. It will be the responsibility of the WZS to coordinate daily traffic management with the engineer. The WZS shall maintain daily contact with the engineer either on-site or via telecommunication.

1.2 Maintaining Work Zones and Work Zone Reviews. The WZS shall maintain work zones on a daily basis to ensure safety to the traveling public and the workers; this includes long term work zones that have devices and/or roadway conditions that need to be maintained. If the engineer or a designated MoDOT employee (identified at the preconstruction meeting) notifies

the WZS of any safety or traffic delay concerns in the work zone, the WZS shall promptly inspect and work to provide a solution to correct the situation. The WZS shall have personnel reviewing traffic control devices daily and any temporary lane drop traffic control devices for initial set up and during the operation. Missing, damaged or over-turned traffic control devices shall typically be corrected without the need for direction by the engineer. The WZS is responsible to assure all traffic control devices are maintained in accordance with EPG standards. The WZS is responsible to ensure the work zone is operated within the hours specified by the engineer and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. The WZS shall submit one weekly review of work zone operations identifying any concerns present and the corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review.

1.3 Work Zone Conflict Resolution. Any conflict resolution shall be in accordance with Standard Specifications Section 616.4. Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless if road user costs are being charged for closures.

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

2.2 The contractor shall request permission at least two working days prior to lane closures or shifting traffic onto detours, and 14 calendar days prior to the imposition of height, width or weight restrictions. This is to ensure closures do not conflict with other work within the zone of influence and the work zone information on the MoDOT's website can remain real-time.

2.3 The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

2.4 In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.5 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of **15 minutes** to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

The contractor may refer to the Work Zone Analysis Spreadsheet found in the electronic deliverables under the MoDOT Online Plans Room for detailed information on traffic delays.

2.5.1 Traffic Safety.

2.5.1.1 Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.1.2 When a traffic queue extends to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway due to non-recurring congestion, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

3.0 Work Hour Restrictions.

3.1 There are six major holiday periods shown below. All lanes shall be scheduled to be open to traffic during these holiday periods, from 12:00 noon on the last working day proceeding the holiday until 9:00 a.m. on the first working day subsequent to the holiday.

Memorial Day
Independence Day
Labor Day
Thanksgiving
Christmas
New Year's Day

3.1.1 The contractor's working hours will be restricted for the Special Events as shown below. All lanes on I-70 shall be scheduled to be open to traffic during these Special Events.

Special Events at the Sprint Center, as Directed by the Engineer

3.2 The contractor shall not perform any construction operation on the active lanes, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

3.3 The contractor shall be aware that traffic volume data indicates construction operations on the roadbed between the following hours will likely result in traffic queues greater than 15 minutes. Based on this, the contractor's operations will be restricted accordingly unless it can be successfully demonstrated the operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the work hours below may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

Route I-70 Eastbound/Westbound:
5:00 a.m. - 7:30 p.m. Monday through Friday

Job No.: J413198
Route: 70
County: Jackson

3.4 Any work requiring a reduction in the number of through lanes of traffic on I-70, shall be completed during nighttime hours. Nighttime hours shall be considered to be 7:30 p.m. to 5:00 a.m. for this project. Dual lane closures will only be permitted from 10:00 p.m. to 5:00 a.m., only in one direction of travel and must be approved by the engineer.

3.5 The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$1,000.00 per 15 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

3.5.1 The said liquidated damages specified will be assessed regardless if it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

4.0 Detours and Lane Closures.

4.1 When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. The CMS shall be capable of communication with the Transportation Management Center (TMC), if applicable, prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

4.2 At least one lane of traffic in each direction shall be maintained on I-70 at all times except for brief intervals of time required when the movement of the contractor's equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer. **No direct payment will be made for a Rolling Road Block. If the contractor wants to utilize a Rolling Road block he shall coordinate it and get approval from the engineer.**

5.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Standard Specifications Section 616.

D. SUPPLEMENTAL REVISIONS JSP-09-01Z

Insert Sec 109.15, Sec 109.16 and Sec 109.17, subsequent section renumbered accordingly:

109.15 Seal Coat Price Index. Adjustments will be made to the payments due the contractor for Seal Coat placed in accordance with Sec 409 of the Standard Specifications. Adjustments will be calculated in accordance with Asphalt Cement Price Index of the General Provisions, except as defined herein.

109.15.1 Basis of Payment. To determine the adjustment for any material specified in this provision the following formula will be used.

$$A = B \times (0.68 \times 8.58/2000) \times (D - E)$$

Where: A = adjustment for Seal Coat placed during the index period
B = gallons of seal coat placed during the index period
D = average index price at the beginning of the period
E = average index price at the time of bid
0.68 = factor to reduce volume of emulsion to AC only
(use average specific gravity of 1.03 for seal coat)

109.15.2 Optional. This provision is optional. If the bidder wishes to be bound by this provision, the bidder shall execute the acceptance form in the Bid for the Asphalt Cement Price Index. Acceptance of this provision will apply to both the Asphalt Cement Price Index and Seal Coat Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election to not participate in the Asphalt Cement Price Index or Seal Coat Price Index.

109.16 Asphalt Underseal Price Index. Adjustments will be made to the payments due the contractor for Asphalt Underseal placed in accordance with Sec 625 of the Standard Specifications. Adjustments will be calculated in accordance with Asphalt Cement Price Index of the General Provisions, except as defined herein.

109.16.1 Basis of Payment. To determine the adjustment for any material specified in this provision the following formula will be used.

$$A = B \times (8.66/2000) \times (D - E)$$

Where: A = adjustment for asphalt underseal placed during the index period
B = gallons of asphalt underseal placed during the index period
D = average index price at the beginning of the period
E = average index price at the time of bid
(use average specific gravity of 1.04 for underseal)

109.16.2 Optional. This provision is optional. If the bidder wishes to be bound by this provision, the bidder shall execute the acceptance form in the Bid for the Asphalt Underseal Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election to not participate in the Asphalt Underseal Price Index.

109.17 Polymer Modified Emulsion Membrane Price Index. Adjustments will be made to the payments due the contractor for Polymer Modified Emulsion Membrane placed in accordance

with Sec 413.30. Adjustment will be calculated in accordance with the Supplemental Asphalt Price Adjustment except as defined herein.

109.17.1 Basis of Payment. To determine the adjustment for any material specified in this provision the following formula will be used.

$$A=B \times (0.9/2000) \times (D - E)$$

Where: A = adjustment for membrane placed during the index period
B = square yards of membrane placed during the index period
D = average index price at the beginning of the period
E = average index price at time of bid

109.17.2 Optional. This provision is optional. If the bidder wishes to be bound by the provision, the bidder shall execute the acceptance form in the Bid for Polymer Modified Emulsion Membrane Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election not to participate in the Polymer Modified Emulsion Membrane Price Index.

Delete Sec 403.2.5.2 and substitute the following:

403.2.5.2 Fibers. A fiber additive shall be used as a stabilizer in SMA Mixtures. Fibers shall be uniformly distributed by the end of the plant mixing process. The dosage rate for fibers shall be no less than 0.3 percent by weight of the total mixture for cellulose and no less than 0.4 percent by weight for mineral fibers.

Delete Sec 606.30.4 & 606.30.5 and substitute the following:

606.30.4 Method of Measurement. Measurement for crashworthy end terminals will be made for each unit assembled, installed and complete in place. Grading for crashworthy end terminals will be measured in accordance with [Sec 203](#) when roadway and drainage excavation is included in the contract, otherwise grading will be measured in accordance with Shaping Slopes, Class III or as directed on plans.

606.30.5 Basis of Payment. The accepted quantities of Type A, B, C, D and E crashworthy end terminals, complete in place, will be paid for at the contract unit price. Payment will be considered full compensation for complete installation including any backup assemblies or other items necessary for proper installation of the end terminal or crash cushion as required. Grading for end terminals will be paid for at the contract unit price for roadway and drainage excavation if included in the contract; otherwise it will be paid for as Shaping Slopes, Class III. If the contractor elects to use a flared Type A crashworthy end terminal, additional embankment as shown on the plans shall be provided at the contractor's expense.

Delete Sec 616.5.1 and substitute the following:

616.5.1 Amber or Amber and White Warning Lights. All on-road construction-related vehicles and equipment shall operate with amber or amber and white warning lights having 360 degrees of total coverage and as follows:

- (1) For daytime operations, SAE Class 1 or 2 lights shall be used.

(2) For dusk to dawn operations, SAE Class 2 lights shall be used, or SAE Class 1 lights with dimming capabilities to minimize glare experienced by travelers.

616.5.1.1 Red or Red and Blue Warning Lights. The contractor may elect to use red or red and blue warning lights in accordance with Missouri law and the following requirements:

(1) Use of red or red and blue lights shall be limited to use on a total of two vehicles per work zone and/or project.

(2) Use of red or red and blue warning lights shall be limited to areas in advance of tapers or lane shifts and at the active work location.

(3) Lights shall be SAE Class 2 or SAE Class 1 with dimming capabilities to minimize glare experienced by travelers.

The awarded contract will serve as a permit by the Commission, granting the prime contractor and approved sub-contractors to utilize red or red and blue lights as required by Missouri law.

Amend Sec 620 to include the following:

620.20.2.6.2 For open-graded pavement surfaces such as UBAWS Type B and C, it is allowable to apply a primer coat of temporary paint prior to applying the High Build Waterborne Paint. When a primer coat is used, it shall be applied in accordance with Sec 620.10.2. No additional payment will be made for the primer coat except for locations where Temporary Pavement Marking Paint is provided in the contract.

SECTION 620.60 CONTRAST PAVEMENT MARKINGS

620.60.1 Description. This work shall consist of furnishing and installing black contrasting pavement marking for intermittent markings (skips), dotted lines and solid intersection lane lines on new, and newly ground concrete surfaces. This work shall be in accordance with Sec 620 and accompanying provisions except as modified herein

620.60.2 Material. The black contrast marking shall be compatible with the white pavement marking material specified in the plans.

