



LEGAL NOTICE

INVITATION FOR FORMAL BID

BID 19-118

For

**CMAQ-5414(632)
GATEWAY GREEN LIGHT (GGL) PHASE 4:
FIBER EXPANSION & ITS DEVICE INSTALLATIONS**

**ST. CHARLES COUNTY GOVERNMENT
ST. CHARLES, MISSOURI**

St. Charles County is seeking bids to provide **Fiber Expansion & ITS Device Installations for Gateway Green Light (GGL) Phase 4** for the County. The County reserves the right to terminate the contract for reasons of violations by the successful proposer of any term or condition of the contract by giving thirty (30) days written notice stating the reasons therefore and giving the party ample time to remedy the deficiencies.

INSTRUCTIONS

The outside of the envelope containing one [1] signed original and one [1] digitized copy of the bid must be received in a sealed envelope, and designated in the lower left corner of the envelope with:

Sealed bid for: **Gateway Green Light: Phase 4 Fiber Expansion & ITS Device Installations**

BIDDER'S Name **BIDDER'S Name**

BIDDER'S address **BIDDER'S address**

Date and Time of bid opening: **January 16, 2020 at 2:00 PM**

An authorized representative of the company/person submitting the statement of qualification must sign it in blue ink.

Bid must be submitted to the St. Charles County Finance Department, 201 North Second Street, Room 541, St. Charles, MO 63301 prior to **01/16/2020 at 2:00 PM**. The bids will thereafter be publicly opened and read aloud in Conference Room 534.

St. Charles County reserves the right to accept and/or reject any and all proposals.

Bid results may be obtained by going to our St Charles County Government website @ <http://www.sccmo.org/Bids.aspx> click on "show Closed/Awarded/Cancelled bids", select bid and click on "related documents". No phone calls please. The time it takes for final bid results to be made public depends on the complexity of the project and the cost of the project.

INQUIRIES

Any questions or clarifications concerning this Request for Bid must be submitted in writing to:

Kurt Manderach, Purchasing Manager
St. Charles County Government - Finance Department
201 North Second Street, Suite 541
St. Charles, Missouri 63301
kmanderach@sccmo.org

For questions or inquiries concerning the specifications please contact:

Steve Helmholt, Project Manager
St. Charles County Government - Roads and Traffic Department
201 North Second St
St. Charles, Missouri 63301
Fax: (636)949-7900 ext. 8950
shelmholt@sccmo.org

- The bid number and title shall be referenced on all correspondence.
- All questions must be received no later than **5:00 PM** on **01/09/2020**.
- Any question received after this deadline may not be answered.

Responses to questions/clarifications will be placed on the County's website <http://www.sccmo.org/Bids.aspx>. Check this website frequently for updates and any addendum that are issued.

Prohibited Communication

Contact with any representative, other than through the procedure outlined in the section titled "Inquiries", concerning this request is prohibited PRIOR TO PROPOSAL DUE DATE. Representative shall include, but not be limited to, all elected and appointed officials, and employees of St. Charles County and their Agents within St. Charles County.

Any Offeror engaging in such prohibited communications prior to proposal due date may be disqualified at the sole discretion of St. Charles County.

TABLE OF CONTENTS

Terms and Conditions	4
Notice to Contractors	10
Bid Form	26
DBE Submittal Forms	29
Contract Agreement	46
Payment / Performance Bond	54
General Requirements	58
GGL Special Provisions	74
MoDOT Special Provisions	129
MoDOT Permits	150
FHWA Form 1273	160
State Wage Rates	173
Federal Wage Rates	179
Environmental & Cultural Permits and Clearances	226
Approved Public Interest Findings	234
Additional Railroad Information	237

TERMS AND CONDITIONS

1. Sealed Bids will be received until 2:00 (Two o'clock) P.M., **January 16, 2020** by:
St. Charles County Finance Department
201 North Second Street, Suite 541
St. Charles, Missouri 63301

Any bids received after the time and date specified above shall not be considered.

The outside of the envelope containing one [1] signed original and one [1] digitized copy of the bid must be received in a sealed envelope, and designated in the lower left corner of the envelope with:

Sealed bid for: **Gateway Green Light: Phase 4 Fiber Expansion & ITS Device Installations**

BIDDER'S Name **BIDDER'S Name**

BIDDER'S address **BIDDER'S address**

Date and Time of bid opening: **January 16, 2020 at 2:00 PM**

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope, addressed as specified in the bid form.

