

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

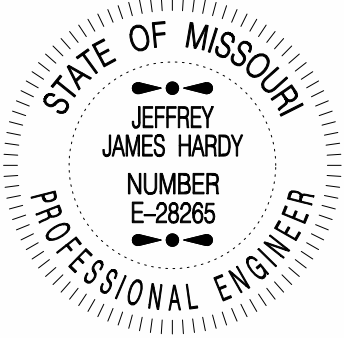
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Job No. J4I2371,
 J4I3012, and J4I3014
 Route I-35/I-70
 County: Jackson/Cass

 <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: J4I2371, J4I3012 COUNTY, MO DATE PREPARED: 01-16-13</p>
	<p>ADDENDUM DATE: R001 - 02-15-13 R002 - 02-19-13</p>
<p>Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,X,Y,Z,AA,BB,CC</p>	

<p>“THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.”</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: J4I3014 COUNTY, MO DATE PREPARED: 01-16-13</p>
	<p>ADDENDUM DATE: R001 - 02-15-13 R002 - 02-19-13</p>
<p>Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: A,B,C,D,E,F,H,I,J,K,M,N,Q,R,T,U,W,Y,CC</p>	

JOB
SPECIAL PROVISION

A. GENERAL - FEDERAL JSP-09-02

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.mo.gov under "Business With MoDOT". 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.mo.gov under "Business With MoDOT" "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to October 2009 Missouri Std. Plans
For Highway Construction

These supplemental bidding documents contain all current revisions to the bound printed 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. WORK ZONE TRAFFIC MANAGEMENT PLAN

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.

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, hours traffic control will be in place, and work hours.

2.2 The contractor shall notify the engineer prior to lane closures or shifting traffic onto detours. The contractor shall notify the engineer two weeks prior

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.

2.5.1 Traffic Delay. The contractor shall be responsible for maintaining the existing traffic flow through the job site during construction. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from occurring again.

2.5.2 Traffic Safety.

2.5.2.1 Where traffic queues routinely extend to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet (150 m) 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.

2.5.2.2 When a traffic queue extends to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet (150 m) 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 (300 m) and no more than 0.5 mile (0.8 km) in advance of the end of the traffic queue on divided highways and no less than 500 feet (150 m) and no more than 0.5 mile (0.8 km) in advance of the end of the traffic queue on undivided highways.

2.5.3 CMS boards shall be placed in advance of queued traffic to notify traffic of the construction traffic zone ahead and shall be immediately relocated if traffic queues are beyond the current CMS board location.

3.0 Work Hour Restrictions.

3.1 There are five major holiday periods: Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. All lanes shall be scheduled to be open to traffic during these holiday periods, from 12:00 noon on the last working day preceding the holiday until 9:00 a.m. on the first working day subsequent to the holiday.

3.2 The contractor shall not perform any construction operation on the roadway of mainline I-35 and I-70, 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 data indicates construction operations on the roadbed of I-35 and I-70 between the hours of 5 a.m. and 10 a.m. and between 3 p.m. and 7:30 p.m. Monday through Friday will likely result in traffic queues greater than 15 minutes. Based on this data the contractors operations will be restricted accordingly unless it can be successfully demonstrated that their operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

3.4 The contractor shall be aware that traffic data indicates construction operations on the roadbed of Rte 7 between the hours of 2 p.m. and 12 a.m. on Fridays and between 2 p.m. and 12 a.m. on Sundays from May 1st through September 30th will likely result in traffic queues greater than 15 minutes. Based on this data the contractors operations will be restricted accordingly unless it can be successfully demonstrated that their operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

3.5 Any work requiring a reduction in the number of through lanes of traffic 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.

3.6 Any weekend closures shall be completed from 7:30 p.m. Friday to 5:00 a.m. Monday.

4.0 Detours and Lane Closures.

4.1 The contractor shall provide changeable message signs notifying motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The changeable message sign shall be installed at a location as approved or directed by the engineer.

4.2 At least one lane of traffic in each direction on I-35/I-70 shall be maintained 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 halt traffic will be designated by the engineer.

4.3 During demolition of 12th St bridge (A1135) no work shall be permitted for the following bridges:

L0935 (I-70W over I-29)
 A1128 (Ramp from I-35 N to I-70 W)
 A1129 (Ramp from I-70 E to I-35 S)
 A0246 (US 71 N and I-670 E to I-70 W) and
 The closure of the I-35 N to I-70 E ramp

4.4 During the closure of the I-35 N to I-70 E ramp no work shall be permitted for the following bridges:

A0246 (US 71N and I-670 E to I-70W) and
 L0935 (I-70W over I-29)

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.

C. 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 Troop A (816-622-0800)			
City of Kansas City, MO	City of Kansas City, KS	City of N. Kansas City, MO	City of Harrisonville, MO
Fire: (816) 784-9200	Fire: (913) 573-5550	Fire: (816) 274-6025	Fire: (816) 380-8952
Central Patrol Police: (816) 234-5510	Police: (913) 573-6000	Police: (816) 274-6013	Police: (816) 380-8929

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.

D. PROJECT CONTACT FOR CONTRACTOR/BIDDER QUESTIONS

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

Jeff Hardy – P.E., Project Contact (J4I2371, J4I3012)
Kansas City District
600 NE Colburn Rd.
Lee’s Summit, MO 64086
Telephone Number 816-622-2266
e-mail Jeffrey.Hardy@modot.mo.gov

Allan Ludiker – P.E., Project Contact (J4I3014)
Kansas City District
600 NE Colburn Rd.
Lee’s Summit, MO 64086
Telephone Number 816-622-2267
e-mail Allan.Ludiker@modot.mo.gov

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

E. SUPPLEMENTAL REVISIONS JSP-09-01J

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 Section 409 of the Standard Specifications when the quantity exceeds 50,000 square yards for an individual project or any number of projects in the contract combination. 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.

$$A = B \times (2.01/2000) \times (D - E)$$

Where: A = adjustment for Seal Coat placed during the index period
B = square yards 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

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 Section 625 of the Standard Specifications when the quantity exceeds 10,000 gallons for an individual project or any number of projects in the contract combination. 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 Seal Coat Price Index. Failure by the bidder to execute the acceptance form will be interpreted to mean election to not participate in the Seal Coat 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 when the quantity exceeds 5,000 square yards. 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.

$$A=B \times (1.20/2000) \times (D - E)$$

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.

F. UTILITIES

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:

JACKSON COUNTY FACILITIES	
<u>Utility Company</u>	<u>Known Required Adjustment</u>
Mr. Reza Zonnooz KCMO Water Services Dept. 4800 E. 63rd Street Kansas City, MO 64130 (816) 513-0309	No
Paetec Communications 1011 Industrial Drive Jefferson City, MO 65109 (573) 636-7857	No
Mr. Roy Bellis Utility Coordination Time Warner Cable 8221 W. 119th Street Overland Park, KS 66213 (816) 215-8934	No
Mr. Brian Cornish Qwest, a CenturyLink Co.; and LightCore, a CenturyLink Co. 5454 West 110th Street Overland Park, KS 66211 (913) 345-7524	No
Mr. Jason Swan Kansas City Power & Light Co. 8325 N. Platte Purchase Drive Kansas City, MO 64118-1057 (816) 737-7777	No
Mr. Chris Collins Missouri Gas Energy 7500 E. 35th Street Kansas City, MO 64129 (816) 472-3413	No
Mr. P.J. McDermott AT&T Corporation (Transmission) 1425 Oak Street Kansas City, MO 64106 (816) 275-4014	No

Job No. J4I2371,
 J4I3012, and J4I3014
 Route I-35/I-70
 County: Jackson/Cass

Mr. Bryan Babcock Engineering Design AT&T Corporation (Distribution) 5400 Foxridge, Room 500 Mission, KS 66202 (913) 383-4934	No
Mr. Tom Reaves Sure West Communications 9647 Lackman Road Lenexa, KS 66219 (913) 322-9631	No

CASS COUNTY FACILITIES	
<u>Utility Company</u>	<u>Known Required Adjustment</u>
Mr. Ted Martin City of Harrisonville 300 E. Pearl Street P.O. Box 367 Harrisonville, MO 64701 (816) 380-8917	No
Mr. Rick Pinkman Osage Valley Electric Coop. Clinton Operations Superintendent P.O. Box 406 Clinton, MO 64735 (660) 885-4222	No
Mr. Keith Thomas Electric Division Superintendent City of Harrisonville 2108 Royal Street Harrisonville, MO 64071 (816) 380-8962	No
Mr. Brett Ramirez AT&T Corporation (Distribution) 5400 Foxridge, Room 500 Mission, KS 66202 (913) 383-4884	No

Mr. JaaFar Fahda Kansas City Power & Light Co. 215 Locust Hill Belton, MO 64012 (816) 737-7777	No
Cass County P.W.S.D. No. 4 22907 E 299 th Street Harrisonville, MO 64701 (816) 884-3282	No
Fidelity Communications Co. 64 North Clark St. Sullivan, MO 63080 (800) 392-8070	No
Mr. Brian Cornish CenturyLink; and LightCore, a CenturyLink Co. 5454 West 110th Street Overland Park, KS 66211 (913) 345-7524	No

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.