620.60.3 Construction Requirements.

620.60.3.1 The contrast markings shall be accomplished by placing the black pavement marking according to manufacturer's recommendations.

620.60.3.2 The white marking shall be centered within the black marking such that there will be a 1.5 inch border of black on both sides of the white marking. Tolerances for the width and length of the black and white markings shall be in accordance with Sec 620.2.4.2.

620.60.4 Basis of Payment. There will be no direct payment for compliance with the requirements of this provision.

Delete Sec 1081.4.3.3.1 and substitute the following:

Job No.: J413198
Route: 70
County: Jackson

1081.4.3.3.1 Hazardous Waste Notification. The contractor shall submit a “Notification of Regulated Waste Activity” form to MDNR Hazardous Waste Program to obtain the EPA identification number. Requests shall be submitted as soon as hazardous waste is determined or at least 30 days prior to shipping hazardous waste. The cost of obtaining the EPA identification number will be considered as part of the surface preparation cost and the engineer will subtract the cost from the contract. Hazardous waste shall not be shipped offsite until the EPA identification number has been received. The contractor will file the quarterly and annual hazardous waste reports in accordance with 10 CSR 25-5.262(2)(D)1 and will deactivate the EPA identification number upon contract completion. The contractor shall submit copies of all hazardous waste manifests and quarterly/annual reports to MoDOT’s Environmental Section.

E. PROJECT CONTACT FOR CONTRACTOR/BIDDER QUESTIONS

All questions concerning this project during the bidding process shall be forwarded to the project contact listed below.

Juan Yin, Project Contact
KC District
600 NE Colbern Road
Lee’s Summit, MO 64086
Telephone Number: 816-607-2216
Email: Juan.Yin@modot.mo.gov

All questions concerning the bid document preparation can be directed to the Central Office – Design at (573) 751-2876.

F. UTILITIES JSP-93-26F

1.0 For informational purposes only, the following is a list of names, addresses, and telephone numbers of the known utility companies in the area of the construction work for this improvement:

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
Google Fiber Marshall Martens 4049 Pennsylvania Avenue Suite 300 Kansas City, MO 64111 Phone: (415) 736-6597 Email: mmartens@google.com	None	Communications

Job No.: J4I3198
 Route: 70
 County: Jackson

<p>AT&T Craig Perkins 500 E. 8th Street Kansas City, MO 64106 Phone: (816) 275-2721 Phone: (816) 214-1453 (Cell) Email: cp0772@att.com</p>	<p>Yes Section 2.0</p>	<p>Communications</p>
<p>Sprint McCoy Ingalls 101 Holmes Kansas City, MO 64106 Phone: (404) 396-9726 Email: mccoy.w.ingalls@sprint.com</p>	<p>None</p>	<p>Communications</p>
<p>Unite Private Networks Steve Morgan 950 W. 92 Highway Kearney, MO 64060 Phone: (816) 520-3437</p>	<p>None</p>	<p>Communications</p>
<p>Zayo Fiber Solutions Dwight Davis 120 South Central Avenue Clayton, MO 63105 Phone: (816) 591-0282 (Cell) Email: dwight.davis@zayo.com</p>	<p>None</p>	<p>Communications</p>
<p>Missouri Gas Energy/Spire Energy Chris Collins 7500 E. 35th Terrace Kansas City, MO 64129 Phone: (816) 509-4400 Email: Chris.Collins@spireenergy.com</p>	<p>Yes Section 2.1</p>	<p>Gas</p>
<p>CenturyLink Brian Cornish 600 New Century Parkway 4th Floor New Century, KS 66031 Phone: (913) 390-2746 Phone: (913) 484-4526 (Cell) Email: brian.cornish@centurylink.com</p>	<p>None</p>	<p>Communications</p>
<p>Time Warner Cable Troy Prewitt 8221 W. 119th Street Overland Park, KS 66213 Phone: (816) 508-7287</p>	<p>None</p>	<p>Communications</p>

Job No.: J4I3198
 Route: 70
 County: Jackson

City of Kansas City Water Services Department Todd Hawes Sean Allen 4800 E. 63 rd Street Kansas City, MO 64130 Phone: (816) 513-0296 (Todd) Phone: (816) 513-0318 (Sean) Email: todd.hawes@kcmo.org	Yes Section 2.2	Water and Sanitary Sewer
Kansas City Power & Light Co. Paul Kreher 720 E. Young Street Warrensburg, MO 64093 Phone: (816) 245-3962 Phone: (660) 441-8148 (Cell) Email: Paul.Kreher@kcpl.com	Yes Section 2.3	Power
Verizon/MCI Don Torbett Engr IV, SouthWest Region 6929 N. Lakewood Avenue MD 5.1.2047 Tulsa, OK 74117 Phone: (918) 590-5922 (Office) Phone: (918) 269-4698 (Cell) Email: donald.torbett@verizon.com	None	Communications

1.1 The existence and approximate location of utility facilities known to exist, as shown on the plans, are based upon the best information available to the Commission at this time. This information is provided by the Commission "as-is" and the Commission expressly disclaims any representation or warranty as to the completeness, accuracy, or suitability of the information for any use. Reliance upon this information is done at the risk and peril of the user, and the Commission shall not be liable for any damages that may arise from any error in the information. It is, therefore, the responsibility of the contractor to verify the above listing information indicating existence, location and status of any facility. Such verification includes direct contact with the listed utilities.

2.0 AT&T has an existing manhole on the west end of the 10th Street bridge that will require adjustment. AT&T facilities will be adjusted by AT&T's Contractor. The Contractor shall coordinate the manhole adjustment work at the 10th Street bridge with AT&T's Contractor. The Contractor shall contact AT&T two weeks in advance of the work. The Contractor will meet on site with AT&T's Contractor to coordinate work. Work involved includes adjusting the height of the lid to match final pavement grade.

2.1 Missouri Gas Energy (Spire Energy) has existing 4" and 6" cast iron gas mains at 8th Street to be relocated prior to Notice To Proceed. The existing gas lines are in conflict with proposed storm sewer inlets.

2.2 The City of Kansas City has water valves and sanitary sewer manholes located within the pavement at each end of the bridge at 8th Street and 9th Street; on the west side of the 10th Street bridge and the south side of the Chestnut Avenue bridge that will require adjustment. The Contractor shall adjust the City facilities to grade as necessary. Work involves using a roadworthy adjusting casting and lid to match final pavement grade. The Contractor shall contact the City regarding any questions regarding the adjustment of these facilities. The Contractor shall contact the City two weeks in advance of the work so that the City can schedule an inspector to be on site for the adjustment. Payment for all necessary work required for the adjustment of these facilities shall be completely covered by Item No. 603-99.02, Adjusting Water Valve and Manhole, per each.

2.3 Kansas City Power and Light has existing manholes at each end of the Chestnut Avenue bridge that will require adjustment. KCP&L facilities will be adjusted by KCP&L's Contractor. The Contractor shall coordinate the manhole adjustment work at the Chestnut Avenue bridge with KCP&L's Contractor. The Contractor shall contact KCP&L four weeks in advance of the work. The Contractor will meet on site with KCP&L's Contractor to coordinate work. Work involved includes increasing the size of the manhole opening to 36" and adjusting the height of the lids to match final pavement grade. This work is expected to take 1 week to complete.

G. EMERGENCY PROVISIONS AND INCIDENT MANAGEMENT

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

2.0 In addition to the 911 emergency telephone number for ambulance, fire or police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol (800-525-5555)
City of Kansas City
Fire: 816-513-0911
Police: 816-234-5000

2.1 This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate police agency.

2.2 The contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

3.0 No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

H. LIQUIDATED DAMAGES FOR WINTER MONTHS

1.0 Description. Revise Sec 108.8.1.2 (a) and (b) and substitute the following for the project:

- (a) Liquidated damages will be assessed from December 15 to March 15, except as provided for below.
- (b) Liquidated damages will be assessed for Saturdays, Sundays and Holidays, except as provided for below.

Liquidated damages for winter months will not be charged from December 15 to March 15 as long as all bridges are open to traffic during this time.

I. CONTRACTOR QUALITY CONTROL AND DAILY REPORTING

1.0 The contractor shall perform Quality Control (QC) testing and reporting in accordance with the specifications and as specified herein. The contractor shall submit a Quality Control Plan (QC Plan) to the engineer for approval that includes all items listed in Section 2.0, prior to beginning work.

2.0 Quality Control Plan.

- (a) The name and contact information of the person in responsible charge of the QC testing.
- (b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.
- (c) A proposed independent third party testing firm for dispute resolution, including all contact information.
- (d) A list of Hold Points, when specified by the engineer.
- (e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website (www.modot.org/quality).

3.0 Quality Control Testing and Reporting. Testing shall be performed per the test method and frequency specified in the ITP. All personnel who perform sampling or testing shall be certified in the MoDOT Technician Certification Program for each test that they perform.

3.1 Reporting of Test Results. All QC test reports shall be submitted as soon as practical, but no later than the day following the test. Test data shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report. No payment will be made for the work performed until acceptable QC test results have been received by the engineer and confirmed by QA test results.

3.1.1 Test results shall be reported on electronic forms provided by MoDOT. Forms and Contractor Reporting Excel2Oracle Reports (CRE2O) can be found on the MoDOT website. All required forms, reports and material certifications shall be uploaded to a Microsoft SharePoint® site provided by MoDOT, and organized in the file structure established by MoDOT.

3.2 Non-Conformance Reporting. A Non-Conformance Report (NCR) shall be submitted by the contractor when the contractor proposes to incorporate material into the work that does not meet the testing requirements or for any work that does not comply with the contract terms or specifications.