All bids will be publicly opened and read aloud in **Conference Room 534 at 2:00 P.M.**

2. A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
3. No additions, deletions, corrections, or adjustments will be accepted after submissions are opened.
4. All requests for clarifications on these bidding documents must be received in writing no later than **5:00 PM** on **01/09/2020**.
5. Interpretations or Correction of Bidding Documents

It is the responsibility of each BIDDER before submitting a Bid to:

- a. BIDDERS shall promptly notify the COUNTY of any ambiguity, inconsistency or error, which they may discover upon examination of the Bidding Documents or of the site and local conditions.
- b. BIDDERS may request clarification or interpretation of the Bidding Documents by making a written request, which shall reach the COUNTY at least seven (7) days prior to the date for receipt of Bids.
- c. Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and BIDDERS shall not rely upon such interpretations, corrections and changes.
- d. If the COUNTY determines that clarification of the terms and conditions of the Bidding Documents is necessary, an Addendum will be made available to all BIDDERS setting forth such clarification.

6. A pre-bid meeting will be held on January 2, 2020 at 1:00 pm at 201 North Second Street, 5th Floor Training Room (542), St. Charles, Missouri 63301.
7. Required Submittal Forms By Bidder
 - a. These Contract Documents include a complete set of bidding and contract forms which are for the convenience of BIDDERS and are not to be detached from the contract documents, filled out, or executed. Separate copies of bidding forms are furnished for that purpose. All bids must be submitted on the forms provided. The following documents are to be completed by CONTRACTOR and turned in as their Bid.
 1. Bid Form
 2. List of Resources and References
 3. Audit Clause for Contracts
 4. 5% Bid Security
 - b. Within three (3) days of the Bid Opening, the two (2) lowest BIDDERS shall each furnish:
 1. List of Proposed Subcontractors and Suppliers.
 2. Disadvantaged Business Enterprise Contract Provisions DBE Forms 1 of 3 through DBE Forms 3 of 3.
8. The COUNTY intends to issue the Notice to Proceed on or about February 21, 2020.
9. The electronic version of this Bid and the plans and specifications are available by download from the St Charles County website at www.sccmo.org. The document was entered into WORD for Microsoft Windows. The Purchasing Office does not guarantee the completeness and accuracy of any information provided on the electronic version. Therefore, respondents are cautioned that the hard copy of this Bid on file in the Purchasing Office governs in the event of a discrepancy between the information contained in or on the electronic version and that which is on the hard copy.
10. The County of St. Charles hereby notifies all BIDDERS that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.
11. Each bid must be accompanied by a cashier's check or certified check, or a Bid Bond executed by the BIDDER and an approved surety company and payable to the COUNTY, in an amount not less than five percent (5%) of the sum total of the base bid.
12. A Performance Bond and Payment and Materials Bond are required.
13. An authorized officer of the company submitting the response must sign all copies, in blue ink.
14. Bidders must submit two [2] signed copy of their bid, one is to be an original and so marked and one [1] digitized copy.
15. St. Charles County reserves the right to accept and/or reject any and all proposals.
16. This project will be awarded to the lowest, responsive, responsible bidder.

17. This project is exempt from all Missouri sales and use tax per Missouri State regulations. Inasmuch as all Missouri sales tax will be exempt, CONTRACTORS shall not include any sales tax in their proposal. Compliance with these tax savings procedures is compulsory and for the benefit of the COUNTY. A copy of the procedure to be followed to obtain this exemption will be furnished to the successful BIDDER. BIDDERS shall include in their proposals any other sales or use taxes which they are required by law to pay.
18. Construction contracts shall assure compliance with Section 165 of the Surface Transportation Assistance Act of 1982, Section 337 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and 23 CFR 635.410 regarding Buy America provisions on the procurement of foreign products and materials. On all contracts involving Federal-aid, all products of iron, steel, or a coating of steel which are incorporated into the work must have been manufactured in the United States. The Contracting Authority may allow minimal amounts of these materials from foreign sources, provided the cost does not exceed 0.1 percent of the contract sum or \$2,500, whichever is greater. The Contractor certifies that these materials are of domestic origin. Additional information regarding the “**Buy America**” requirements can be found at: <https://www.fhwa.dot.gov/construction/cqit/buyam.cfm>
19. Prices for services should not be included in submitted responses.
20. Bid Quantities
 - a. It is understood by the undersigned that the quantities given in the following itemized proposal are not guaranteed by the COUNTY and are used solely for the purpose of comparing bids and awarding the Contract and may or may not represent the actual quantities encountered on the job.
 - b. BIDDER shall complete the schedule of unit prices included in the Bid Form. The total Bid will be determined as the sum of the products of the estimated quantity of each item and the unit price bid for the item.
 - c. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
 - d. The adjustment unit prices provided for in the Bid Form shall apply only in the event of a Change Order providing for such increase or decrease in the quantities. The Contract Price will be subject to adjustment according to final measured, used, or delivered quantities, and the adjustment unit prices in the Bid will apply to such final quantities.
21. All labor used in the construction of this public improvement shall be paid a wage no less than the prevailing hourly rate of wages of work of a similar character in this locality as established by the Department of Labor and Industrial Relations (Federal Wage Rate), or state wage rate, whichever is higher.
22. Missouri Annual Wage Order 26 as amended June 26, 2019 shall be in effect for this project.