1.2 The contractor agrees that any effects of the presence of the utilities, their relocation, contractor's coordination of work with the utilities and any delay in utility relocation shall not be compensable as a suspension of work, extra work, a change in the work, as a differing site condition or otherwise including but, without limitation, delay, impact, incidental or consequential damages. The contractor's sole remedy for the effects of the presence of utilities, delay in their relocation or any other effects shall be an excusable delay as provided in Section 105.7.3. The contractor waives, for itself, its subcontractors and suppliers the compensability of the presence of utilities, delay in their relocation and any cost to the contractor, it's subcontractors and suppliers in any claim or action arising out of or in relation to the work under the contract.

1.3 The contractor shall be solely responsible and liable for incidental and consequential damage to any utility facilities or interruption of the service caused by it or its subcontractors operation. The contractor shall hold and save harmless the Commission from damages to any utility facilities interruption of service by it or it's subcontractor's operation.

2.0 It shall be noted by the contractor that MoDOT is a member of Missouri One Call (800 Dig Rite). Some work on this project may be in the vicinity of MoDOT utility facilities, which includes but is not limited to traffic signal cables, highway lighting circuits, ITS cables, cathodic protection cables, etc. Prior to beginning work, the contractor shall request locates from Missouri One Call. The contractor shall also complete the Notice of Intent to Perform Work form located at the Missouri Department of Transportation website:

<http://www.modot.mo.gov/asp/intentToWork.shtml>

The contractor shall submit the form over the web (preferred method) or by fax to the numbers on the printed form. The notice must be submitted a minimum of 2 and a maximum of 10 working days prior to excavation just as Missouri One Call requires.

G. LIQUIDATED DAMAGES SPECIFIED

1.0 Description. If any work on I-35/I-70 requiring a lane reduction or lane restriction beyond the proposed traffic control for stages 1 and 2 in project J4I2371 or for Bridge closure of L0935 in project J4I3012, as specified elsewhere in the provisions, is not complete and open to traffic prior to the work hours as stipulated, 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 delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$5,000 per 15 minutes** for the first 15 minute increment, **\$10,000** for each **15 minute** increment thereafter for each full 15 minutes, for a maximum of **\$35,000 per hour** for each **full hour** thereafter that I-35/I-70 is 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 excess closure time.

If any work not completed within calendar days for bridges L0936 and L0248 in project J4I3012 or bridges L0298 and A0806 in project J4I3014, or if any work not completed within weekend hours for bridges A1128, A1129, and A0246, as specified elsewhere in the provisions, is not complete and open to traffic prior to the work hours as stipulated, 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 delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$2,500 per 15 minutes** for the first 15 minute increment, **\$5,000** for each **15 minute** increment thereafter for each full 15 minutes, for a maximum of **\$15,000 per hour** for each **full hour** thereafter that I-35/I-70 is 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 excess closure time.

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

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
- (b) Liquidated damages will be assessed for Saturdays, Sundays and Holidays.

1 **REVISED** I. TIME FOR COMPLETION OF THE WORK

1.0 Description. Completion of this project shall be in accordance with Sec 108.7 and will be administered on both a calendar date completion basis and by calendar days completion basis.

1.1 Regardless of when the work is begun on this project, 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.

Completion Date: December 31, 2013.

1.2 In addition, calendar days for the completion of projects J4I2371 and J4I3012, and the partial closures from J4I3014 have been established. The count of calendar days will start on the date the contractor starts any construction operations. All work shall be completed within the calendar days specified below. Completion of the work by calendar days shall be in accordance with the requirements of Sec 108.7. **Weekend closures are defined in Job Special Provision B. Work Zone Traffic Management Plan.**

Project	Calendar Days
J4I2371	72
J4I3012 – L0935	46 21
J4I3012 – L0936	70
J4I3012 – L0248	20 25
J4I3014 – A0806	20
J4I3014 – A0298	20
	Weekend Closures
J4I3014 – A1128	3 6 (WEEKEND CLOSURE)
J4I3014 – A1129	3 6 (WEEKEND CLOSURE)
J4I3014 – A0246	7 14 (WEEKEND CLOSURE)

1.3 Should the contractor, or in case of default, the surety, fail to complete the work within the above specified calendar days or the completion date, whichever occurs first, a deduction of the amount shown below will be made for each day that the project remains uncompleted in accordance with the requirements of Sec 108.8. These damages are in addition to any other damages as specified elsewhere in this contract.

Project	Liquidated Damages per Day
J4I2371	\$34,000
J4I3012 – L0935	\$34,000
J4I3012 – L0936	\$15,000
J4I3012 – L0248	\$15,000
J4I3014 – A0806	\$15,000
J4I3014 – A0298	\$15,000
J4I3014 – A0246	\$15,000
J4I3014 – A1128	\$15,000
J4I3014 – A1129	\$15,000

1.4 If all Work is not complete prior to the specified overall contract completion date, the contractor will be charged with an overall liquidated damage specified in the amount of **\$2,025** per day for each full day that the Work is not fully completed. This damage will be assessed independently of the liquidated damages (per project) as specified above.

J. COOPERATION BETWEEN CONTRACTORS

1.0 This contract is one of several projects essential to the overall improvements in the downtown loop and along I-35/I-70. Other area projects that will be under construction during this project are:

- Jackson, I-35, J4I3016, Bridge Replacement at 12th Street
- Jackson, I-35, J4I2012, Bridge Rehabilitation at 23rd Street
- Cass, MO 7, J4P2359, Pavement Improvements from I-49 to Cass County Line

K. ACCELERATING THE COMPLETION OF CLOSURE WORK (Incentive/Disincentive Clause) (J4I2371)

1.0 **Description.** This provision contains modifications to the standard specifications for accelerating the construction for Bridges L07816 and L07817 rehabilitation and to minimize the closure or lane restriction time on: any traffic lanes for I-35 southbound and northbound, any traffic lanes for I-70 eastbound and westbound, and access to any interchange entrance or exit ramps.

1.1 Unless otherwise stated, specification section references are to the Missouri Standard Specifications for Highway Construction and its supplements in effect at the time of this contract.

2.0 **Definition of Terms.**

2.1 For this project the following terms are used as defined below:

- (a) Closure Time

Closure time is defined as any day or other unit of time, including Saturdays, Sundays and legal holidays, when any lane is closed or lane restriction to traffic on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound due to the contractor's operations.

Under no circumstances will the closure time bid be allowed to extend actual closure of any lane or lane restriction to traffic on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound due to the contractor's operations beyond December 31, 2013 or 45 calendar days whichever occurs first.

(b) Average Daily Road-User Cost

The amount shown in the bid, determined by the Commission, that interference and inconvenience to highway traffic will cost the road-users for each unit of time for any lane closure or lane restriction to traffic on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound. The average daily road-user cost cannot be changed by the bidder. Bidder and its surety stipulate to the reasonableness and accuracy of that amount and expressly waive any right they may have to contest that amount in any claim, litigation or otherwise.

The road user costs are as follows:

2 ADDED

- Any lane closure or lane restriction on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound...**\$10,000 per Calendar Day**

(c) Contract Amount

The total amount bid for all items of work to be performed by the contractor. This amount is the summation of the products of the approximate quantities shown in the bid schedule multiplied by the contract unit price. The contract amount does not include the amount produced by this acceleration of work clause.

2 DELETED

~~2.2 Maximum Days for Closures or Lane Restrictions. The maximum calendar days that the contractor may bid for closures or lane restrictions shall be as follows:~~

- ~~The sum of calendar days for all closures or lane restrictions on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound...**14 Calendar Days**~~

3.0 Preparation of Bid.

3.1 In addition to the requirements of Sec 102.7, the bidder shall specify in the bid the closure time which it determines is required to complete the work. The bidder shall show the product of the closure time and the average daily road-user cost in the amount column provided for that purpose. This amount will be added to the contract amount. The sum will be read as the bid total.

3.2 A bidder may alter or correct the units of closure time entered in the bid, provided the bidder follows the same requirements set forth for altering or correcting bid prices in Sec 102.7.1.

4.0 Bid Guaranty. For this project the amount of guaranty required by Sec 102.9 shall be not less than five percent of the contract amount as defined above.

5.0 Award and Execution of Contract. Delete Sec 103.1 and substitute the following:

5.1 Consideration of Bids. After the bids are opened and the bid totals read, they will be compared on the basis of the contract amount, to which has been added the product of the closure time submitted by the bidder and the average daily road-user cost shown in the bid. This total amount will be used to determine the lowest responsive and responsible bid for the project. The Commission reserves the right to reject any and all bids including those which, in the sole judgment of the Commission, contain too few or too many units of closure time.

6.0 Prosecution and Progress.

6.1 Subletting of Contract. For this project the total contract cost referred to in Sec 108.1.1 shall be considered as the summation of the products of the approximate quantities shown in the bid schedule multiplied by the contract unit price.