3.2.1 Non-Conformance Reporting shall be submitted electronically on the Non-Conformance Report form provided on the MoDOT Website. The NCR shall be uploaded to the MoDOT SharePoint® site and an email notification sent to the engineer.

3.2.2 The contractor shall propose a resolution to the non-conforming material or work. Acceptance of a resolution by the engineer is required before closure of the non-conformance report.

3.3 Contractor Daily Work Reporting. The contractor shall submit to the engineer a Contractor Daily Work Report (CDWR) for each calendar day that work is performed. The CDWR shall include all information listed in 3.3.2.

3.3.1 The CDWR information may be provided on the MoDOT-provided form or an approved contractor form. Each CDWR shall be digitally signed by the contractor and uploaded to the MoDOT SharePoint® site no later than two (2) business days following the end of each week.

3.3.2 CDWR information:

- (a) Date and Contract Identification Number
- (b) Weather conditions, rainfall amounts, high/low ambient temperatures
- (c) List of subcontractors who performed work
- (d) Description of all work performed, including general location (ex. Sta, offset, log mile, etc.), and any testing performed.
- (e) Date range of days when no work was performed since the previous DWR
- (f) Pertinent traffic control information (changes, delays, accidents, etc.)
- (g) Statement: "All items installed meet or exceed contract requirements."

4.0 Work Planning and Scheduling.

4.1 Two-week Schedule. Each week, the contractor shall submit to the engineer a schedule that outlines the planned project activities for the following two-week period. The two-week schedule shall detail all work and traffic control events planned for that period and any Hold Points specified by the engineer.

4.2 Weekly Meeting. When work is active, the contractor shall hold a weekly project meeting with the engineer to review the planned activities for the following week and to resolve any outstanding issues. Attendees shall include the engineer, the contractor superintendent or project manager and any foreman leading major activities. This meeting may be waived when, in the opinion of the engineer, a meeting is not necessary. Attendees may join the meeting in person, by phone or video conference.

4.3 Pre-Activity Meeting. A pre-activity meeting is required in advance of the start of each new activity, except when waived by the engineer. The purpose of this meeting is to review construction details of the new activity. Discussion topics should include: safety precautions, QC testing, traffic impacts, and any required Hold Points.

4.4 Hold Points. Hold Points are events that require approval by the engineer prior to continuation of work. Hold Points occur at definable stages of work when, in the opinion of the engineer, a review of the preceding work is necessary before continuation to the next stage.

Job No.: J413198
Route: 70
County: Jackson

4.4.1 A list of typical Hold Point events is available on the MoDOT website. Use of the Hold Point process will only be required for the project-specific list of Hold Points, if any, that the engineer submits to the contractor in advance of the work. The engineer may make changes to the Hold Point list at any time.

4.4.2 Prior to all Hold Point inspections, the contractor shall verify the work has been completed in accordance with the contract and specifications. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection. Re-scheduling of Hold Points require a minimum 24-hour advance notification from the contractor unless otherwise allowed by the engineer.

5.0 Quality Assurance Testing and Inspection. MoDOT will perform quality assurance testing and inspection of the work, except as specified herein. The contractor shall utilize the inspection checklists provided in the ITP as a guide to minimize findings by MoDOT inspection staff. Submittal of completed checklists is not required, except as specified in 5.1.

5.1 Inspection and testing required in the production of concrete for the project shall be the responsibility of the contractor. Submittal of the 501 Concrete Plant Checklist is required.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

J. DBE PROGRAM REQUIREMENTS NJSP-15-41A

1.0 Description: Insert the following additional program provisions in the Disadvantaged Business Enterprise (DBE) Program Requirements of the General Provisions and Supplemental Specifications to Missouri Standard Specifications for Highway Construction.

13.6 Factors Used to Determine if a DBE Regular Dealer of Liquid Asphalt is Performing a CUF. The DBE must be responsible with respect to materials and supplies used on a contract perform all of the following, pursuant to 49 CFR § 26.55(c)(1) and 7 CSR 10-8.131:

- (a) Negotiating price.
- (b) Determining quality and quantity.
- (c) Ordering the material.
- (d) Paying for the material itself.
- (e) 30% of the work must be performed by the DBE's permanent employees (which does not include owner-operators or leased employees) or those hired by the DBE firm for the project from an independent source other than the prime contractor, such as a union hall. For at least 30% of the work the DBE's owned (not leased) equipment shall be used and the DBE must provide documentation that this owned equipment was used on the project as required by this provision.
- (f) For up to 70% of the remaining work the equipment used by the DBE must be by long term lease (at least one year) with another DBE or non-DBE but not the prime contractor.

Job No.: J413198
Route: 70
County: Jackson

The DBE must have absolute priority over other businesses or entities to use the long term leased equipment and must display the name and identification number of the DBE.

(g) The Contractor shall require DBE subcontractors to provide documentation in one of the following formats: bills of lading, hauling tickets, shippers manifest, and/or paid invoices. Regardless of the document format, the document(s) shall include the following information: name of the carrier, full name of the driver, driver ID number(s), truck and tanker ID or VIN number, and reflect the contract number, job number, county and route.

The contract number, job number, county and route can be reported through a consignee number or lift number, as long as the DBE Subcontractor has provided the consignee number, or lift number, along with project specific information which shall include contract number, job number, county and route.

The documentation must be submitted and generated by the DBE Subcontractor and be printed on letterhead or other similar documentation outlining the contact information for the DBE Subcontractor. In addition the documentation shall indicate the quantity and amount invoiced to the prime contractor (Such as an invoice). **“MoDOT’s DBE Contractor/Subcontractor Project Trucker and Equipment List”** (Form 1) will be provided by MoDOT and shall be completed and submitted to MoDOT by the DBE Subcontractor or Liquid Asphalt Supplier before Asphalt Operations begin. The DBE Subcontractor shall report all trucks and tankers they currently own and all full time drivers that they employ, including all of the drivers numbers for each terminal the drivers pick up from. In addition the DBE Subcontractor shall include a list of “long term” leased equipment, along with drivers and drivers’ numbers to the DBE Subcontractor Project Trucker and Equipment List. The DBE Subcontractor shall attach copies of all current long term lease agreements to the DBE Subcontractor Project Trucker and Equipment List.

(h) DBE Trucking/Hauling regulations do not apply to regular dealers of liquid asphalt.

13.7 When a DBE Regular Dealer of Liquid Asphalt is Not Eligible for DBE Credit.

(a) “If its role is limited to that of an extra participant in a transaction, contract or project through which funds are passed in order to obtain the appearance of DBE participation.” 49 CFR § 26.55(c)(2)

(b) If the type of transaction does not allow the DBE subcontractor to perform one of the four required functions, such as a prime contractor deciding the price of a commodity to be supplied by the DBE, that transaction is not eligible for DBE credit.

(c) Work that is performed with trucks that are not owned nor under a lease of at least one year by the DBE will not be eligible for DBE credit.

(d) A lack of documentation verifying that at least one DBE owned (not leased) tractor and tanker/ trailer was used to haul liquid asphalt on the project will result in no DBE credit given on that project.

13.8 This form will be completed by the inspector from the project office during the time of the project. MoDOT will use the *MoDOT DBE Job-Site Review CUF Determination Form* to verify CUF was performed on the project, a copy of which is available on the MoDOT Contractor Resource website.

K. STORMWATER COMPLIANCE REQUIREMENTS NJSP-15-38

1.0 The land disturbance necessary to complete this project is not anticipated to exceed one (1) acre. Should the contractor disturb more than one (1) acre to complete the work, or for any other reason, all terms of this Job Special Provision will apply.

1.1 Description. The Contractor shall comply with the terms of the United States of America v. Missouri Highways and Transportation Commission Consent Decree (Consent Decree) that are identified as the responsibility of the Contractor or subcontractor, and with the terms of this provision. Viewing of the Consent Decree is available on the MoDOT Land Disturbance webpage under Contractor Resources, or by going to the web address www.modot.org/LD.

1.2 Applicability. The Consent Decree and this provision apply to any project that includes land disturbance of areas totaling greater than one (1) acre on the project site. The project site consists of all areas designated on the plans, including temporary and permanent easements. The Consent Decree and this provision do not apply to Contractor staging, plant, or borrow areas that are not located on MoDOT right of way (Off-site). The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

2.0 Stormwater Training for Contractor Employees. The Contractor's on-site project manager, designated Water Pollution Control Manager (WPCM), as defined in Section 3.0, and WPCM delegate, shall complete MoDOT Stormwater Training prior to serving in those roles. If someone other than the Contractor's project manager is given the authority to manage the grading or erosion control operations, the project manager(s) for those operations shall also complete MoDOT Stormwater Training. MoDOT Stormwater Training is also required for any other person who the Contractor gives authority to take measures to prevent or minimize the consequences of non-compliance with the Stormwater requirements, as defined in Section 3.1(a) of this provision.

2.1 The Commission will provide MoDOT Stormwater Training to the Contractor employees specified in Section 2.0 at a location and time determined by MoDOT. There will be no fee for attending the training; however, the Contractor shall be responsible for all other cost related to the training, such as travel expenses, if necessary, and wages for its employees. The time to complete the training is anticipated to be no more than 6 hours. As long as the Consent Decree is in effect, MoDOT will provide periodic trainings at various locations around the state, as needed, to ensure contractors and bidders have the opportunity to maintain the number of WPCMs they need to comply with this provision.

2.2 Those who require MoDOT Stormwater Training per Section 2.0 shall complete the training prior to beginning any land disturbance work. Thereafter, training shall occur at least once every two (2) years. The training is not project-specific. Any Contractor employee who receives the training will be qualified to perform the WPCM duties on any MoDOT project for a period of two (2) years.