23. Missouri Law, 292.675 RSMO, requires any awarded contractor and its subcontractor(s) to provide a ten-hour Occupational Safety and Health Administration (OSHA) Construction Safety Program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees.
24. The DBE goal for this letting is a minimum 9% (nine percent) of the total contract amount.
25. All BIDDERS must meet the MoDOT requirements as a CONTRACTOR at least seven days prior to bid opening.
26. All BIDDERS must possess the necessary and appropriate business and/or professional licenses in their field.
27. St. Charles County will not award any proposal to an individual or business having any outstanding amounts due from a prior Contract or business relationship with the County or who owes any amount(s) for delinquent Federal, State or Local taxes, fees and licenses.
28. The successful BIDDER is specifically denied the right of using in any form or medium the names of St. Charles County or any other public agency of St. Charles County Government for public advertising unless express written permission is granted.
29. Insurance

Errors and Omissions (Professional Liability): With limits of not less than \$1.0 million per claim/\$2.0 million aggregate covering all services provided by the Contract. Coverage to be written on a claims-made basis.

Commercial General Liability (CGL): \$1,000,000/\$3,000,000 including Products/Completed Operations. CGL coverage shall cover all liability arising from premises, operations, independent contractor and personal injury and liability assumed under an insured contract.

Automobile Liability: covering liability arising out of the use of any owned, hired, leased or non-owned vehicle in an amount of no less than \$1,000,000 per occurrence.

Workers Compensation/Employer's Liability: Statutory WC limits as required by the Statutes of the State of Missouri, (or a qualified self-insurer) and Employers Liability in an amount of no less than \$1.0 million.

Excess Umbrella: liability with a limit of no less than \$1,000,000 in excess of the above policies.

 - a. All insurance to be written through a company duly authorized to do business in the State of Missouri with an A.M. Best Rating of A-IX or higher.
 - b. The Professional Liability, CGL, Automobile and Umbrella policies shall be endorsed to include the County as an additional insured and provide for 30 days advance written notice of any material change.
 - c. A Waiver of Subrogation in favor of the County shall be endorsed on each of the policies.
 - d. The required insurance provided by the "Firm" shall be primary insurance with respect to any other insurance or self-insurance programs maintained by the County.

- e. A Certificate of Insurance evidencing the above coverage(s) together with a copy of the required endorsements shall be provided to the County prior to the commencement of any work.
30. Nondiscrimination and DBE Goal
- a. The undersigned, as BIDDER, understands that in any project involving participation of County funds, the BIDDER awarded the Contract will be required to comply, and to cause his subcontractors, if any, to comply with all County and State statutes, regulations, and directives against discriminations against any person in connection with the Contract, on account of race, color, religion, creed, sex, age, ancestry, or national origin, and that such nondiscrimination extended to procurement of materials and lease of equipment for use in connection with the Contract.
 - b. The undersigned, as BIDDER, understands that the BIDDER awarded the Contract will be required to comply with the Executive Order of the Governor of the State of Missouri dated September 10, 1973. This order stipulates that there shall be no discriminatory employment practices by the CONTRACTOR or his subcontractors, if any, based on race, color, religion, creed, national origin, sex, or age. The undersigned CONTRACTOR or his subcontractors, if any, shall give written notice of their commitments under this clause to any labor union with which they have bargaining or other agreements.
 - c. DBE Goals for this letting are the utilization of DBE firms listed in the MoDOT DBE directory. Maximum DBE utilization is deemed to have been met when any subcontracting or supplies equal a minimum of **9%** of the total contract amount. If the BIDDER does not meet the established goal, award of contract can be made only if this BIDDER can document and demonstrate good faith effort to meet the goals. The good faith effort will be reviewed and approved by MoDOT. DBE's must be listed on the MoDOT approved listing at the time of the contract letting. All DBE utilization shall be in accordance with the rules and regulations as contained in 49 CFR Part 26.
 - d. DBE Forms 1 of 3 through DBE Forms 3 of 3 must be received by 4 P.M. three (3) business days after bid opening from the lowest and 2nd lowest BIDDERS. Failure to submit the required DBE Forms within three days shall be grounds to disqualify the CONTRACTOR and allow the County to take the CONTRACTOR's bid bond as damages for failure of the CONTRACTOR to enter into contract.
31. Employment of Unauthorized Aliens Prohibited (*Missouri Revised Statutes Section 285.530*)
- a. As a condition for the award of any contract or grant in excess of five thousand dollars by St. Charles County to a business entity (Firm), the business entity shall, by sworn affidavit and provision of documentation**, affirm its enrollment and participation in a federal work authorization program (**E-Verify**) with respect to the employees working in connection with the contracted services. Every such business entity shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. [RSMO 285.530 (2)]