6.2 Prosecution of Work. Assessment of closure time will begin on the first day of any lane closure or lane restriction on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound.

6.2.1 Prior to beginning work causing lane closure, the engineer may require the contractor to submit a schedule and written narrative for the lane closure work. The schedule shall be provided in accordance with Sec 108.4, or by the Critical Path Method if that is the schedule method specified by the contract. This schedule is required to reflect the effect of all constraints on the lane closure work.

6.2.2 This schedule requirement is in addition to any other schedule requirement of the contract. The cost for this requirement will be considered fully covered by the contract prices for the lane closure work.

6.3 Liquidated Damages for Failure or Delay in Completing Work on Time. Sec 108.8 is modified as follows:

6.3.1 If the contractor fails to complete all work necessary to have all lanes of traffic open on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound in the closure time specified by the bidder or fails to restore traffic on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound to normal traffic the next calendar day after December 31, 2013, the amount shown in the bid as average road-user cost per day will be deducted from the contractor's payment for each unit of closure time, including Saturdays, Sundays and legal holidays more than the closure time bid or after December 31, 2013 until such time as all lanes of southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound are opened to traffic.

6.3.2 This deduction will be made as liquidated damages from any money due or to become due to the contractor under the contract. The contractor and surety shall be liable for any liquidated damages assessed in excess of any amount due the contractor.

6.3.3 This deduction will continue until such time as all lanes of southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound are open to traffic. Liquidated damages as described elsewhere in the contract will be assessed on any work, excluding construction of Bridges L07816 and L07817 rehabilitation, if not complete by December 31, 2013.

6.4 Credit for Completion of Work Ahead of Time. If the contractor completes all work required and has all lanes of traffic opened on southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound in less than the closure time specified by the bidder, the amount shown in the bid as average road-user cost per day will be added to the contractor's payment for each unit of closure time, including Saturdays, Sundays and legal holidays less than the closure time specified in the bid.

6.4.1 Computation of this payment will begin on the first full unit of closure time that all lanes of southbound Route 9 entrance ramp, I-35 southbound and northbound, or I-70 eastbound and westbound are opened to traffic. This credit will be added to the amount of money due or to become due the contractor under the contract. The total amount of this credit shall not exceed...**\$140,000.**

6.4.2 An extension of the closure time may be granted for changes in the work as specified in Sec 104.3 or for excusable, non-compensable and compensable delays as specified in Sec 108.14 only to the extent, as determined by the engineer, they actually affect the then major item of work or the critical path of the work.

6.4.3 In the event of an excusable delay, an extension of the closure time specified by the bidder will not be made for determining any liquidated savings or incentive payment. Further, in the event of an excusable delay, if the contractor completes the work within the closure time specified by the bidder, that shall not constitute a basis to claim acceleration costs in addition to the liquidated savings or incentive that may be earned.

7.0 Measurement and Payment. Sec 109.2 is supplemented by the following:

7.1 Scope of Payment. The average daily road-user cost, shown in the bid, will be used only for bid comparisons and as a deduction from money due the contractor in accordance with section 6.3, "Liquidated Damages for Failure or Delay in Completing Work on Time", or as a credit for additional money due the contractor in accordance with section 6.4, "Credit for Completion of Work Ahead of Time", and for no other purpose.

L. QUALITY MANAGEMENT

1.0 Quality Management. The contractor shall provide Quality Management to ensure the project work and materials meets or exceeds all contract requirements as specified herein.

1.1 The contractor shall provide all Quality Control (QC) of the work and material. QC staff shall hold the primary responsibility for ensuring all work and material is in compliance with contract requirements. QC staff shall perform and document all inspection and testing. The QC inspectors may be contractor employees or the contractor may utilize a third party.

1.2 The engineer will provide Quality Assurance (QA) inspection. The role of QA is to verify the performance of the QC.

1.3 The contractor shall designate a person to serve as the project Quality Manager (QM). At a minimum the QM shall be responsible for the implementation of the Quality Management Plan and shall oversee all QC activities. The QM shall be the point of contact for all quality related issues and needs.

2.0 Quality Management Plan. The contractor shall develop, implement and maintain a Quality Management Plan (QMP) that will ensure the project quality meets or exceeds all contract requirements, and provides a record of acceptance of the work and material. The QMP shall address all QC inspection and test requirements of the on-site construction work. Revisions to the QMP will require approval from the engineer.

2.1 Physical work on the project shall not begin prior to the contractor obtaining approval from the engineer for the QMP. The approved QMP shall be considered a contract document.

2.2 The contractor shall establish a Document Control Procedure. This procedure will describe the project file structure for all documents required in the QMP, including a file naming system and folder structure. The document storage shall be an electronic format that allows quick access to all documents. A secure web based document sharing application such as SharePoint, or an approved project management software, may be used as a storage and retrieval system for the project files. The contractor shall provide the engineer with access to project records at all times.

2.3 The following items shall be included in the Quality Management Plan:

- a) General organizational structure of the contractor's production and QC staff.
- b) Name, qualifications and job duties of the Quality Manager and all QC inspectors.
- c) A procedure describing QC Inspections as outlined in Section 3.0.
- d) A procedure describing QC Testing as outlined in Section 4.0.
- e) A procedure describing Material Receiving as outlined in Section 5.0.
- f) A Document Control Procedure as described in Section 2.2.
- g) A procedure for Non-Conforming and Deficient work, and Corrective Action Requests, as described in Section 8.0.
- h) A list of work items that will be sub-contracted and the QC personnel who will be responsible for inspection and testing of the sub-contracted work.
- i) A list of QA Hold Points and a procedure for addressing any issues found during the QA Hold Point inspections.
- j) A list of QC Hold Points and a procedure for addressing any issues found during the QC Hold Point inspections.

- k) A procedure for making revisions to the QMP.
- l) References to specific applicable QC Plans such as asphaltic concrete pavement or Portland cement concrete pavement.
- m) A proposed independent third party company name, address and phone number for dispute resolution as described in Section 4.3.
- n) Any approved changes to the standard forms provided by MoDOT.
- o) Format for the Weekly Schedule and Work Plans as described in Section 9.0.
- p) A procedure for project closeout, including a Quality Documentation Audit that verifies all project documentation is accurate and complete.

3.0 Quality Control Inspections. The QMP shall identify a procedure for performing QC inspections. QC inspections shall be performed for all on-site work per the project Inspection & Test Plan (ITP). The engineer will provide a standard ITP that may be modified to a project-specific ITP, as approved by the engineer.

3.1 Standard inspection checklists and reports will be provided by the engineer. The contractor may use alternate versions as approved by the engineer. Each day the contractor shall completely fill out an inspection checklist and any required test reports for each element of work. Completed inspection checklists and associated test reports shall be submitted electronically to the engineer within 12 hours of completion of a shift.

3.2 QC inspection and testing for sub-contract work may be performed by certified staff from the contractor, sub-contractor, or a third party.

3.3 External fabrication of materials does not require further QC inspection if the product is currently under MoDOT inspection or an approved QC/QA program.

3.4 All Surveying and Staking shall be completed by the contractor in accordance with Sec 627 except as specified herein. Payment for surveying and staking will only be made when a pay item is provided in the contract. If no pay item is provided, all costs associated with surveying and staking shall be considered included in the cost of other bid items.

4.0 Quality Control Testing. The QMP shall identify a procedure for QC testing. The procedure shall ensure that testing is performed at the frequencies shown in the Inspection and Test Plan. Results shall be recorded on the standard test reports provided by the engineer, or in a format approved by the engineer. Any test data required in the standard test reports shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report.

4.1 The contractor shall ensure that all personnel who perform sampling and/or testing are certified by the MoDOT Technician Certification Program or a certification program that has been approved by MoDOT for the sampling and testing they perform.

4.2 Any QC personnel determined in sole discretion of the engineer to be incompetent, derelict in their duties, or dishonest, shall at a minimum, be removed from the project. Further investigation will follow with a stop work notification to be issued until the contractor submits a corrective action report that meets the approval of the engineer.

4.3 An independent third party shall be used to resolve any significant disputes over discrepancies between QC and QA test results. All testing shall be performed by an approved laboratory that is AASHTO Accreditation Program certified in the area of the test, if applicable. The contractor shall be responsible for the cost if the third party test verifies that the QA test was accurate. The Commission shall be responsible for the cost if the third party test verifies that the QC test was accurate.

5.0 Material Receiving. The QMP shall identify a procedure for performing material receiving. Standard material receiving forms will be provided by the engineer. The procedure shall address inspections for all material delivered to the site (excluding testable material such as concrete, asphalt, aggregate, etc.) for general condition of the material at the time it is delivered. The material receiving procedure shall record markings and accompanying documentation indicating the material is MoDOT accepted material (MoDOT-OK Stamp, PAL tags, material certifications, etc.).

5.1 All required material documentation must be present at the time of delivery. If the contractor is unable to determine whether the material is accepted, the engineer shall be notified prior to incorporation of the material into the work. Material receiving reports shall be submitted to the engineer electronically no later than the morning following the delivery.