2.3 MoDOT will document the names and dates that contractor employees attend MoDOT Stormwater Training and will retain those records for the period of time specified in the Consent Decree. Duplicate record keeping by the contractor is not required.

3.0 Water Pollution Control Manager (WPCM). Prior to the Pre-Activity meeting for Grading/ Land Disturbance, the Contractor shall designate a Water Pollution Control Manager (WPCM) to fulfill the duties and responsibilities listed in Section 3.1 until final stabilization occurs. The Contractor's on-site project manager may also serve as the WPCM or that role may be assigned to another manager employed by the contractor or a subcontractor. The Contractor shall also maintain a WPCM delegate to temporarily fulfill the WPCM duties in the absence of the primary WPCM (e.g. illness, vacation, other leave).

3.1 Duties of the WPCM:

- (a) Be familiar with Stormwater Requirements including the National Pollutant Discharge Elimination System (NPDES), the current MoDOT State Operating Permit for construction stormwater discharges/ land disturbance activities, the Project-specific Stormwater Pollution Prevention Plan (Project SWPPP), the Corps of Engineers Section 404 Permit, when applicable, the Consent Decree, and this provision. The Project SWPPP includes: a title page with project-specific information, the general SWPPP posted on the MoDOT land disturbance website, the Project Erosion & Sediment Control Plan, all applicable special provisions, and all applicable specifications and standard drawings;
- (b) Complete the stormwater training set forth in Section 2.0;
- (c) Attend the Pre-Activity for Grading/ Land Disturbance Meeting or, if hired after the meeting has occurred, be familiar with the conference decisions;
- (d) Review and sign the Project-specific SWPPP and all updates thereto within time periods set out in the Consent Decree;
- (e) Visit and review the project site for compliance with Stormwater Requirements at least once per week from the start of any grading operations until final stabilization is achieved and permit is closed;
- (f) Be authorized by the Contractor to supervise all work performed by the Contractor and subcontractors that involves compliance with Stormwater Requirements, including the authority to order work be stopped on a Project, implement MoDOT-directed changes in work related to Stormwater Requirements, and order the taking of, measures to cease, correct, prevent, or minimize the consequences of non-compliance with Stormwater Requirements;
- (g) Review and certify electronically each MoDOT inspection report for the Project within three (3) days of receiving each report to ensure it conforms with report requirements in the National Pollution Discharge Elimination System Stormwater (NPDES SW) Permit, Project SWPPP and the Consent Decree and ensure that all Stormwater Deficiencies noted on the report are corrected within the time required;
- (h) Recommend in writing within three (3) days of discovering any changes in site conditions and Best Management Practices (BMPs) that require an update to the Project-specific SWPPP; and

- (i) Be the point of contact relating to Stormwater Requirements and the Consent Decree between the Contractor, Subcontractors and MoDOT.

4.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point. At each Project, a Pre-Activity Meeting for Grading/Land Disturbance shall be held prior to the start of any land disturbance and shall include a physical visit and review of the project site. Discussion items at the pre-activity meeting shall include a review of the project SWPPP, the planned order of grading operations, proposed areas of initial disturbance, identification of all necessary BMPs that shall be installed prior to commencement of grading operations, and any issues relating to compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

4.1 Contractor employees who shall attend the Pre-Activity Meeting for Grading/Land Disturbance include the WPCM for the Project and the person(s) designated the authority to manage the grading and erosion control operations.

4.2 Following the pre-activity meeting for Grading/land disturbance, and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

5.0 Compliance with the NPDES SW Permit and Project SWPPP. On all projects, the Contractor shall comply with all applicable Stormwater Requirements which are defined as, but are not limited to:

- (a) Consulting with the engineer on recommended design revisions to the Project SWPPP to accommodate the Contractor's staging plan, implementation, managing, and maintaining BMPs or other control measures to prevent or minimize sediment and other pollutants in stormwater runoff in accordance with contract specifications or any relevant manufacturer specifications and good engineering practices, including but not limited to the manuals (*Note: two manuals cited in the MoDOT permit are "Developing your stormwater pollution prevention plan: A guide for construction activities" and "Protecting Water Quality: A Field Guide to erosion, sediment and stormwater best management practices for development sites in Missouri"*) and any other applicable standards for sedimentation basins, stabilization, rock dams, brush checks, construction entrances, and other BMPs;
- (b) Installing all BMPs at the locations and relative times specified in the Project SWPPP; and
- (c) Complying with the Missouri Water Quality Standards and with effluent limitations in Section E.1 of the NPDES SW Permit. Measurement of effluent is not required except as specified in E.2.

5.1 Stormwater Deficiency Corrections. Per terms of the Consent Decree, Stormwater Deficiencies identified on the MoDOT Land Disturbance Inspection Report shall be corrected within 7 days of the inspection date to avoid stipulated penalties, except that more time might be granted by the engineer when weather or field conditions prohibit the corrective work. If the Contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work

to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the Contractor. Work shall not resume until the engineer approves the corrective work.

6.0 Inspection Protocol. The Contractor and all subcontractors shall review and adhere to MoDOT’s written Stormwater Inspection Protocol, found on the MoDOT Land Disturbance webpage (www.modot.org/LD). The Inspection Protocol is applicable to all Projects under the consent decree. The MoDOT Resident Engineer will serve the role of Stormwater Resident Engineer, or a delegate will be named in their absence.

6.1 Inspection Reports. MoDOT will provide one or more Environmental Construction Inspectors (ECI) to perform the weekly and post run-off inspections and other duties described in paragraph 17 of the Consent Decree. The ECI will enter the inspection reports into a web-based Stormwater Compliance database. The WPCM will have access to this database to view all report information, including any noted deficiencies, and to certify the report as required in Section 3.1 (g.). Automated email reminders of pending reports that need to be certified and for deficiencies that need to be corrected will be sent to the WPCM. The Contractor may designate other employees or subcontractor employees to have viewing access to this database and to receive the email reminders. Completion of MoDOT Stormwater Training is necessary in order to receive the email reminders. The WPCM and other users shall be equipped with an electronic device (desktop computer, laptop, tablet, smartphone, etc.) with a browser and internet access to connect to the database. The contractor shall be responsible for providing the electronic devices.

7.0 Stipulated Penalties. If the Contractor fails to comply fully and timely with the requirements of the Consent Decree, stipulated penalties will be assessed to the Commission. For matters under the Contractor’s responsibility and control the following stipulated penalties will be assessed to the Contractor and MoDOT will withhold payment pursuant to the following:

Violation	Stipulated Penalty Amount
Failure to Designate or Maintain WPCM at each Project in Accordance with Section 3.0.	\$750 for the initial violation (each person not designated) and then \$750 for each fourteen (14) day period that person is not designated.
Failure to complete MoDOT Stormwater Training by an Individual Required to be Trained in Accordance with Section 2.0, such as the WPCM or Project Manager.	\$750 per person for each missed training. This \$750.00 per person violation shall continue to accrue for each fourteen (14) day period that the person fails to timely receive the applicable training
Failure of WPCM to Review and Certify an Inspection Report in Accordance with Inspection Protocol as set forth in Section 6.	\$250 per inspection report not reviewed or signed.
Failure to Comply with Any NPDES SW Permit or SWPPP Requirement.	\$1000 per violation for the first ten (10) days of the violation; \$2500 per violation for days 11-20; \$3500 per violation for days 21 and beyond.
Failure to Correct a Stormwater Deficiency Identified in a MoDOT Inspection Report, or Otherwise Discovered by the WPCM, within the Time Required by the NPDES SW Permit or SWPPP.	\$1000 per deficiency for the first ten (10) days after correction was required; \$2500 per deficiency for days 11-20 after correction was required; \$3500 per deficiency for days 21 and beyond after correction was required.

8.0 Information Collection and Retention. The EPA, its representatives and its agents shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credential, to:

- (a) monitor the progress of activities required under the Consent Decree;
- (b) verify any data or information submitted to the United States in accordance with the terms of the Consent Decree;
- (c) obtain samples and, upon request, splits of any samples taken by MoDOT or its representatives, contractors, or consultants;
- (d) obtain documentary evidence, including photographs and similar data; and
- (e) assess MoDOT's compliance with the Consent Decree.

8.1 Until three (3) years after the termination of the Consent Decree, Contractors and the agents of the Contractors shall preserve all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its Contractors' or agents' possession or control, or that come into the Contractor's or agent's possession or control, and that relate to MoDOT's performance of its obligations under the Consent Decree or to the Contractor's performance of its obligations under the Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures.

9.0 Basis of Payment. Should the contractor disturb more than one (1) acre due to its method of operations, or for any other reason, no direct payment will be made for compliance with this provision, including the cost to provide a WPCM. Should the engineer direct the contractor to exceed one (1) acre of land disturbance, payment will be made only for the actual cost of the weekly duties of the WPCM. Separate payment will be made for erosion and sediment control devices, and for permanent and temporary seeding and mulching, when payment for those items are provided elsewhere in the contract.

L. ADA COMPLIANCE AND FINAL ACCEPTANCE OF CONSTRUCTED FACILITIES
JSP-10-01A

1.0 Description. The contractor shall comply with all laws pertaining to the Americans with Disabilities Act (ADA) during construction of pedestrian facilities on public rights of way for this project. An ADA Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

2.0 ADA Checklist. The contractor can locate the ADA Checklist form on the Missouri Department of Transportation website:

http://www.modot.mo.gov/business/contractor_resources/forms.htm

2.1 The ADA Checklist is intended to be a helpful tool for the contractor to use during the construction of the pedestrian facilities and a basis for the commission's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned

work that is in conflict with the design or with the requirement shown in the checklist. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

2.2 It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize negative impacts that his equipment, subcontractors or general public may have on the work. Completed facilities must comply with the requirements of ADA and the ADA Checklist or have documented reasons for the non-complaint items to remain.