- b. An employer may enroll and participate in a federal work authorization program (**E-Verify**) and shall verify the employment eligibility of every employee in the employer's hire whose employment commences after the employer enrolls in a federal work authorization program. The employer shall retain a copy of the dated verification report received from the federal government. Any business entity that participates in such program shall have an affirmative defense that such business entity has not violated subsection 1 of this section. [RSMO 285.530 (4)]
- c. Any entity contracting with St. Charles County shall only be required to provide the referenced affidavit on an annual basis. A copy of the affidavit is included in this Qualification request. Firms may choose to send the required documentation using one of the following options:
- Send the notarized affidavit and E-Verify MOU signature page to: St. Charles County, Attn: Purchasing Manager, 201 N Second Street, Room 541, St. Charles, MO 63301 prior to responding to any solicitations; **OR**
 - Send the notarized affidavit and E-Verify MOU signature page along with a Qualification solicitation response.

These documents will be kept on file. The notarized affidavit and E-Verify MOU signature page will remain current for **one year** from the date of the notarized affidavit.

****PLEASE NOTE:****

Acceptable enrollment and participation documentation consists of a valid copy of the signature page of the E-Verify Memorandum of Understanding, completed and signed by the Firm, and the Department of Homeland Security - Verification Division

The online address to enroll in the E-verify program is:

<https://e-verify.uscis.gov/enroll/StartPage.aspx?JS=YES>

32. Veteran Friendly Employment Policy

Indicate whether you have developed a veteran friendly employment policy and, if so, attach a copy of such policy to your response as a point of information.

_____ "YES" our company has a veteran friendly employment policy.

_____ "NO" our company does not have a veteran friendly employment policy.

Please include a copy of your veteran friendly employment policy with your submission.

33. Open Records

Any and all information contained in or submitted with the proposal becomes a public record subject to the Missouri Sunshine Law when a contract is executed or all proposals are rejected. If Proposer believes that any information contained in or submitted with the proposal is protected by the Missouri Sunshine Law, Proposer must clearly identify what information Proposer believes is so protected and must also clearly identify the legal basis therefor.

NOTICE TO CONTRACTORS

Sealed bids, addressed to St. Charles County, Missouri, 201 N. Second Street, St. Charles, Missouri 63301 for the proposed work will be received by St. Charles County until 2:00 p.m. (prevailing local time) on **January 16, 2020** at the office of St. Charles County, 201 N. Second Street, St. Charles, Missouri 63301. All bids will be publicly opened and read aloud in **Conference Room 534 at 2:00 P.M.** Bids should be delivered to:

St. Charles County Finance Department
201 N. Second Street, Suite 541
St. Charles, Missouri 63301.

1. Proposed Work

The proposed work, hereinafter called the work, includes: the procurement, programming and installation of network switches and devices, and installation of ITS devices, conduit and fiber optic cables at various locations throughout St Charles County as indicated in the plans and in these documents, along with communication connections necessary as described on plans or in these documents.

2. Definitions

The following terms used at any place in the contract documents shall be construed thus:

BIDDER: The individual or entity who submits a bid directly to the OWNER.

CONSULTING ENGINEER: The design firm of gba Systems Integrators and their duly authorized agents, such agents acting within the scope of the particular duties entrusted to them in each case.

CONTRACTOR: The individual, partnership, or corporation, which shall enter into the Agreement to perform the work, outlined in the contract documents with the OWNER.

DAY(S): Calendar days, unless otherwise defined.

DBE: Disadvantaged Business Enterprise

ENGINEER/ COUNTY ENGINEER: The County Transportation Director, County of St. Charles, Missouri or his duly authorized representative.

MHTC: Missouri Highway Transportation Commission

MoDOT: Missouri Department of Transportation.

OWNER/COUNTY: St. Charles County, Missouri

SUB-BIDDER or SUBCONTRACTOR: A person or entity that submits a Bid to a BIDDER for materials or labor for a portion of the Work.

SUCCESSFUL BIDDER: The lowest qualified, responsible, and responsive BIDDER to whom OWNER (on the basis of OWNER'S evaluation as herein provided) makes an award.