6.0 Quality Assurance. The engineer will perform Quality Assurance inspections (QA) for contract compliance on the contractor's performance and QC process. The frequency of the QA Inspections will be as shown in the ITP, but may be more frequent at the discretion of the engineer. The engineer will record the results of the QA inspections in the SiteManager system.

6.1 The QM will be notified of any nonconforming work identified by QA.

6.2 QA inspection and test results may not be used as a substitute for QC inspection and testing.

6.3 QA staff will be available for Hold Point inspections at the times planned in the Weekly Schedule. The inspections may be re-scheduled as needed, but a minimum 24-hour advance notification from the contractor is required unless otherwise approved by the engineer.

7.0 Hold Points. Hold Points are events that require approval prior to continuation of work. Hold Points occur at definable stages of work or progress phases when the succeeding work depends on acceptance of the preceding work. QC staff shall provide completed Daily Inspection Reports, Inspection Checklists, and Material Test Reports to QA staff prior to all QA Hold Points.

7.1 QC Hold points are established by the QM for compliance verification prior to QA Hold Points. QC Hold points typically occur at more frequent stages than the QA Hold Points. At a minimum, a QC Hold Point inspection shall occur just prior to each QA Hold Point inspection.

7.2 A list of minimum QA Hold Points will be provided by the engineer. The engineer may make changes to the QA Hold Point list at any time. Following a QA Hold Point inspection, all issues identified by the engineer shall be corrected prior to continuing work and a new hold point shall be scheduled.

8.0 Non-Conforming and Deficient Work. Non-conforming work is defined as completed work that does not meet the contract requirements. Deficient work is defined as in-progress work that does not meet the contract requirements. The contractor shall establish a procedure for the identification, tracking, resolution, and time requirements for addressing non-conforming and deficient work. The engineer shall approve the resolution of all non-conforming work. Either the engineer or the contractor may identify non-conforming or deficient work.

8.1 Corrective Action Requests are issued by QA or QC for recurring non-conforming or deficient work. The contractor shall establish a procedure for tracking the corrective action from issuance of the request to implementation of the solution. The engineer shall approve the corrective action. The contractor shall notify the engineer after the approved corrective action has been implemented.

9.0 Work Planning and Scheduling. The contractor shall include Quality Management in all aspects of the work planning. Aspects of the Work Plan should include a safety plan, size of crew, equipment, material, work sequence, quality control, and hold points for inspection.

9.1 A Weekly Schedule shall be provided to the engineer each week. This schedule shall include all planned work activities and hold points for the following two-week period. Other routine items that should be included in this schedule are: planned quantity of materials, identification of new activities, planned delivery dates, traffic control events, and any other pertinent information.

9.2 A Work Plan and pre-activity meeting is required prior to the start of each new activity. The purpose of this meeting is to plan for all aspects of the new activity and incorporate quality control into the process. A Work Plan shall be submitted to the engineer for review prior to the pre-activity meeting. The QM will develop a QC inspection checklist for the new activity and include it in the Work Plan. QC, QA, and production staff should all be present at all pre-activity meetings.

10.0 Standard Forms, Checklists, and Reports. Documents referenced in this provision such as the standard Inspection and Test Plan, Inspection Checklists, inspection/test reports, and minimum QA Hold Points can be obtained online at the following link: <http://www.modot.org/quality> .

11.0 Basis of Payment. Payment for any costs associated with developing, implementing and maintaining the QMP, providing Quality Control inspection and testing, and all costs associated with this provision will be considered included in the unit price of each contract item. No direct pay will be made for this provision.

M. SAFETY PLAN

1.0 Description. This contractor shall submit to the engineer a project Safety Plan (SP) for all work performed by the contractor and all subcontractors. The purpose of the SP is to encourage and enable all work to be performed in the safest possible manner and that all parties involved are aware of their individual responsibility for safety on the jobsite.

1.1 The SP shall be completed by the contractor and provided to the engineer prior to the beginning of any construction activity or phase on the project.

1.2 The contractor shall designate a person to serve as Project Safety Manager (PSM). The PSM shall be responsible for implementing and overseeing the SP. The PSM is not required to be present on the project at all times, but must be available to address safety issues and needs.

1.3 The PSM shall make revisions to the SP as necessary. Any new project activities or phases shall be included in the SP prior to work beginning on that activity or phase.

1.4 An example Safety Plan is available at:

http://www.modot.mo.gov/business/contractor_resources/bid_opening_info/bidGenInfo.shtml

1.5 The contractor is advised that there is Lead Chromium Paint on the existing bridge L0781. The contractor shall be responsible for proper handling, disposal and PPE requirements associated with the paint.

2.0 Emergency Preparedness. The SP shall outline and detail for all workers, the specific procedures and actions necessary to respond to a jobsite emergency and the measures taken to communicate these requirements to all workers.

2.1 The SP shall include a list of local emergency contacts including phone numbers. A copy of the emergency contact list shall be accessible to workers.

2.2 In the case where there is no cellular or land line phone service at the jobsite, the SP shall identify how to reach the nearest available phone service.

3.0 Project Safety Analysis. The SP should contain a basic Project Safety Analysis (PSA) that outlines the actions necessary to complete each activity or phase of the project. The SP shall include a general description of the primary activities or steps required to safely complete the project.

3.1 Each activity should also include a general description of the work involved along with the known risks associated with the activity. In addition the PSA should outline the controls for those risks, including any Personal Protection Equipment (PPE) requirements for that activity or phase, and whether or not the activity or phase requires a specific safety meeting prior to beginning the activity or phase.

3.2 Submittal of the PSA for all activities or phases is not required with the initial submittal of the SP; however, the PSA for each activity or phase shall be completed prior to the beginning of that activity or phase.

4.0 Safety Meetings. The SP shall include the types of safety meetings that will be required of and conducted by the contractor.

5.0 Safety Training. The SP shall identify the required safety training provided to the contractor's personnel. The contractor shall require that the appropriate safety training for the contractor's personnel is completed prior to the beginning of work on each activity or phase.

5.1 The SP shall identify the recommended safety training needs and PPE for MoDOT employees who will be exposed to the work activities. MoDOT will provide safety training and PPE to MoDOT employees based on MoDOT safety policies.

6.0 Payment. There will be no direct payment for compliance with this Safety Plan provision.

N. BONDED ASPHALTIC CONCRETE PAVEMENT (J4I2371)

1.0 Description. This work shall consist of the placement a Polymer Modified Emulsion Membrane prior to a bituminous overlay of hot asphaltic concrete pavement. The Polymer Modified Emulsion Membrane shall be spray applied immediately prior to the application of the hot asphaltic concrete pavement so as to produce a homogeneous surface in accordance with Section 403 of the Standard Specifications.

2.0 Materials. The Polymer Modified Emulsion Membrane shall be in accordance with Section 1015.20.6.2 of the Standard Specifications.

3.0 Construction Requirements. The asphaltic concrete pavement shall be placed in accordance with Section 403 of the Standard Specification, except as modified herein.

4.0 Equipment. No wheel, track or other part of the paving machine shall come in contact with the Polymer Modified Emulsion Membrane before the asphaltic concrete pavement mixture is applied.

5.0 Application of Polymer Modified Emulsion Membrane. The Polymer Modified Emulsion Membrane shall be sprayed at a temperature of 120 - 180°F or as recommended by the Polymer Modified Asphalt Emulsion Membrane supplier. The sprayer shall accurately and continuously monitor the rate of spray and provide a uniform application across the entire width to be overlaid. The Engineer may make adjustments to the spray rate based upon the existing pavement surface conditions and the recommendations of the Polymer Modified Emulsion Membrane supplier. The application rate of the Polymer Modified Emulsion Membrane shall be verified by dividing the volume (of Polymer Modified Emulsion Membrane used) by the area of paving for that day. No tire or other part of the hauling equipment shall come in contact with the Polymer Modified Emulsion Membrane before placement of the asphaltic concrete by the paver.

6.0 Method of Measurement. Measurement of the Polymer Modified Emulsion Membrane shall be based on the volume in gallons in accordance with Section 1015 of the Standard Specifications. If water is added to asphalt emulsion, the quantity to be paid for will be determined prior to the addition of water.

7.0 Basis of Payment. The accepted quantity of Polymer Modified Emulsion Membrane shall be paid for at the contract unit price. No direct payment will be made for water added to the asphalt emulsion.

O. OPTIONAL PAVEMENTS (TEMPORARY)(J4I2371)

1.0 Description. This work shall consist of a pavement composed of either Portland cement concrete or asphaltic concrete constructed on a prepared subgrade. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 The quantities shown reflect the total square yards of pavement surface designated for each pavement type as computed and shown on the plans.

2.1 No additional payment will be made for asphaltic concrete mix quantities to construct the required 1:1 slope along the edge of the pavement.

2.2 No additional payment will be made for aggregate base quantities outside the limits of the final surface area as computed and shown on the plans. When A2 shoulders are specified, payment for aggregate base will be as shown on the plans.