3.0 Coordination of Construction.

3.1 Prior to construction and/or closure on an existing pedestrian path of travel, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian detour compliant with MUTCD Section 6D that will be used during each stage of construction. This plan shall be submitted to the engineer for review and approval at or prior to the pre-construction conference. Accessible signed detours shall be in place prior to any work being performed that has the effect of closing an existing pedestrian travel way.

3.2 When consultant survey is included in the contract, the contractor shall use their survey crews to verify that the intended design can be constructed to the full requirements as established in the 2010 ADA Standards. When 2010 ADA Standards do not give sufficient information to construct the contract work, the contractor shall refer to the PROWAG.

3.3 When consultant survey is not included in the contract, the contractor shall coordinate with the engineer, prior to construction, to determine if additional survey will be required to confirm the designs constructability.

4.0 Final Acceptance of Work. The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-complaint items that are allowed to remain at the end of the construction project. Specific details of the non-complaint items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

4.1 Slope and grade measurements shall be made using a properly calibrated, 2 foot long, electronic digital level approved by the engineer.

5.0 Basis of Payment. The contractor will receive full pay of the contract unit cost for all sidewalk, ramp, curb ramp, median, island, approach work, cross walk striping, APS buttons, pedestrian heads, detectible warning systems and temporary traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon

completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

5.1 No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract documents.

M. AIRPORT REQUIREMENTS JSP-15-09

1.0 Description. The project is located near a public use airport or heliport or is more than 200 feet above existing ground level, which requires adherence to Federal Aviation Regulation Part 77 (FAA Reg Part 77). "Near" to a public use airport or heliport is defined as follows:

- 20,000 feet (4 miles) from an airport with a runway length of at least 3,200 feet
- 10,000 feet (2 miles) from an airport with runway length less than 3,200 feet
- 5,000 feet (1 mile) from a public use heliport

2.0 The maximum height of the improvement and the equipment operating while performing the improvements was assumed to be 45 feet above the current travelway during the process of evaluating the project for compliance with FAA Reg Part 77.

2.1 If the contractor's height of equipment or if the improvement itself is beyond the assumed height as indicated in Sec 2.0, the contractor will work with the resident engineer to fill out the Form 7460-1, or revise the original Form 7460-1 based upon the proposed height and resubmit, if necessary, for a determination by FAA on compliance with FAA Reg Part 77. Further information can be found in MoDOT's Engineering Policy Guide 235.8 Airports. If the Form 7460-1 must be filed, the associated work shall not be performed prior to the FAA determination, which could take up to 45 days.

2.2 If the contractor's height of equipment and the improvement itself is below the assumed height as indicated in Sec 2.0, no further action is necessary to fulfill the requirements set forth in FAA Reg Part 77.

3.0 Basis of Payment. There will be no direct payment for any work associated with this provision. Contract time extension will be given for the time necessary to obtain or revise the FAA permit. Any delays or costs incurred in obtaining the revised permit will be noncompensable.

N. RELOCATION OF EXISTING SIGN ASSEMBLIES

1.0 Description. This work consists of removing and relocating existing sign assemblies impacted by construction.

1.1 This provision is in addition to the requirements of the temporary relocation of existing signs and markers under Section 104.10.2 Signs and Markers.

2.0 Storage and Maintenance. The existing sign assemblies, posts and hardware that are to be relocated shall be maintained in accordance with Section 104.10.2, as shown on the plans or

as directed by the engineer and it shall be the responsibility of the contractor to properly store and maintain them in good condition until it is time to re-install the signs.

2.2 The contractor shall exercise reasonable care in handling the sign assemblies and materials during removal and transportation. Should any of the signs be damaged by the contractor's negligence, they shall be replaced at the contractor's expense.

2.3 The contractor shall reinstall existing sign assemblies after the work is completed in the area that relocation is required. Sign assemblies to be reinstalled shall match their existing location or be relocated as shown in the plans or as directed by the engineer. Relocated sign assemblies shall be reinstalled, on new posts, with a new post base and breakaway assembly, in accordance with section 903.

3.0 Basis of Payment. Payment will be made at the contract unit price for item number 903-99.02, Relocation of Existing Sign Assemblies, per each. Payment shall constitute full compensation for all labor, materials and equipment necessary to complete this item of work. No direct payment shall be made for new posts, post bases, backing bars, breakaway assemblies, movable supports, frames, temporary sign supports, transportation or storage for relocation of existing sign assemblies.

O. DECORATIVE ROCK

1.0 Description. This work shall consist of furnishing and placing decorative rock as shown in the plans.

2.0 Basis of Payment. All costs including material, labor and equipment required for furnishing and placing decorative rock will be paid for under the contract bid price for Item 604-99.05, Decorative Rock, per ton.

P. KCMO (KANSAS CITY MISSOURI) STREET LIGHTING

1.0 Description. Work under this Section shall consist of furnishing and installing all KCMO Street Lighting equipment and material as shown on the plans.

2.0 Construction Requirements. All work shall be done in conformance with Kansas City Department of Public Works Standard specification, Division II Section 2800 and Division V Section 5800 and any supplements, except as amended below, on the plans, or by the Engineer.

3.0 Method of Measurement. All work associated with the installation of roadway lighting material, complete in place shall be measured for payment as a single unit and will include anchor bolts and nuts, lighting poles, breakaway supports, quick disconnect fuse kits and all other necessary components.

4.0 Basis of Payment. Payment for the above described work including all materials, labor, equipment and all incidentals necessary to complete this item shall be made and considered completely covered under the contract unit price as listed for each of the following items:

901-99.02 KCMO Lighting Controller, 120/240 Volt, 2 Circuit, Each

- 901-99.02 KCMO Junction Box, Type II, Each
- 901-99.02 KCMO Pole Foundation, Each
- 901-99.02 KCMO Fuse Kit, Each
- 901-99.02 KCMO Cable Retainer Assembly, Each
- 901-99.02 KCMO Relocate Light Pole, Each
- 901-99.03 KCMO 3c-#6 AWG Wiring, Linear Feet
- 901-99.03 KCMO 3c-#10 AWG Pole Wiring, Linear Feet
- 901-99.03 KCMO Conduit, 2 in. Rigid in Trench, Linear Feet
- 901-99.03 KCMO Conduit, 2 in. Rigid Pushed, Linear Feet

No direct payment will be made for any incidental items necessary to complete the work unless specifically provided as pay item in the contract.

Q. BLACK VINYL-COATED CHAIN-LINK FENCE

1.0 Description. This work shall consist of furnishing black vinyl-coated chain-link fence as shown on the plans or as directed by the engineer in accordance with section 607 of the standard specifications.

2.0 Materials and Construction Requirements. Material requirements shall conform to Division 1000, Section 1043 – Chain-Link Fence. Fencing. The fence height shall be 84 inches.

3.0 Basis of Payment. The accepted quantity of fencing will be paid for by the contract unit price for Item 607-99.03, Black Vinyl Chain-Link Fence, per linear foot.

R. 4" TINTED & STAMPED CONCRETE MEDIAN

1.0 Description. This work shall consist of furnishing and installing 4" tinted and stamped concrete median as specified in the plans medium to dark red complying with section 608.3 of the standard specifications.

1.1 The 4" tinted and stamped concrete median shall have a float finish and be impressed with a brick pattern. Immediately after impressing, surface shall be covered and cured with clear membrane or with polyethylene sheeting for not less than 72 hours. The Contractor shall submit a sample for the Engineer's approval of the finished surface material that clearly demonstrates the impression pattern and color of material.

2.0 Method of Measurement. The quantities of concrete median will be paid for in accordance with Section 608.4.

3.0 Basis of Payment. The cost of all materials, labor, and equipment necessary for the complete in place installation shall be included in the unit bid price for:

<u>Item No.</u>	<u>Description</u>	<u>Units</u>
608-99.05	4 IN. TINTED & STAMPED CONCRETE MEDIAN	S.Y.

S. TRENCH DRAIN SYSTEM

1.0 Description. This work shall consist of furnishing and installing a 4 inch internal width polymer concrete trench drain system with frame and grate as indicated on the plans, to manufacture specifications.

2.0 Construction Requirements. The following shall be considered the minimum polymer concrete trench drain system requirements.

2.1 The trench system bodies shall be manufactured from polyester polymer concrete with properties as follows:

Compressive Strength (ASTM C579) of 12,000 psi Minimum
Flexural Strength (ASTM C580) of 3000 psi Minimum
Water Absorption (ASTM C140) of 0.2% Maximum
Chemical Resistance (ASTM C267) Pass – Automotive Fluids/Road Salts
Freeze/Thaw (1,600 Cycles)(ASTM C666) No Weight Loss

To meet strict horizontal clearance tolerances the maximum concrete encasement for the 4 in. trench drain shall be 4 in. of concrete. The concrete used for encasement shall meet a minimum of 4000 psi for a commercial mix. The modular units shall be manufactured with either an invert slope of 0.5% minimum or neutral as indicated on the plans. Each unit will have a full radius in the trench bottom and a male to female interconnecting end profile. The units shall have cast in anchoring features on the outside wall to ensure maximum mechanical bond to the surrounding concrete and pavement surface. The units shall have properly fitting outlets and end caps.

2.2 The grate may be monolithically cast as part of the trench drain body or if separate the frame and grate shall meet the following requirements:

Shall meet Medium Duty ASME Load Ratings.
Shall be made of ductile iron (ASTM-A536).
Shall feature 30% open area for maximum hydraulic efficiency.
Shall be motorcycle safe, bicycle safe, and ADA compliant in both longitudinal and transverse directions of pedestrian traffic.

The frame grate shall be a one piece unit except for sections at the beginning and end of each run. These beginning and ending sections shall have a removable grate that allows access for maintenance.