SURETY: Surety shall be a corporate surety company or companies of recognized standing licensed to do business in the State of Missouri and acceptable to the County of St. Charles. A rating in the "A" category from Best's or from Standard and Poor's shall constitute recognized standing. The Surety shall attach a certified and current copy of its authority to do insurance business from the State of Missouri.

3. Trainees

No trainee hours will be required under this contract.

4. Compliance with Contract Provisions

The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction," and "Missouri Standard Plans for Highway Construction", their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted.

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 Missouri Std. Plans For Highway Construction (Latest Edition)

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.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, "St. Charles County, Missouri", and the term "Engineer" is a reference to the Engineer of Record from the gba Systems Integrators Team

5. Specifications, Contract, And Bond

The specifications, contract, and bond governing the construction of the work contemplated are those known and designated as the "Missouri Standard Specifications for Highway Construction, current edition", together with the "General Requirements, GGL Special Provisions, and Job Special Provisions", attached to this proposal.

6. Plans

The plans herein referred to are drawings entitled: "**Gateway Green Light: Phase 4 Fiber Expansion & ITS Device Installations**," bid set dated June 24, 2019, and prepared by the gba Systems Integrators Team.

7. Subsurface and Physical Conditions

- a. In preparation of the Contract Documents, the following report of exploration and tests of subsurface conditions at the site of work was used for the pavement design:

Not Applicable

8. Execution of Contract

The BIDDER to whom the Contract has been awarded shall sign four (4) copies of the County-Contractors Agreement, and return them along with properly executed Performance, Payment and Materials bonds, and all certificates of insurance as set forth in the "General Requirements" within ten (10) days after receipt of the Notice of Intent to Award from the COUNTY. Failure to return the required items above to the COUNTY within ten (10) days after receipt of the Notice of Intent to Award shall be cause for the annulment of the Contract award and the forfeiture of the bid security to the COUNTY.

9. Condition of Work

Each BIDDER must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful BIDDER of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible the CONTRACTOR in carrying out his work must employ such methods or means as will not cause any interruption of or interference with the work of any other CONTRACTOR.

10. Examination of Bidding Documents and Site

Before submitting a bid, BIDDER shall:

- a. Examine and carefully study the Bidding Documents, including any Addenda and other related data identified in the Bidding Documents;
- b. Visit the Site and become familiar with and satisfy BIDDER as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- c. Become familiar with and satisfy BIDDER as to all Federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;
- d. Carefully study all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site;
- e. Obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by BIDDER, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents and safety precautions and programs incident thereto;
- f. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the

determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

- g. Become aware of the general nature of the Work to be performed by OWNER or others at the Site that relates to the Work indicated in the Bidding Documents;
- h. Correlate the information known to BIDDER, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- i. Promptly give OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER discovers in the Bidding Documents and confirm that the written resolution thereof by OWNER or CONSULTING ENGINEER is acceptable to BIDDER; and
- j. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

11. Substitute and "Or-Equal" Items

- a. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Application for review of substitute or "or-equal" materials or equipment will not be considered by ENGINEER until after the Effective Date of the County-Contractors Agreement.
- b. The materials, products, systems and equipment described in the Bidding Documents establish a minimum standard of required function, dimension, appearance and quality, which must be met by any proposed substitution.
- c. No substitution of the materials, products, systems and equipment described in the Bidding Documents will be considered prior to receipt of Bids unless written request for approval has been received by the COUNTY at least seven (7) days prior to the date for receipt of Bids. Each such request shall include the name of the material, product, system or equipment for which substitution will be made and a complete description of the proposed substitute including drawings, costs, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, products, systems, equipment, or other Work that incorporation of the substitute would require shall be included in each such request. The COUNTY, at its sole discretion, may approve or disapprove the proposed substitute.
- d. If the COUNTY approves any proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. BIDDERS shall not rely upon approvals made in any other manner.
- e. No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

12. Addenda

- a. No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any BIDDER orally. Every request for such interpretation should be in writing addressed to:

Steven Helmholt
201 N. Second Street, Suite 560
St. Charles, MO 63301
636-949-3074
roadsandtraffic@sccmo.org

and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of bids. All addenda shall be posted to the County website.

- b. Any and all such interpretations to the specifications which, if issued, will be faxed, delivered by courier, or mailed by certified mail with return receipt requested to all prospective BIDDERS (at the respective addresses furnished for such purposes), not later than four (4) days prior to the date fixed for the opening of bids. Failure of any BIDDER to receive any such addendum or interpretation shall not relieve such BIDDER from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract documents.

13. Power of Attorney

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

14. Laws and Regulations

The BIDDER'S attention is directed to the fact that all applicable federal and state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written in full.