2.3 The grading shown on the plans was designed for the either pavement option. For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional pavements.

2.4 The contractor shall comply with Sections 401 through 403 for the asphalt option and Sections 501 and 502 for the concrete option.

2.5 Pavement options composed of Portland cement concrete shall have contrast pavement marking for intermittent markings (skips), dotted lines, and solid intersection lane lines. The pavement markings shall be in accordance with Section 620. No additional payment will be made for the contrast pavement markings.

3.0 Method of Measurement. The quantities of concrete pavement will be measured in accordance with Section 502.14. The quantities of asphaltic concrete pavement will be measured in accordance with Section 403.22.

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 403-99.05, OPTIONAL PAVEMENT (TEMPORARY), per square yard.

4.1 For projects with previously graded roadbeds, any additional quantities required to bring the roadway subgrade to the proper elevation will be considered completely covered by the pay item for Subgrading and Shouldering.

P. WET REFLECTIVE PAVEMENT MARKINGS JSP 08-06B

1.0 Description. This work shall consist of furnishing and installing wet reflective pavement markings as shown on the plans or as directed by the engineer. The pavement markings shall consist of pavement marking paint as specified in the plans, MoDOT Type P glass beads, and wet reflective pavement marking elements. The beads and wet reflective elements shall be placed as a double drop system to provide wet night retroreflectivity. This work shall be in accordance with Sec 620 and accompanying provisions except as modified herein

2.0 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows.

<u>Item</u>	<u>Section</u>
Type P Drop-On Glass Beads	1048.40
Epoxy Pavement Marking Material	1048.60
High Build Acrylic Waterborne Pavement Marking Paint	1048.90

2.1 Wet Reflective Elements. The wet reflective elements used shall be from the following approved products list:

Manufacturer	Product
3M Inc.	All Weather Elements (Series 50 or 90)
Potters Industries, Inc.	Visimax
Swarco	Plus-9-Spots

3.0 Construction Requirements.

3.1 Application of the wet reflective marking shall consist of placement of the marking paint, followed by the application of Type P glass beads and the wet reflective elements. Manufactures recommendations shall be followed in the application of the wet reflective elements including, if applicable, the matching of bead colors with paint colors.

3.2 The width of the line shall be as shown on the plans.

3.3 The marking paint shall be applied at a minimum thickness as shown in the following chart. The thickness may be increased depending on manufacturer's recommendations to properly hold the bead system.

High Build Acrylic Waterborne Marking Paint	20 mils
Epoxy Pavement Marking Material	25 mils

3.4 Type P glass beads and the wet reflective elements shall be mechanically applied to the wet paint directly behind the paint spray guns. The order of application and the application rates of the Type P beads and the wet reflective elements shall be based on the manufacturer's recommendations to provide wet night retroreflectivity.

3.5 The completed pavement marking system shall meet the initial retroreflectivity requirements of Sec. 620.2.4.1.

3.6 The contractor shall assure the engineer that the wet reflective system has been calibrated for proper application according to manufacturers recommendations before the application begins.

4.0 Method of Measurement.

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

4.2 Where required, measurement of 4 inch, 6 inch, 8 inch or 24 inch pavement marking will be made to nearest linear foot. Where intermittent lines are specified, deductions will be made for the gaps in pavement marking.

5.0 Basis of Payment. The accepted quantity of wet reflective pavement markings will be paid at the contract unit price for each of the pay items included in the contract.

Q. GROOVING FOR PAVEMENT MARKING JSP-12-11

1.0 Description. This work shall consist of furnishing and installing a groove in the pavement for placement of pavement markings as shown on the plans or as directed by the engineer.

2.0 Construction Requirements.

2.1 The grooves shall be cut such that the surface of the groove is uniform with minimal variation in height.

2.2. The grooves shall be located where the final pavement marking will be placed according to the plans or as directed by the engineer.

2.3 The width of the grove shall be 7 inches.

2.4 The final depth of the groove shall be 80 mils, plus or minus 5 mils.

2.5 The groove shall be clean and dry before the installation of the pavement marking can begin.

2.6 All debris resulting from the installation of the grooves shall be removed and disposed of by the contractor.

3.0 Method of Measurement. Final measurement will not be made except for an authorized change during construction or where appreciable errors are found in the contract quantity. Where required, grooves will be measured separately and made to the nearest linear foot. The revision or correction will computed and added to or deducted from the contract quantity.

4.0 Basis of Payment. The accepted quantity of grooves will be paid for at the contract unit price per each of the pay items included in the contract. Payment will be considered full compensation for all labor, equipment, and material necessary to complete the described work, including loading, hauling, stockpiling and disposal of material; and any other incidental items

R. SEQUENTIAL FLASHING WARNING LIGHTS

1.0 Description. This specification covers the furnishing, installation and maintenance of Sequential Flashing Warning Lights for use on trim-line channelizer devices within the work zone taper.

2.0 Material.

2.1 Warning lights shall be in accordance with the MUTCD and ITE's 'Purchase Specification for Flashing and Steady-burn Warning Lights' and shall be considered a lightweight light per FHWA letter WZ-54. Warning lights shall consist of a single unit (head and housing), employ LED technology, and be equipped with tamper-proof mounting hardware.

2.2 Sequential Flashing Warning Lights (SFWL) shall have an On/Off switch. SFWL shall be capable of communicating through wireless technology. SFWL shall be able to be placed in any order and provide sequential lighting through the taper. If individual SFWL are not operating, the remaining SFWL shall be capable of providing sequential lighting through the taper.

2.3 Certification and Acceptance. The manufacturer shall provide written certification the SFWL provided comply with the requirements of this specification. Acceptance of SFWL will be by certification and any tests deemed necessary by the department for compliance with this specification.

3.0 Construction Requirements. This work shall be in accordance with Sec 616 and standard plan 616.10, and shall include all maintenance, including repair or replacement of non-functioning units.

4.0 Method of Measurement. Final measurement will not be made, except for authorized changes during construction or where appreciable errors are found in the contract quantity. Where required, measurement of SFWL will be made per each. The revision or correction will be computed and added to or deducted from the contract quantity. Replacement units shall not be counted in the final measurement.

5.0 Basis of Payment. The accepted quantity of SFWL will be paid for at the contract unit price for Sequential Flashing Warning Lights, Item No. 616-10.55, SEQUENTIAL FLASHING WARNING LIGHT, per each.

S. COLDMILLING REQUIREMENTS

1.0 Description. The contractor will only be allowed to coldmill an area in which the first lift of bituminous material can be constructed in the same day's operation.

1.1 Coldmilled areas that are exempt from the above requirement include typical transverse joint transitions for project beginning, end, ramp or bridge transitions and but joints for overlays at entrances and approaches.

1.2 All exempt coldmilled areas shall have a temporary header installed and maintained until the first lift of bituminous material can be constructed.

2.0 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 provision.

 **REVIS**ED T. TACK COAT

~~1.0 Polymerized Tack Coat, CRS2P shall be required for use in lieu of SS-1 or SS-1h for this project.~~

~~2.0 Quantities are based on a tacking rate of 0.10 gallon per square yard for areas designated as mill and fill. All or any of the tack may be overrun or underrun.~~

1.0 A polymer modified emulsion shall be required for the tack coat material used on this project and shall be applied at the same rate as stated on the typical sections or as directed by the Engineer.

2.0 Quantities are based on an application rate of 0.10 gallons per square yard (0.45 L/m²).

U. SEEDING, MULCHING, AND FERTILIZING

1.0 In accordance with the Standard Specifications, the Contractor shall apply the following to all disturbed areas at the rates specified:

All areas within 30 feet of the pavement will be seeded with the cool season mixture composed of the following:

145 lb/acre	Turf Type Tall Fescue
5 lb/acre	Kentucky Blue Grass

All areas within 30 feet of the pavement will be fertilized with the following mixtures as follows:

120 lb/acre	Nitrogen
100 lb/acre	Phosphorus
120 lb/acre	Potassium
500 lb/acre	Lime

Vegetative Mulch Embedment shall be applied in accordance with Section 802 to all permanent and.

2.0 Basis of Payment. All areas disturbed by the outside of the slope limits shall be seeded, mulched, and fertilized to these same specifications, at the contractor's expense. The accepted quantity of seeding will be paid for at the contract unit price. No direct payment will be made for liming, fertilizing, mulching or seedbed preparation.

V. PAVEMENT MARKING LOG

1.0 Description. The contractor shall log the locations of existing pavement marking prior to any construction operations that may affect the existing pavement marking. The log shall contain all existing pavement marking and shall include center stripes, no passing stripes, lane lines, turn arrows, hash bars, cross walks, and stop bars. The contractor shall provide a copy of the existing pavement marking log to the engineer. The contractor shall place the new pavement marking at the same locations as the existing pavement marking, unless otherwise directed by the engineer or shown on the plans.

2.0 Basis of Payment. No direct payment will be made for logging of existing pavement marking.

W. 28" GUARDRAIL

1.0 Description. This work shall consist of furnishing and installing guardrail as shown on the plans or as directed by the engineer.