2.3 The trench drain system shall be installed in accordance with the manufacture's specifications and recommendations. All materials and incidentals needed to hold the channels to line and grade, prevent flotation, and ensure proper concrete encasement shall be included with the trench drains

3.0 Method of Measurement. The length of trench drain to be paid for will be the length measured along the pavement surface as shown on the plans.

4.0 Basis of Payment. No direct payment will be made for excavation, preparation of subgrade, or backfilling. The cost of all materials, labor and equipment necessary for the complete in place installation shall be included in the unit bid price for:

Item 604-99.01, 4 IN TRENCH DRAIN, per Lump Sum

T. SPECIAL GROUP B PIPE

1.0 Description. This work shall consist of furnishing and installing Group B pipe in non-standard sizes as shown on the plans and as required by Section 724 and 725 of the Missouri Standard Specifications for Highway Construction.

2.0 Basis of Payment. The cost of all materials, labor and equipment necessary for the complete in place installation shall be included in the unit bid price for:

Item 725-99.03, 8 IN. PIPE GROUP B, per linear feet

U. REINFORCED CONCRETE PIPE

1.0 Description. This work shall consist of furnishing reinforced concrete pipe culvert, laid upon a bed, and backfilled as specified on the plans or as directed by the engineer. This work shall be in accordance with Sec 726 and accompanying provisions except as modified herein.

2.0 Material. All material shall be in accordance with Sec 726.2.

3.0 Construction Requirements. The construction requirements shall conform to Sec 724.2, 724.3, and 726.3.

4.0 Method of Measurement. The quantities will be paid for in accordance with Section 724.4

5.0 Basis of Payment. Section 724.5 is supplemented by the following.

The cost of all materials, labor and equipment necessary for the complete in place installation shall be included in the unit bid price for:

Item 726-99.03, 12 IN. Class III Reinforced Concrete Pipe, per linear foot

Item 726-99.03, 15 IN. Class III Reinforced Concrete Pipe, per linear foot

V. MODIFIED CURB AND GUTTER

1.0 Description. This work shall consist of constructing modified curb, gutter or combination curb and gutter as shown on the plans or as directed by the engineer. This work shall be in accordance with Sec 609 and accompanying provisions except as modified herein.

2.0 Method of Measurement. Measurement for Modified Curb and Gutter will be made to the nearest linear foot, along the curb face or flow line of the gutter.

3.0 Basis of Payment. Payment for the above described work including all materials, labor, equipment and all incidentals necessary to complete this item shall be made and considered completely covered under the contract unit price as listed for each of the following items:

609-99.03 4 In. Mountable Curb & Gutter, Linear Feet

609-99.03 6 In. Modified Curb & Gutter Type B, Linear Feet
609-99.03 6 In. Modified Curb & Gutter Type B-1, Linear Feet

No direct payment will be made for any incidental items necessary to complete the work unless specifically provided as pay item in the contract.

W. RELOCATE EXISTING LIGHT POLE

1.0 Description. This work shall consist of relocating the existing light pole mounted on existing bridge safety barrier on Ramp S (Bridge L09392) to new bridge safety barrier on Ramp S (Bridge L09392) as indicated in the roadway/bridge plans or as directed by the engineer. It shall include all equipment, materials, and labor necessary to remove and relocate the existing lighting poles, bracket arms, luminaires and appurtenances, and to adjust the existing luminaires for optimum lighting of the new roadway geometrics.

1.1 This work shall be coordinated with the Missouri Department of Transportation's District Traffic Division.

1.2 The contractor shall exercise reasonable care in the handling of the lighting poles and equipment during removal and relocation. Should any of the lighting poles or equipment be damaged by the contractor, the contractor shall immediately notify the engineer. The engineer will inspect the damage and determine what repair work or replacement shall be made. All required repair work and replacement shall be made at the contractor's expense.

2.0 Material. All material shall conform to Section 901. All mounting hardware, bolts, washers, nuts, and electrical connectors shall be of new stock.

3.0 Construction Requirements.

3.1 The contractor will be required to install additional pull boxes, conduit and cable conduit as shown on the plans.

3.2 Relocation (including removal from service at the old location and restoration of service at the new location) of each light pole shall be completed during the daylight hours of not more than one (1) day.

4.0 Basis of Payment. All costs incurred by the contractor to satisfy the above requirements, including all materials and labor required to Relocate Light Pole, shall be considered incidental to and completely covered by the contract unit price for item number 901-99.02, Misc. KCMO Relocate Light Pole, per each.

All other related items of work shall be paid under their respective bid item numbers, as shown in the contract.

X. EXTERNAL ON STRUCTURE

1.0 Description. This work shall consist of furnishing and installing 3 in. rigid conduit, external on structure on retaining walls and bridges to connect from 3 in. stub out from bridge safety

barrier ends to 3 in. conduit in trench at various locations within the project limits as indicated in plans or directed by the engineer.

2.0 Construction Requirements. The construction shall conform to the requirements of Section 902.16 and 902.16.7.

3.0 Basis of Payment. Payment for furnishing and installing 3 in. rigid conduit, external on structure shall include all rigid conduit, junction boxes, conduit fittings, expansion fittings, brackets, clamps, and anchors. All costs incurred by the contractor to satisfy the above requirements, including all materials, equipment, and labor shall be completely covered by the contract unit price for item number 901-99.01, Misc. Conduit, 3 in. Rigid, External on Structure, per lump sum.

Y. FERTILIZING, SEEDING, AND MULCH

1.0 Description. The contractor shall fertilize, seed, and mulch all areas disturbed during construction operations in accordance with the pertinent sections of Division 800 or as directed by the engineer.

2.0 Fertilizing. The contractor shall use the fertilizing mixture and rates shown below for all disturbed areas. No direct payment will be made for fertilizing.

<u>Fertilizing Agent</u>	<u>Rate (Lbs/Acre)</u>
Nitrogen	40
Phosphorus	40
Potash	40
Lime	0

3.0 Seeding. In accordance with Section 805, the following seed mixtures shall be applied at the rate specified:

<u>Seeding Mixture</u>	<u>Lbs. Seed/Acre</u>
Tall fescue	80
Annual Ryegrass	10
Perennial Ryegrass	5
White Clover	5
<u>Oats</u>	<u>10</u>
Total	110

4.0 Basis of Payment. All costs incurred will be paid for at the contract unit price for the following pay item:

805-10.00A, Seeding - Cool Season Mixtures, per acre

Z. REMOVABLE STEEL CURB

1.0 Description. This work shall consist of furnishing and installing 9 in. PCCP, 6 in. Integral Curb Type A, and 4 in. Type 5 Aggregate necessary for the placement for the Removable Steel

Job No.: J413198
Route: 70
County: Jackson

Plate Cover. Removable Steel Plate Cover shall be of the size and type necessary to fit appurtenant details shown on the plans and shall meet the approval of the engineer.

2.0 Material. The Removable Steel Plate Cover, shall be constructed of structural steel meeting the requirements of ASTM A 36 and shall be fabricated as shown on the plans. Welds shall be of full section and sound throughout. Obvious dimensional defects and structural discontinuity of welds will be cause for rejection. All welding residue shall be removed. All tightly contacting surfaces shall be completely sealed by welding. Removal of welding beads will not be required except on bearing surfaces. Removable Steel Curb Covers shall be hot-dip galvanized after fabrication in accordance with AASHTO M 111. Top of steel plate shall have a minimum coefficient of static friction of 0.5 for either wet or dry condition, when tested for any shoe sole material. All steel rod anchors and screws shall be stainless steel. 9 in. PCCP shall conform to specification 502. 6 in. Integral Curb Type A shall conform to standard plan 609.00P and specification 609.20. 4 in. Type 5 Aggregate shall conform to specification 304.

3.0 Construction Requirements. Bearing surfaces of both the frame and cover shall be finished to a non-rocking fit and shall be ADA Compliant. The fixture shall be set securely as shown on the plans to prevent displacement during the placing of concrete. All concrete placed adjacent to the fixture shall be thoroughly vibrated.

4.0 Basis of Payment. No direct payment will be for 9 in. PCCP, 6 in. Integral Curb Type A, or 4 in. Type 5 Aggregate. The accepted quantity of Removable Steel Curb, complete in place, will be paid for at the contract unit price for item number 614-99.02, Removable Steel Curb, per each

AA. ORNAMENTAL STEEL FENCE

1.0 Description. This work shall consist of furnishing and erecting a 72 in. Ornamental Steel Fence as shown on the plans or as directed by the engineer.

2.0 Material. The steel material for fence panels and posts shall be ASTM A653/653M with a minimum yield strength of 45 ksi and a minimum zinc (hot-dip galvanized) coating weight of 0.60 oz/ft², coating designation G-60. Posts shall be a minimum of 2 1/2" steel square tubing 16 Ga. Material for pickets shall be 3/8 in. square 18 Ga. steel tubing. The rails shall be steel u-channel 1 1/2 in. x 1 7/16 in. 14 Ga. The ornamental steel fence shall be capable of meeting the vertical load, horizontal load, and infill performance requirements for commercial weight fences under ASTM F2408. All fence components shall be coated with primer, intermediate, and final coats in the shop. Paint shall conform to the requirements of sections 1045 and 1081. Paint shall be system G (Black). Color shall match federal standard 959B 17038.

3.0 Construction Requirements. The contractor shall submit detailed shop drawings and calculations signed and sealed by a professional engineer registered in the state of Missouri prior to ordering and installation for the approval of the engineer. Member sizes and connection details for the fence shall be indicated on the shop drawings. Ornamental steel fence shall be installed per manufacture's recommendations. The contractor shall check all material upon receipt to ensure no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft. The contractor shall fill, cut, or trench where necessary to produce a smooth and uniform ground surface for Ornamental Steel Fence. All posts shall be set plumb, true to line and grade. All posts shall be set in concrete per manufacture's

recommendations. The concrete footing shall be a uniform thickness around the post and shall a cone or dome shaped top. Posts damaged during construction shall be removed and replaced at the contractor's expense.