15. Notice To Bidders of Third Party Concurrence In Award (DSP-98-19a)

- a. Bidders are advised that COUNTY is party to a contract with Federal Highway Administration (FHWA) and Missouri Department of Transportation (MoDOT) which provides that FHWA/MoDOT shall provide substantial funds for construction of Job No. CMAQ 5414(623) by reason of which FHWA/MoDOT has the right to concur or not concur in COUNTY's award of a contract for this job.
- b. Bidders acknowledge that their bids are made with knowledge of and subject to the condition of FHWA/MoDOT concurrence in and prior authorization of any award of a contract for this job by COUNTY.
- c. Bidders agree that they shall be stopped, both in law and equity, to assert any right to award of a contract for this job by COUNTY should FHWA/MoDOT not concur in that award for any reason.

16. Award of Contract

- a. Since this project has federal funds the OWNER must obtain MoDOT/FHWA concurrence/approval prior to awarding or rejecting any bid.
- b. OWNER reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any BIDDER whom it finds, after reasonable inquiry and evaluation, to be non-responsive. OWNER also reserves the right to waive all informalities not involving price, time, or changes in the Work.
- c. More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any BIDDER has an interest in more than one Bid for the Work may be cause for disqualification of that BIDDER and the rejection of all Bids in which that BIDDER has an interest.
- d. In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and with such alternatives, unit prices, and other data as may be requested in the Bid Form or prior to the Notice of Award.
- e. OWNER reserves the right to cancel the contract without penalty if MoDOT and/or FHWA do not concur with the award.
- f. St. Charles County will not award any bid to an individual or business having any outstanding amounts due from a prior Contract or business relationship with the County or who owes any amount(s) for delinquent taxes, fees or licenses.

17. Available Land

The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by CONTRACTOR in performing the Work are identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by OWNER unless otherwise specified in.

18. Period of Performance

If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

Calendar Days: 180

19. Liquidated Damages

The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages to be recovered in accordance with Sec 108 shall be as follows:

Liquidated damages per day \$1,200.00

20. Bid Guaranty

The bidder shall submit a Bid Guaranty meeting the requirements of Section 102 of the Missouri Standard Specifications for Highway Construction. The project bid bond form is included in the bid book. The bidder shall mark the box below to identify the type of Bid Guaranty.

- Paper Bid Bond
- Cashier's Check

21. Prime Contractor Requirements

The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this contract. Instead, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to and not less than 30 percent of the total original contract price. Second-tier subcontracting will not be permitted on this contract. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.

22. Subcontractor Disclosure

Requirements contained within Sec 102.7.12 of the Missouri Standard Specification for Highway Construction shall be waived for this contract.

23. Certifications for Federal Jobs

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

24. Materials Inspection

All technicians who perform, or are required by the FHWA to witness, such sampling and testing shall be deemed as qualified by virtue of successfully completing the requirements of EPG 106.18 Technician Certification Program, for that specific technical area

25. Federal and State Inspection

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 State or 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.

26. Addendum Acknowledgement

The undersigned states that the all addenda (if applicable) have been received, acknowledged and incorporated into their bid, prior to submittal. For paper bids, staple addenda to the bid in the appropriate part of the bid.

27. Preparation of Bid Form

- a. Each bid must be submitted on the prescribed Bid Form. All blank spaces for bid prices must be filled-in with indelible ink or typewritten. The "Total" must be completed in both words and figures on the Bid Form.
- b. Signature of BIDDER based on type of business shall be as follows:
 - A Bid by a Corporation shall be executed in the corporate name by the president or the vice-president or by another corporate officer, accompanied by evidence of authority to sign for the corporation. The corporate seal shall be imprinted with the signature of bidder.
 - A Bid by a Partnership shall be executed in the partnership name and signed by a partner, accompanied by evidence of authority to sign.
 - A Bid by a Limited Liability Company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm shall be shown below the signature.
 - A Bid by an Individual shall show the BIDDER's full name.
 - A Bid by a Joint Venture shall be executed by each joint venture in the manner indicated on the Bid Form.
- c. The names of all persons signing shall be legibly printed below their signatures. A Bid by a person who affixes to its signature the word "president", "secretary", "agent", or other designation without disclosing its principal may be held to be the Bid of the individual signing. When requested by OWNER, evidence of the authority of the person signing shall be furnished.
- d. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid Form.
- e. No alterations in a Bid by erasures, interpolations, or otherwise, will be acceptable unless each such alteration is signed or initialed by BIDDER; if initialed, OWNER may require BIDDER to identify any alteration so initialed.