2.0 Material. All materials shall conform to Sec 606.

3.0 Construction Requirements. The construction requirements shall conform to Sec 606.

4.0 Method of Measurement. The method of measurement shall conform to Sec 606.

5.0 Basis of Payment. Basis of payment shall conform to Sec 606. 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 606-99.02, 28" BRIDGE ANCHOR SECTION, 7 FT. OR 2335 MM POSTS, per EACH
- Item 606-99.02, 28" TRANSITION SECTION, 7.5 FT. POSTS, per EACH
- Item 606-99.02, 28" TRANSITION SECTION, 6.5 FT. POSTS, per EACH
- Item 606-99.02, 28" BRIDGE ANCHOR SECTION, 6.5 FT. POSTS (SAFTEY BARRIER CURB), per EACH
- Item 606-99.03, 28" GUARDRAIL TYPE A, 7 FT. POST, 3 FT.-1.5 IN. SPACING, per linear foot (LF)

X. AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE AND FINAL ACCEPTANCE OF CONSTRUCTED FACILITIES JSP-10-01

1.0 Description. The contractor shall comply with all laws pertaining to the Americans with Disabilities Act during construction of pedestrian facilities on public rights of way for this project. An ADA Post Construction 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 Post Construction Checklist. The contractor can locate the ADA Inspection Checklist form on the Missouri Department of Transportation website:

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

2.1 The 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: Americans with Disabilities Act Accessibility Guidelines (ADAAG), Draft Public Rights of Way Accessibility Guidelines (PROWAG), MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the Access Board.

2.2 It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize impacts that his equipment, subcontractors or general public may have on the tolerances as established in the checklist.

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 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.

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 ADAAG. When ADAAG does not give sufficient information to construct the contract work, the contractor shall refer to the Draft 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 Post Construction Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA Post Construction 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.

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 and detectible warning systems that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Post Construction Checklist, the contractor shall complete any necessary adjustments 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.

5.2 No direct payment will be made to the contractor to recover the cost of the equipment, labor, materials, or time required to provide an accessible signed detour during the various stages and locations of construction.

Y. ORDER OF WORK

1.0 The first order of work shall consist of constructing the signals on Rte 7 prior to shifting any traffic.

2.0 Basis Of Payment. No direct pay will be made for compliance with this special provision.

Z. FULL DEPTH PAVEMENT REPAIR AND ALL RELATED ITEMS FOR DROP INLET GRATE REPLACEMENT

1.0 Description. This work shall consist of all components required for full depth pavement repair as stated in the special sheet 2 of 2. These components include, but are not limited to, sawcuts, subgrade compaction, aggregate base, dowel bars, tie bars, curb, and pavement repair.

2.0 Method of Measurement. Measurement of Full Depth Pavement Repair and all Related Items will be made to the nearest 1/10 square yard.

3.0 Basis of Payment. The accepted quantity of Full Depth Pavement Repair and all Related Items will be paid for at the contract unit price for Item 613-99.05.

AA. REMOVAL AND RELOCATED SIGN

1.0 Description. The contractor shall be required to relocate an existing sign. The sign to be relocated is noted in the plans.

2.0 Material.

2.1 The contractor shall handle the sign with care in removing it from its present location, storing it and moving it back to the new location shown in the plans. The contractor shall be responsible for replacing any signs damaged or lost by reason of their negligence as determined by the engineer.

Job No. J412371,
J413012, and J413014
Route I-35/I-70
County: Jackson/Cass

2.2 The contractor shall furnish and install a footing, and breakaway assembly to reinstall the sign at the new location. Existing signs, post and mounting assembly should be retained. The existing footing is to be removed and disposed of.

3.0 Basis of Payment. All expenses incurred by the contractor by reason of their compliance with this provision shall be considered as completely covered by the unit prices bid for Item No. 903-12.40, "Breakaway Assembly", and Item No. 903-10.10, "Concrete Footings, Embedded".

BB. CONTRACTOR RETAINED GUARDRAIL

1.0 Description. All guardrail removed from this project shall become the property of the Contractor and shall be disposed of in accordance with Sec 202.

2.0 Basis of Payment. All costs incurred for complying with this provision shall be considered completely covered by the contract unit price for Item No. 202-20.10, Removal of Improvements.

CONTRACTOR: _____
ADDRESS: _____

Date:

To: Dan Niec
District Engineer
Missouri Department of Transportation
600 NE Colbern Road
Lees Summit, Missouri 64086

Subject: Construction
VAR. Routes, Jackson/Cass County
Job No. J413012
Contract I. D.:
Equipment and Materials List

We respectfully submit the attached list of proposed traffic signal items for your review and approval.

It is understood approval of this list does not constitute final acceptance nor in any way void sections of the specifications requiring sampling and testing of equipment and materials prior to final acceptance.

Furthermore, we understand none of these items are to be ordered nor any related construction work performed until this list has been approved in writing by your office.

Signature _____

Contractor

ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR ⁽¹⁾	CATALOG NUMBER OR DRAWING NUMBER ⁽¹⁾
----------	-------------	---	---

**REQUIRED INFORMATION
LIST OF EQUIPMENT & MATERIALS
PROPOSED FOR THIS PROJECT**

ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR ⁽¹⁾	CATALOG NUMBER OR DRAWING NUMBER ⁽¹⁾
----------	-------------	---	---

TRAFFIC SIGNALS:

902-02.13	Signal Head, Type 3S	_____	_____
	Signal Hardware	_____	_____
	Backplate	_____	_____
902-04.13	Signal Head, Type 3C	_____	_____
	Signal Hardware	_____	_____
	Backplate	_____	_____
902-04.14	Signal Head, Type 4C	_____	_____
	Signal Hardware	_____	_____
	Backplate	_____	_____
902-08.14	Signal Head, Type 1S	_____	_____
	Signal Hardware	_____	_____
	Backplate	_____	_____
902-42.81	NEMA Controller Assembly	_____	_____
	Cabinet and Backpanel Assembly	_____	_____
	NEMA Controller	_____	_____
	Conflict Monitor	_____	_____
	Loadswitch	_____	_____
	Flasher	_____	_____
	Flash Transfer Relay	_____	_____
	Surge Protector	_____	_____
	Controller Breaker ⁽⁶⁾	_____	_____
	Auxiliary Breaker ⁽⁶⁾	_____	_____
	Power Supply for Card Rack Detector	_____	_____
902-49.75	Video Detection System	_____	_____

ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR ⁽¹⁾	CATALOG NUMBER OR DRAWING NUMBER ⁽¹⁾
902-82.08	Cable, 8 AWG, 1c, Power ⁽²⁾	_____	_____
902-83.02	Cable, 12 AWG, 2c ⁽²⁾	_____	_____
902-83.11	Cable, 16 AWG, 7c ⁽²⁾	_____	_____
902-88.10	Pull Box, Preformed, Class 1	_____	_____

NOTES:

- (1) Contractor complete.
- (2) Indicate type of insulation on cable items. Certifications required for approval (see Standard Specifications).
- (3) See Standard Specification Section 1091.1 for preapproval requirements for lighting poles.
- (4) See Standard Specification Section 1092.2 for preapproval requirements for signal poles.
- (5) Certifications required for approval (see Standard Specifications).
- (6) Specification sheets required for approval (shop drawings required for fabricated items).

CONTRACTOR: _____

ADDRESS: _____

Date October 30, 2012

To: Dan Niec
 District Engineer
 Missouri Department of Transportation

Subject: Construction
 Route IS 70, JACKSON County
 Job No. J4I2371
 Equipment and Materials List

We respectfully submit the attached list of proposed (Highway Lighting) items for your review and approval.

It is understood approval of this list does not constitute final acceptance nor in any way void sections of the specifications requiring sampling and testing of equipment and materials prior to final acceptance.

Furthermore, we understand none of these items are to be ordered nor any related construction work performed until this list has been approved in writing by your office.

Signature _____

Contractor

REQUIRED INFORMATION LIST OF EQUIPMENT & MATERIALS PROPOSED FOR THIS PROJECT

ITEM NO.	DESCRIPTION	MANUFACTURER OR FABRICATOR ⁽¹⁾	CATALOG NUMBER OR DRAWING NUMBER ⁽¹⁾
HIGHWAY LIGHTING:			
9015010	TRENCHING TYPE I	_____	_____
9016110	"PULL BOX, PREFORMED CLASS 1"	_____	_____
9017002	"CABLE, 2 AWG 1 CONDUCTOR ⁽²⁾	_____	_____
9017008	"CABLE, 8 AWG 1 CONDUCTOR ⁽²⁾	_____	_____
9017202	"WIRE, 2 AWG, BARE NEUTRAL"	_____	_____
9017208	"WIRE, 8 AWG, BARE NEUTRAL"	_____	_____
9017401	"CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 2 AWG ⁽²⁾	_____	_____
	Splice Kit	_____	_____
9017404	"CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 6 AWG ⁽²⁾	_____	_____
	Splice Kit	_____	_____
9017407	"CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG ⁽²⁾	_____	_____
	Splice Kit	_____	_____

NOTES:

- ⁽¹⁾ Contractor Complete
- ⁽²⁾ Indicate type of insulation on cable items. Certifications required for approval (see Standard Specifications).
- ⁽³⁾ All documentation required by Standard Specification Section 901.4.1 must be submitted to the engineer for review and approval.
- ⁽⁴⁾ All documentation required by Standard Specification Section 902.4.3.3 must be submitted to the engineer for review and approval.
- ⁽⁵⁾ Certifications required for approval (see Standard Specifications).
- ⁽⁶⁾ Specification sheets required for approval (shop drawings required for fabricated items).




MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Melissa Neff-KC/de

COPY: ProjectWise

FROM: Frank Reichart 
Environmental Chemist

DATE: January 16, 2013

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route I-35
Job No. J4I3014
Bridges A-1128, A-1129, A-0806, A-0246, and A-0298
Jackson County

We are providing you with the results of the requested inspection on the above referenced properties. The inspection report contains an asbestos and a heavy metals survey, unless otherwise requested. The asbestos inspection included sample collection of suspect asbestos-containing material and National Voluntary Laboratory Accreditation Program (NVLAP) accredited testing to confirm the presence of asbestos. This asbestos and heavy metal paint report includes four different report forms. Form T746 lists all of the samples taken during the asbestos inspection. Form T747 shows only those samples that tested positive for Category I nonfriable asbestos-containing materials that may remain in the structure during demolition, if kept adequately wet to avoid visible air emissions. Form T748 shows only those samples that tested positive for asbestos and require removal prior to demolition. Form C760 lists all paint samples taken during the heavy metal paint survey and their metal content.

In accordance with the National Emissions Standard for Hazardous Air Pollutants (NESHAP), as well as city and county asbestos abatement regulations - Registration, Notification, and Performance Requirements, regulated asbestos-containing material (RACM) namely, Friable and Category II nonfriable, have a high probability of becoming friable under normal demolition forces. Practices and procedures for removal prior to demolition, disposal, and clearances should be in accordance with referenced regulations. Missouri Department of Transportation policy is to perform asbestos abatements in accordance with NESHAP.

In accordance with Missouri Department of Natural Resources' Technical Bulletin "Managing Construction and Demolition Waste" dated January 31, 2003, a heavy metal paint survey has been performed on the above referenced properties. We are providing you with the results of this survey. This survey includes locating painted concrete, block and/or brick surfaces, sampling/testing the painted surface(s) to determine if hazardous heavy metals are present. Non-hazardous painted concrete, blocks, or bricks may be used as clean fill materials, if properly

TO: Neff-KC/de
Page 2
January 16, 2013

handled. You must contact the Central Office Design Division for proper handling of the reported painted surfaces.

Although our survey included observing and sampling behind walls, above ceilings, beneath floors, etc., it is possible that potentially hidden asbestos-containing materials may exist within the structures. To our knowledge, we have located all suspect asbestos-containing and all painted concrete, block and brick surfaces. If suspect asbestos-containing materials or if painted concrete, block and/or brick surfaces are observed in addition to those reflected in this inspection report, then please advise us immediately so that we may schedule a follow-up inspection.

Should you have any questions regarding these reports, please contact me at (573) 526-4359.

db/dr

[http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared documents/asbestos/districts/kansas city \(kc\)/jxi's/j4i3014/fr1301161.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared/documents/asbestos/districts/kansas%20city%20(kc)/jxi's/j4i3014/fr1301161.docx)
Attachments

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
DATE OF SURVEY: January 8, 2013
PARCEL NO.: Bridge A-1128

SURVEYED BY: Frank Reichart *FR*
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: I-35NB ramp to I-70WB, Over I-35/I-70/UPRR
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
13MFJR 008	Asphalt Felt Material	Behind Curb Plates at Expansion Joints	N-ACM	
	Bridge Paint is not a suspect ACM per MSDS's on file.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable
NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report
 Nonfriable Asbestos-Containing Materials
 (Abatement not required if not made friable during demolition.)

ROUTE:	I-35	TESTED BY:	Frank Reichart
MODOT JOB NO.:	J413014	CERTIFICATION #:	7118010412MOIR11239
DISTRICT:	KC	SITE ADDRESS:	I-35NB ramp to I-70WB, Over I-35/I-70/UPRR
COUNTY:	Jackson	TYPE(S) OF STRUCTURE(S):	Bridge
DATE OF TESTS:	January 15, 2013		
PARCEL NO.:	Bridge A-1128		

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.
 INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
All materials requiring removal or special handling.

ROUTE: I-35
 MODOT JOB NO.: J413014
 DISTRICT: KC
 COUNTY: Jackson
 DATE OF TESTS: January 15, 2013
 PARCEL NO.: Bridge A-1128

TESTED BY: Frank Reichart *FR*
 CERTIFICATION #: 7118010412MOIR11239
 SITE ADDRESS: I-35NB ramp to I-70WB, Over I-35/I-70/UPRR
 TYPE(S) OF STRUCTURE(S): Bridge

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
SURVEYED BY: Frank Reichart
DATE OF SURVEY: January 8, 2013


TESTED BY: N/A
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-1128
SITE ADDRESS: I-35NB ramp to I-70WB, Over I-35/I-70/UPRR
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
	No samples taken. No painted surfaces located.								

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Asbestos Survey Report
All Suspect ACM

ROUTE: I-35
MODOT JOB NO.: J4I3014
DISTRICT: KC
COUNTY: Jackson
DATE OF SURVEY: January 8, 2013
PARCEL NO.: Bridge A-1129

SURVEYED BY: Frank Reichart 
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: I-70EB ramp to I-35SB, Over 8th Street/UPRR
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	No samples taken. No suspect ACM located.			
	Bridge Paint is not a suspect ACM per MSDS's on file.			

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
Nonfriable Asbestos-Containing Materials
(Abatement not required if not made friable during demolition.)

ROUTE: I-35 TESTED BY: Frank Reichart
MODOT JOB NO.: J413014 CERTIFICATION #: 7118010412MOIR11239
DISTRICT: KC SITE ADDRESS: I-70EB ramp to I-35SB, Over 8th Street/UJPRR
COUNTY: Jackson TYPE(S) OF STRUCTURE(S): Bridge
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-1129

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.
INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
All materials requiring removal or special handling.

ROUTE:
MODOT JOB NO.:
DISTRICT:
COUNTY:
DATE OF TESTS:
PARCEL NO.:

I-35
J413014
KC
Jackson
N/A
Bridge A-1129

TESTED BY:
CERTIFICATION #:
SITE ADDRESS:
TYPE(S) OF STRUCTURE(S):

Frank Reichart
7118010412MOIR11239
I-70EB ramp to I-35SB, Over 8th Street/UPRR
Bridge



Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE:	I-35	TESTED BY:	N/A
MODOT JOB NO.:	J413014	DATE OF TESTS:	N/A
DISTRICT:	KC	PARCEL NO.:	Bridge A-1129
COUNTY:	Jackson <i>JW</i>	SITE ADDRESS:	I-70EB ramp to I-35SB, Over 8 th Street/UPRR
SURVEYED BY:	Frank Reichart	TYPE(S) OF STRUCTURE(S):	Bridge
DATE OF SURVEY:	January 8, 2013		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)								
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag	
	No samples taken. No painted surfaces located.									

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
DATE OF SURVEY: January 8, 2013
PARCEL NO.: Bridge A-0806

SURVEYED BY: Frank Reichart
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: I-70EB ramp to I-670WB, Over 14th Street ramp to I-70
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	No samples taken. No suspect ACM located.			
	Bridge Paint is not a suspect ACM per MSDS's on file.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable
NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
Nonfriable Asbestos-Containing Materials
(Abatement not required if not made friable during demolition.)

ROUTE: I-35 TESTED BY: Frank Reichart
 MODOT JOB NO.: J413014 CERTIFICATION #: 7118010412MOIR11239
 DISTRICT: KC SITE ADDRESS: I-70EB ramp to I-670WB, Over 14th Street ramp to I-70
 COUNTY: Jackson TYPE(S) OF STRUCTURE(S): Bridge
 DATE OF TESTS: N/A
 PARCEL NO.: Bridge A-0806

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.

INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report
All materials requiring removal or special handling.

M

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-0806

TESTED BY: Frank Reichart
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: I-70EB ramp to I-670WB, Over 14th Street ramp to I-70
TYPE(S) OF STRUCTURE(S): Bridge

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
SURVEYED BY: Frank Reichart
DATE OF SURVEY: January 8, 2013

TESTED BY: N/A
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-0806
SITE ADDRESS: I-70EB ramp to I-670WB, Over 14th Street ramp to I-70
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Color/Location of Material/Substrate	Metals (ppm)										
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag			
	No samples taken. No painted surfaces located.											