4.0 Basis of Payment. No direct payment will be made for concrete footings, posthole excavation, or for excavation and embankment necessary to smooth the area under the fence. The cost of all materials, labor, and equipment necessary for the complete in place installation also furnishing, finishing, and erecting the fence per manufacture's recommendations shall be included in the unit bid price for:

Item 6079903, 72 in. Ornamental Steel Fence, per Linear Feet (LF)

AB. LINEAR GRADING FOR IMPROVEMENTS

1.0 Description. This work shall consist of grading work necessary to bring the improvements to the required grade and cross section within reasonable tolerances.

2.0 Construction Requirements.

2.1 The improvements shall be brought to the required grade and cross sections within tolerances by backsloping, ditching, removing stone and boulders from the subgrade surface, bringing in material, or any other work necessary, including hauling and or disposal of any excavated material.

2.2 Bituminous material, stumps, roots, rubbish or any other deleterious material shall not be placed in embankments. Where an embankment less than 2 feet high is to be constructed, all vegetative matter shall be cut and removed from the surface upon which the embankment is to be placed. The cut-over surface shall be thoroughly broken. All ditches including inlet and outlet ditches shall be cut to grades that will properly drain.

2.3 Shape existing slopes to construct the improvements as directed by the engineer.

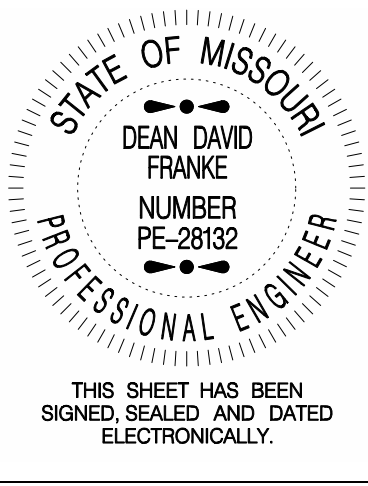
2.4 Linear Grading for Improvements shall consist of grading where it is necessary to excavate, haul material, or furnish and transport material from stockpile sites or from a contractor-provided source to bring the gutter to the desired grade.

3.0 Method of Measurement. Measurement of Linear Grading for Improvements will be made to the nearest 1/10 station.

4.0 Basis of Payment. No direct payment will be made for hauling material or furnishing and transporting material from stockpile sites or from contractor-provided sources. The accepted quantity of linear grading for gutters will be paid for at the contract unit price for Item 207-99.09 "Linear Grading for Improvements" per station.

TABLE OF CONTENTS

- A. Construction Requirements
- B. Clean and Epoxy Seal
- C. Rapid Set Concrete Patching Material – Vertical and Overhead Repairs
- D. Form Liners

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636</p>
	<p>If a seal is present on this sheet, JSP's has been electronically sealed and dated.</p>
	<p>JOB NO. J4I3198 Jackson County, MO Date Prepared: 12/22/2017</p>

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

1.0 Description. This provision contains general construction requirements for this project.

2.0 Construction Requirements. Plans for the existing structure(s) are included in the contract in the bridge electronic deliverables zip file for informational purposes only.

2.1 In order to assure the least traffic interference, the work shall be scheduled so that a bridge closure is for the absolute minimum amount of time required to complete the work. A bridge shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed bridge is opened to traffic.

2.2 Bridge work by contractor forces, including erection, rehabilitation, or demolition, shall not be allowed over traffic unless a bridge platform protection system is installed below the work area except for work performed above a deck that is intact. The protection system shall be capable of catching all falling objects such as tools, overhang brackets or materials. Lifting of objects that are heavier than the capacity of the bridge protection system shall not be allowed.

2.3 Qualified special mortar shall be a qualified rapid set concrete patching material in accordance with [Sec 704](#). A qualified rapid set concrete patching material will not be permitted for repairing concrete deck (half-soling), deck repair with void tube replacement, full depth repair, modified deck repair and substructure repair (formed) unless a note on the bridge plans specifies that a qualified special mortar may be used.

2.4 Provisions shall be made to prevent any debris and materials from falling onto the roadway. Any debris and materials that falls below the bridge outside the limits mentioned previously and if determined necessary by the engineer, the debris shall be removed as approved by the engineer at the contractor's expense. Traffic under the bridge shall be maintained in accordance with the contract documents.

2.5 Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

3.0 Method of Measurement. No measurement will be made.

4.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

B. CLEAN AND EPOXY SEAL

1.0 Description. In order to protect the bridge superstructure concrete from deicing chemicals and other contaminates, loose and delaminated concrete shall be removed and an epoxy seal shall be applied to each outside edge of the concrete box girders and 4 feet from each outside edge on the bottom of the concrete box girders in accordance with the bridge plans and this job special provision.

2.0 Construction Requirements. After repairs to the concrete box girders has been performed and the concrete fully cured as required by the epoxy manufacturer's written recommendations, the epoxy sealing preparation and applying the epoxy to these areas shall be in accordance with [Sec 704](#). The areas to be cleaned and epoxy sealed shall be as follows:

JOB SPECIAL PROVISIONS (BRIDGE)

(a) Each outside vertical face of the concrete box girders for entire length of the bridge or entire end of the bridge.

(b) Four feet of concrete box girders bottom from each outside face for entire length of the bridge or entire end of the bridge.

3.0 Method of Measurement. The area to be cleaned and epoxy sealed will be computed to the nearest square foot. Final measurement will not be made except for authorized changes during construction or if appreciable errors are found in the contract quantity.

4.0 Basis of Payment. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary to complete this item, will be based on the contract plan quantities and will be considered completely covered by the contract unit price for "Clean and Epoxy Seal". Any change in the contract plan quantities, based on approved change orders, will be paid for at the contract unit price.

C. RAPID SET CONCRETE PATCHING MATERIAL – VERTICAL AND OVERHEAD REPAIRS JSP-02-01

1.0 Description. This specification covers cementitious concrete, polymer-modified concrete and polymer concrete that are suitable for repairing concrete surfaces on bridges or concrete structures, particularly under fast setting or special conditions. The repairs would involve vertical or overhead applications. The work shall consist of removing, furnishing, preparing, and placing materials at locations as shown on the plans or as directed by the engineer.

2.0 Material. All materials shall be in accordance with MoDOT specifications and as noted herein.

2.1 Aggregate For Extending Commercial Mixture. Coarse and fine aggregates shall be in accordance with [Sec 1005](#), except the requirements for gradation and percent passing the No. 200 sieve shall not apply. Coarse aggregate meeting Gradation E requirements shall be used for repairs greater than one inch (25 mm) in depth. Fine aggregate will be allowed for repairs less than one inch (25 mm). Aggregate specified, bagged, labeled and furnished by the rapid set concrete patching material manufacturer may also be used for mortar extension.

2.2 Material Applications. The contractor shall select and use the product most suitable for the work and field conditions in accordance with these specifications.

2.3 Curing. Rapid set concrete patching material shall be cured until the minimum compressive strength 1500 psi is attained using standard curing specifications, unless otherwise specified by the manufacturer.

2.4 Qualification and Project Acceptance.

2.4.1 Inspection. All materials shall be subject to inspection and sampling by MoDOT at the source of manufacture, intermediate shipping terminal or destination. MoDOT will be allowed free access to all facilities and records as required to conduct inspection and sampling.

2.4.2 Qualification. Prior to use, rapid set concrete patching materials need to be qualified.

JOB SPECIAL PROVISIONS (BRIDGE)

2.4.2.1 Requested Information. The manufacturer shall submit with samples of the materials, a written request to Construction and Materials with the following information:

- (a) New Products Evaluation Form
- (b) Brand name of the product.
- (c) Certification that the material meets this specification.
- (d) Certified test results from an independent laboratory showing compliance with this specification.
- (e) Specific preparation instructions of repair area.
- (f) Specific mixing, handling and curing instructions.
- (g) Application type (i.e., vertical or overhead).

2.4.2.2 Field Evaluation. Final approval will be granted when the following requirements are met:

- (a) MoDOT report documenting two years of field performance on MoDOT system. The report will contain the placement date, field observations (semi-annual), description of field performance and photographs of in-place material.
- (b) A manufacturer's representative shall be present during placement of the material to provide technical expertise.

2.4.2.2.3 Disqualification. If during the two year observation period the repair area(s) fails the product will not be added to the qualified list.

2.5 Qualified List. The listing of qualified products are available from Construction and Materials or on MoDOT's web site. New certified test results and samples shall be submitted any time the manufacturing process or the material formulation is changed. The material will be subject to removal from the qualified list if there is evidence of unsatisfactory performance or a change in manufacturing process or formulation, or when random sampling and testing of material offered for use indicates nonconformity with any of the requirements herein specified.

2.6 Certification. The contractor shall supply a manufacturer's certification to the engineer for each lot of material furnished. The certification shall include the name of the manufacturer, a manufacturer certification statement that the material supplied is the same as that qualified and listing the date of qualification.

2.7 Acceptance. Acceptance of the material will be based on the use of a qualified product, the manufacturer's certification that the material supplied is the same as that approved and upon the results of such tests as may be performed by the engineer.

3.0 Mixture. Unless otherwise specified, rapid set concrete patching material shall be approved commercial mixtures meeting [Sections 3.1 – 3.1.3.](#) Rapid set concrete patching materials shall be specifically designed for the application needed.