28. Signature and Identity of Bidder

The undersigned states that the following provided information is correct and that (if not signing with the intention to bind themselves to become the responsible and sole bidder) they are the agent of, and they are signing and executing this, as the bid of _____, which

is the correct LEGAL NAME as stated on the contractor questionnaire (if applicable).

a. The organization submitting this bid is a(n) (1) individual bidder, (2) partnership, (3) joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (4) corporation. Indicate by marking the appropriate box below.

- sole individual partnership joint venture
- corporation, incorporated under laws of state of _____

b. If the bidder is doing business under a fictitious name, indicate below by filling in the fictitious name _____

Executed by bidder this _____ day of _____ 20____.

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

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

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

Check this box ONLY if the bidder REFUSES to make any or all of these certifications. The bidder may provide an explanation for the refusal(s) with this submittal.

Signature of Bidder's Owner, Officer, Partner or Authorized Agent

Please print or type name and title of person signing here

Attest:

Secretary of Corporation if Bidder is a Corporation

Affix Corporate Seal (If Bidder is a Corporation)

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual, partners, joint ventures, or corporation, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo. A certified copy of such registration of fictitious name or certificate of authority to do business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the standard specifications.

Exception Sheet

If the item(s) and/or services proposed in the response to this Request for Qualifications is in any way different from that contained in this Request for Qualifications, the Firm is responsible to clearly identify all such differences in the space provided below. Otherwise, it will be assumed that the Firm's offer is in total compliance with all aspects of the proposal or Qualification.

Below are the exceptions or differences to the stated specifications (attach additional sheets as needed):

Date: _____

Signature: _____

Title: _____

Company: _____

THIS FORM MUST BE COMPLETED AND ENCLOSED WITH THE BID

Audit Clause for Contracts

Examination of Records

The Contractor's records must include, but not be limited to, accounting records (hard copy, as well as computer readable data), written policies and procedures, subcontractor files, indirect cost records, overhead allocation records, correspondence, instructions, drawings, receipts, vouchers, memoranda, and any other data relating to this contract shall be open to inspection and subject to audit and/or reproduction by the County Auditor, or a duly authorized representative from the County, at the County's expense. The contractor must preserve all such records for a period of three years, unless permission to destroy them is granted by the County, or for such longer period as may be required by law, after the final payment. Since the Contractor is not subject to the Missouri Sunshine Law (Chapter 610, RSMo), information regarding the Contractor's operations, obtained during audits, will be kept confidential.

The Contractor will require all subcontractors under this contract to comply with the provisions of this article by including the requirements listed above in written contracts with the subcontractors.

Vendor Information

Company Name: _____

Business Address: _____

Business Hours: _____

Phone: _____ Fax: _____

Email address: _____

Contact Person: _____

Authorized Signature: _____

(Indicates acceptance of all bid terms and conditions)

Date: _____

AFFIDAVIT OF WORK AUTHORIZATION

The bidder/contractor who meets the section 285.525, RSMo definition of a business entity must complete and return the following Affidavit of Work Authorization.

Comes now _____ **(Name of Business Entity Authorized Representative)** as _____ **(Position/Title)** first being duly sworn on my oath, affirm _____ **(Business Entity Name)** is enrolled and will continue to participate in the E-Verify federal work authorization program with respect to employees hired after enrollment in the program who are proposed to work in connection with the services related to contract(s) with the County for the duration of the contract(s), if awarded in accordance with subsection 2 of section 285.530, RSMo. I also affirm that _____ **(Business Entity Name)** does not and will not knowingly employ a person who is an unauthorized alien in connection with the contracted services provided to the contract(s) for the duration of the contract(s), if awarded.

In Affirmation thereof, the facts stated above are true and correct. (The undersigned understands that false statements made in this filing are subject to the penalties provided under section 575.040, RSMo.)

Authorized Representative's Signature

Printed Name

Title

Date

E-Mail Address

Subscribed and sworn to before me this _____ of _____. I am
(DAY) (MONTH, YEAR)

commissioned as a notary public within the County of _____, State of
(NAME OF COUNTY)

_____, and my commission expires on _____
(NAME OF STATE) (DATE)

**BIDDER CHECKLIST
FINAL CHECKLIST BEFORE SUBMITTING BID**

- 1. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Standard Specifications, and Rule 7 CSR 10-15.900, "Prequalifications to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website.
- 2. For submittal of paper bids, the complete set of bidding documents includes all information through the DBE form (for DBE forms see #8). The Technical Specifications/Job Special Provisions are for the bidder's information only and is not to be returned with the bid.
- 3. If submitting the bid by mail, it is to be completed, executed, and submitted in a sealed envelope addressed to St. Charles County Highway Department.
- 4. Please read all items in the bidding document carefully. For paper bids, complete all items in ink or by typing in the information.
- 5. Sign this bidding document properly. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation. Affix Corporate Seal if the Bidder is a Corporation.
- 6. For paper bids submit the provided bid bond executed by bidder and surety or attach cashier's check to the bid bond form.
- 7. Submit the Subcontractor Disclosure Form within 3 business days of the Bid Opening.
- 8. Submit the DBE Identification Submittal within 3 business days of the Bid Opening.
- 9. For paper bids, staple addenda to the bid in the appropriate part of the bid. The letter accompanying the addenda should be stapled to the inside of the back cover of the bid and returned. The bidder should retain a duplicate copy.