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE:	I-35	SURVEYED BY:	Frank Reichart
MODOT JOB NO.:	J413014	CERTIFICATION #:	7118010412MOIR11239
DISTRICT:	KC	SITE ADDRESS:	Northbound US 71, Over 12 th Street
COUNTY:	Jackson	TYPE(S) OF STRUCTURE(S):	Bridge
DATE OF SURVEY:	January 8, 2013		
PARCEL NO.:	Bridge A-0246		

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	No samples taken. No suspect ACM located.			
	Bridge Paint is not a suspect ACM per MSDS's on file.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable
 NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report

**Nonfriable Asbestos-Containing Materials
(Abatement not required if not made friable during demolition.)**

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
DATE OF TESTS: N/A
PARCEL NO.: Bridge A-0246

TESTED BY: Frank Reichart
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: Northbound US 71, Over 12th Street
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.


INF = Category I Nonfriable

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report

All materials requiring removal or special handling.


ROUTE: I-35
 MODOT JOB NO.: J413014
 DISTRICT: KC
 COUNTY: Jackson
 DATE OF TESTS: N/A
 PARCEL NO.: Bridge A-0246

TESTED BY:  Frank Reichart
 CERTIFICATION #: 7118010412MOIR11239
 SITE ADDRESS: Northbound US 71, Over 12th Street
 TYPE(S) OF STRUCTURE(S): Bridge

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE:	I-35	TESTED BY:	N/A
MODOT JOB NO.:	J413014	DATE OF TESTS:	N/A
DISTRICT:	KC	PARCEL NO.:	Bridge A-0246
COUNTY:	Jackson	SITE ADDRESS:	Northbound US 71, Over 12 th Street
SURVEYED BY:	Frank Reichart 	TYPE(S) OF STRUCTURE(S):	Bridge
DATE OF SURVEY:	January 8, 2013		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)								
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag	
	No samples taken. No painted surfaces located.									

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
DATE OF SURVEY: January 8, 2013
PARCEL NO.: Bridge A-0298

SURVEYED BY: Frank Reichart
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: Benton Boulevard, Over I-70 & Indiana Avenue Ramp
TYPE(S) OF STRUCTURE(S): Bridge



Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
13MFJR 005	Asphalt Fiber Duct	Street Lighting Conduits, Sidewalls and Under Sidewalk	I NF	398 Lin. Ft.
	Bridge Paint is not a suspect ACM per MSDS's on file.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable
NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure

II NF = Category II Nonfriable F = Friable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report

Nonfriable Asbestos-Containing Materials

(Abatement not required if not made friable during demolition.)

ROUTE: I-35
MODOT JOB NO.: J413014
DISTRICT: KC
COUNTY: Jackson
DATE OF TESTS: January 15, 2013
PARCEL NO.: Bridge A-0298

TESTED BY: Frank Reichart
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: Benton Boulevard, Over I-70 & Indiana Avenue Ramp
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
13MFJR 005	Asphalt Fiber Duct	Street Lighting Conduits, Sidewalls and Under Sidewalk	INF	398 Lin. Ft.	Chrysotile	5-10

All necessary work to handle this material is the contractor's responsibility.

INF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS

Asbestos Survey Report

All materials requiring removal or special handling.

ROUTE: I-35 **TESTED BY:** Frank Reichart *FR*

MODOT JOB NO.: J413014 **CERTIFICATION #:** 7118010412MOIR11239

DISTRICT: KC **SITE ADDRESS:** Benton Boulevard, Over I-70 & Indiana Avenue Ramp

COUNTY: Jackson **TYPE(S) OF STRUCTURE(S):** Bridge


DATE OF TESTS: January 15, 2013

PARCEL NO.: Bridge A-0298

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE:	I-35	TESTED BY:	N/A
MODOT JOB NO.:	J413014	DATE OF TESTS:	N/A
DISTRICT:	KC	PARCEL NO.:	Bridge A-0298
COUNTY:	Jackson	SITE ADDRESS:	Benton Boulevard, Over I-70 & Indiana Avenue Ramp
SURVEYED BY:	Frank Reichart 	TYPE(S) OF STRUCTURE(S):	Bridge
DATE OF SURVEY:	January 8, 2013		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)													
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag						
	No samples taken. No painted surfaces located.														

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471



MEMORANDUM

Missouri Department of Transportation Construction and Materials Central Laboratory

TO: Craig Skorseth-KC/de

COPY: ProjectWise

FROM: Frank Reichart *FR*
Environmental Chemist

DATE: January 11, 2013

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route I-35
Job No. J4I2371
Bridge L-0781
Jackson County

We are providing you with the results of the requested inspection on the above referenced property. The inspection report contains an asbestos and a heavy metals survey, unless otherwise requested. The asbestos inspection included sample collection of suspect asbestos-containing material and National Voluntary Laboratory Accreditation Program (NVLAP) accredited testing to confirm the presence of asbestos. This asbestos and heavy metal paint report includes four different report forms. Form T746 lists all of the samples taken during the asbestos inspection. Form T747 shows only those samples that tested positive for Category I nonfriable asbestos-containing materials that may remain in the structure during demolition, if kept adequately wet to avoid visible air emissions. Form T748 shows only those samples that tested positive for asbestos and require removal prior to demolition. Form C760 lists all paint samples taken during the heavy metal paint survey and their metal content.

In accordance with the National Emissions Standard for Hazardous Air Pollutants (NESHAP), as well as city and county asbestos abatement regulations - Registration, Notification, and Performance Requirements, regulated asbestos-containing material (RACM) namely, Friable and Category II nonfriable, have a high probability of becoming friable under normal demolition forces. Practices and procedures for removal prior to demolition, disposal, and clearances should be in accordance with referenced regulations. Missouri Department of Transportation policy is to perform asbestos abatements in accordance with NESHAP.

In accordance with Missouri Department of Natural Resources' Technical Bulletin "Managing Construction and Demolition Waste" dated January 31, 2003, a heavy metal paint survey has been performed on the above referenced property. We are providing you with the results of this survey. This survey includes locating painted concrete, block and/or brick surfaces, sampling/testing the painted surface(s) to determine if hazardous heavy metals are present. Non-hazardous painted concrete, blocks, or bricks may be used as clean fill materials, if properly

TO: Skorseth-KC/de

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January 11, 2013

handled. You must contact the Central Office Design Division for proper handling of the reported painted surfaces.

Although our survey included observing and sampling behind walls, above ceilings, beneath floors, etc., it is possible that potentially hidden asbestos-containing materials may exist within the structure. To our knowledge, we have located all suspect asbestos-containing and all painted concrete, block and brick surfaces. If suspect asbestos-containing materials or if painted concrete, block and/or brick surfaces are observed in addition to those reflected in this inspection report, then please advise us immediately so that we may schedule a follow-up inspection.

Should you have any questions regarding these reports, please contact me at (573) 526-4359.

db/dr

[http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared documents/asbestos/districts/kansas city \(kc\)/jxi's/j4i2371/fr1301113.docx](http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared/documents/asbestos/districts/kansas%20city%20(kc)/jxi's/j4i2371/fr1301113.docx)

Attachments

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Asbestos Survey Report
All Suspect ACM

ROUTE: I-35/I-70
MODOT JOB NO.: J412371
DISTRICT: KC
COUNTY: Jackson
DATE OF SURVEY: January 8, 2013
PARCEL NO.: Bridge# L-0781(twin)

SURVEYED BY: Frank Reichart 
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: IS 35 & 70 Over Charlotte Street
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	No samples taken. No suspect ACM located.			
	Bridge Paint is not a suspect ACM per MSDS's on file.			


N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable
NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure

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**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report
Nonfriable Asbestos-Containing Materials
(Abatement not required if not made friable during demolition.)

ROUTE: I-35/I-70
MODOT JOB NO.: J412371
DISTRICT: KC
COUNTY: Jackson
DATE OF TESTS: N/A
PARCEL NO.: Bridge# L-0781(twin)

TESTED BY: Frank Reichart 
CERTIFICATION #: 7118010412MOIR11239
SITE ADDRESS: IS 35 & 70 Over Charlotte Street
TYPE(S) OF STRUCTURE(S): Bridge

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	INF			

All necessary work to handle this material is the contractor's responsibility.

INF = Category I Nonfriable

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**

Asbestos Survey Report

All materials requiring removal or special handling.

ROUTE: I-35/I-70	TESTED BY: Frank Reichart
MODOT JOB NO.: J412371	CERTIFICATION #: 7118010412MOIR11239
DISTRICT: KC	SITE ADDRESS: IS 35 & 70 Over Charlotte Street
COUNTY: Jackson	TYPE(S) OF STRUCTURE(S): Bridge
DATE OF TESTS: N/A	
PARCEL NO.: Bridge# L-0781(twin)	

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

**MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS**
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: I-35/I-70 **TESTED BY:** N/A
MODOT JOB NO.: J412371 **DATE OF TESTS:** N/A
DISTRICT: KC **PARCEL NO.:** Bridge# L-0781(twin)
COUNTY: Jackson **SITE ADDRESS:** IS 35 & 70 Over Charlotte Street
SURVEYED BY: Frank Reichart **TYPE(S) OF STRUCTURE(S):** Bridge
DATE OF SURVEY: January 8, 2013

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
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All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471