JOB SPECIAL PROVISIONS (BRIDGE)

3.1 Commercial Mixtures. Rapid set concrete patching material in its sacked form and mixtures when properly prepared in accordance with the manufacturer's specifications, shall meet the minimum test requirements given in Table 1. Mixtures may be supplied, as required, as a patching mortar or as a patching mortar with aggregate extension. If the material is to be supplied with extender aggregate, this shall also pass the required tests in Table 1 using the maximum allowed amount of extender aggregate.

3.1.1 Mixture Requirements. Rapid set concrete patching material shall be single packaged dry mix requiring the addition of water or other liquid component just prior to mixing. The material shall not contain soluble chlorides as an ingredient of manufacture. The material shall be placed in accordance to the manufacturer's recommendations.

Table 1 (English Unit)				
Physical Test Property	Specification	Requirement for cementitious concrete	Requirement for polymer-modified concrete	Requirement for polymer concrete
Bond Strength by Slant Shear	ASTM C882/C928 ²	min. 1000 psi @ 24hrs.& min. 1500 psi @ 7 days	n/a	min. 1000 psi @ 24hrs.& min. 1500 psi @ 7 days
Linear Coefficient of Thermal Expansion ¹ (for bagged mortar only, without extension aggregate)	ASTM C531	n/a	n/a	4 – 8 X 10 ⁻⁶ in/in/deg F
Resistance to Rapid Freezing & Thawing	AASHTO T161 or ASTM C666	80% min. using Procedure B ³ (300 Cycles)	80% min. using Procedure B ³ (300 Cycles)	n/a
Compressive Strength	AASHTO T22 or ASTM C39	1500 psi @ 3 hr & 3000 psi @ 24 hr	1500 psi @ 3 hr & 3000 psi @ 24 hr	n/a
Rapid Chloride Permeability	AASHTO T277 or ASTM C1202	1000 coulombs @ 28 days	1000 coulombs @ 28 days	1000 coulombs @ 28 days
Length Change	AASHTO T 160 or ASTM C157	In water Storage (+0.15) In air storage (-0.15)	In water storage (+0.15) In air storage (-0.15)	n/a
Color		gray	gray	gray

¹ Not required for extended mixtures if the mortar passes this requirement.

² ASTM C882 shall be performed on non-water based materials. ASTM C928 shall be performed on water-based materials.

³ Procedure A may be used in lieu of Procedure B

3.1.2 Construction Requirements. The manufacturer shall provide with the bagged mixture, specifications for the mixing procedure, amount and kind of liquid to be added, and the amount of aggregate extension allowed, if any. All mixing, handling and curing practices recommended by the manufacturer shall be followed and will be considered a part of these specifications.

3.1.3 Removal from Qualified List. All mixtures shall be approved before use. Reoccurring failures of any mixture for any reason will be cause for removal from the qualified list.

3.2 Vertical Repair.. A qualified rapid set concrete patching material approved for vertical use may be used when specified on the plans and as approved by the engineer. The engineer will make field cylinders to verify the 1500 psi (10 MPa) minimum strength. The material shall adhere to the concrete surface without sagging.

3.3 Overhead Repair. A qualified rapid set concrete patching material approved for overhead use may be used when specified on the plans and as approved by the engineer. The material shall be placeable in layers of at least 1 inch on overhead applications without the use of formwork or anchoring devices. The material shall adhere to the concrete surface without sagging. The engineer will make field cylinders to verify the 1500 psi (10 MPa) minimum strength.

4.0 Construction Requirements.

4.1 Mixing. Rapid set concrete patching material shall be mixed and finished according to the manufacturer's recommendation.

4.2 Preparation of Repair Area. Deteriorated, damaged or defective concrete as shown on the plans, required by the specifications or as directed by the engineer, shall be removed. All exposed reinforcement shall be thoroughly cleaned as shown on the plans, required by the specifications or as directed by the engineer. Unless otherwise specified by the commercial mixture manufacturer, the existing surface shall be damp and all free water shall be removed prior to placement of the required material.

4.3 Bonding Agent. A bonding agent may be used if recommended by the rapid set concrete patching material manufacturer.

5.0 Method of Measurement. No measurement will be made for rapid set concrete patching material.

6.0 Basis of Payment. Rapid set concrete patching material will be paid for at the contract unit price for other items and will be considered full compensation for all labor, equipment and material to complete the described work.

D. FORM LINERS

1.0 Description. This work item shall consist of constructing the form liner aesthetic treatment on cast-in-place concrete curbs as shown on the plans and described in this special provision.

2.0 Materials.

2.1 Shop Drawings. Contractor shall provide complete shop drawings of all aesthetic treatments.

2.2 Formwork. Formwork for aesthetic treatment of the cast-in-place concrete curb shall be a type that produces uniform results consistent in both, pattern and depth of relief with the project design aesthetics. The contractor shall be responsible to coordinate the aesthetic treatments of all components to meet the design aesthetic criteria described herein and as shown on plans. No mixing of pattern numbers or manufacturers will be permitted. The form liner pattern shall be one of the patterns listed on the plans or approved equal.

2.3 Form Ties. In surface areas receiving the aesthetic treatment form liner, all form ties shall be placed in the simulated stone surface. Form ties shall be fiberglass ties that shall hold the forms in the correct alignment. The color of the ties shall closely match the concrete wall color. Ties shall be ground flush with the surface of concrete prior to pressure washing.

2.4 Form Release Agent. Form release agents shall be the manufacturer's standard non-staining, non-petroleum based and compatible with surface sealer finish coating. Form release agents shall be applied to all surfaces of the form liner at the manufacturer's recommended rate.

2.5 Gaskets. Closed cell compressible neoprene of such thickness as is appropriate to assure leakage prevention shall be used to prevent joint leakage. One face shall be coated with an adhesive tape to assure proper positioning at the time of form closure. The neoprene shall be sufficiently compressible as to assure virtual "zero" separation of the forms as a result of the use of this product.

2.6 Aggregates.

2.6.1 Aggregate Source. The aggregate incorporated into the concrete mix of all aesthetic concrete bridge components shall be from the same source as the balance of the bridge concrete work. The purpose for this provision is to ensure uniformity of materials and color once areas are pressure washed and aggregates become exposed. Single-source shall be interpreted as one contiguous rock quarry, gravel pit or dredging location. This provision in no way alters the specification requirements for aggregate quality specified in other sections of the project specifications.

2.6.2 Aggregate Gradation. Concrete mixes supplied for the construction of the aesthetic treatments shall be in accordance with the following requirements. The concrete aggregate for the aesthetic treatment mix shall be Gradation E in accordance with [Sec 1005](#) for any areas where aesthetic treatment is formed monolithically with the structure. This requirement for aggregate size is necessary to permit concrete mixture to flow freely and fill completely into reveals and form liner proposed in the aesthetic treatment. Gradation E aggregate shall meet the aggregate source requirements.

2.7 Joint Materials. Bond breaker material shall be polyethylene tape, coated paper, metal foil or similar type materials. The backup material shall be compressible, non-shrink, non-reactive with the sealant and non-absorptive material type such as extruded butyl or polychloroprene foam rubber. The joint sealant shall be an elastomeric, multi-component sealant, in accordance with Federal Specification TT-S-227, Type II. The sealant color shall match the pressure washed concrete surface color.

3.0 Construction Requirements.

3.1 Reveals and Texture. All reveals and texture shall be continuous from element to element through construction joints and around corners. Techniques shall be utilized to ensure true continuous texture between separate elements. Sand blasting will not be permitted for cleaning concrete surface, as sand blasting will reduce the special surface texture specified. Pressure washing with water is the preferred method of removing laitance. Pressure washing cleaning shall provide a minimum pressure of 3000 psi at a rate of 3 to 4 gallons per minute (11.4 to 15.1 L/min) using a fan nozzle held perpendicular to the surface at a distance of 2 to 3 feet. The completed surface shall be free of blemishes, discolorations, surface voids and conspicuous form marks to the satisfaction of the engineer.

3.2 Sample Test Panels. Sample test panels shall be constructed to demonstrate the contractor's workmanship for all form liner textures and patterns as shown on the plans. The sample test panels may also be used for demonstration special surface finish if approved by the engineer. The architectural surface treatment of the finished work shall achieve the same final effect as demonstrated on the approved sample test panels. The materials used in construction of the sample test panels shall be in accordance with all standards as listed in this specification and the plans. The concrete mix shall be consistent with the project specifications and criteria. The minimum size of the sample test panels shall be 6 x 6 feet x 8 inches. The form liner finish shall be demonstrated in a vertical strip covering one-half to three-quarters of the sample test panel(s).

3.3 Patches. Holes and defects in concrete surface shall be filled within 48 hours of when the forms are removed. The same patching materials and techniques shall be used that were approved on sample test panels. The patches shall be made with a stiff mortar made with the same material sources as the concrete. The mortar mix proportions shall be adjusted so the dry patch matches the dry adjacent concrete. White cement shall be added to the mortar mix if necessary to lighten the mortar mix.

3.4 Joints. Joints shall be sealed when the sealant, air and concrete temperatures are above 40°F. Joints shall be primed and filled flush with joint sealant in accordance with the manufacturer's recommendation. All construction control and expansion joints shall occur within the vertical joints as shown in the elevation views on the plans. All vertical expansion joints shall be filled with preformed fiber expansion joint filler covered with bond break tape and sealed with elastomeric, multi-component sealant.

4.0 Method of Measurement. Final measurement will not be made except for authorized changes during construction or where significant errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity.

4.1 Form Liners for Cast-In-Place Concrete. Measurement of form liners will be made to the nearest square yard.

5.0 Basis of Payment.

5.1 Form Liners for Cast-In-Place Concrete. Payment for form liners will be based on the contract plan quantities. Payment for the above described work, including all material, additional concrete, equipment, labor and any other incidental work necessary to complete this item, will be considered completely covered by the contract unit price for Form Liners. Any change in the contract plan quantities, based on approved change orders, will be paid for at the contract unit price.