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

- a) Not signing the bid
- b) Not incorporating the addendum into the bidding documents, including attaching the letter to the bid
- c) Using a different bid bond form than the one provided, or not providing a bid bond
- d) Using pencil to fill out the bid
- e) Using white out to make corrections to the itemized bid sheets
- f) Not initialing changes made

All project specific questions concerning the bid can be directed to:
Steven Helmholt
201 North Second Street, Suite 560
St. Charles, Missouri 63301
(636)949-7900 Ext 8950
shelmholt@sccmo.org

Special Needs: If you have special needs addressed by the Americans with Disabilities Act, please notify St Charles County as noted below, at least five (5) working days prior to the bid opening.

Kurt Mandernach, Purchasing Manager
St. Charles County Government - Finance Department
201 North Second Street, Suite 541
St. Charles, Missouri 63301
Fax: (636)949-7589
purchasing@sccmo.org

BID FORM

ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows.

BID FORM

Federal Project No. CMAQ 5414 (632)

Project Title: Gateway Green Light Phase 4 Fiber Expansion & ITS Device Installations

BID PACKAGE #1 - Fiber Expansion & ITS Device Installations

Line	Item No.	Item Description	Unit	Quantity	Unit Price	Extension
Roadway Items						
300.00	618-10.00	MOBILIZATION	LS	1		\$0.00
310.00	616-10.05	CONSTRUCTION SIGNS	Sq Ft	170		\$0.00
320.00	616-10.40	FLASHING ARROW PANEL	Each	2		\$0.00
330.00	616-10.34	DIRECTIONAL INDICATOR BARRICADE	Each	20		\$0.00
340.00	612-30.00a	TRUCK OR TRAILER ATTENUATOR	Each	1		\$0.00
350.00	616-10.25	CHANNELIZER (TRIM LINE)	Each	225		\$0.00
					Roadway Subtotal:	\$0.00
Signals						
360.00	910-99.01	12 CT SMFO CABLE (BRANCH)	LF	2045		\$0.00
370.00	910-99.02	24 CT SMFO CABLE (CROSS CONNECT ONLY)	LF	715		\$0.00
380.00	910-99.03	48 CT SMFO CABLE	LF	11,365		\$0.00
390.00	910-99.04	72 CT SMFO CABLE	LF	26,340		\$0.00
400.00	910-99.05	GGL FIBER SPLICING (PER SPLICE)	Each	424		\$0.00
410.00	910-99.06	GGL FIBER TERMINATION (PER TERMINATION)	Each	594		\$0.00
420.00	910-99.07	FIBER OPTIC JUMPER	Each	52		\$0.00
440.00	910-99.08	IN-GROUND SPLICE ENCLOSURE	Each	13		\$0.00
450.00	910-72.01	CONDUIT, 2 IN RIGID, UNDERGROUND	LF	19,385		\$0.00
460.00	910-99.09	TYPE 336S GROUND MOUNT CABINET (CROSS CONNECT)	Each	1		\$0.00
470.00	910-91.00	BASE, CONCRETE	Each	1		\$0.00
480.00	910-99.10	CABINET AND NETWORK DEVICE CUTOVER (PER LOCATION)	Each	14		\$0.00
490.00	910-99.11	FURNISH & INSTALL INDUSTRIAL ETHERNET LAN SWITCH (2 direction)	Each	4		\$0.00
500.00	910-99.12	FURNISH & INSTALL INDUSTRIAL ETHERNET LAN SWITCH (4 direction)	Each	5		\$0.00
510.00	910-99.13	ENTERPRISE LAYER 3 SWITCH (AGENCY)	Each	3		\$0.00
520.00	910-99.15	SFP (GLC-LX/LH - 10 km)	Each	36		\$0.00
530.00	910-99.16	SFP (GLC-EX - 40 km)	Each	12		\$0.00
540.00	910-99.17	SFP (GLC-T - RJ45)	Each	12		\$0.00
550.00	910-99.18	SFP+ (SFP-10G-ER - 40km)	Each	6		\$0.00
560.00	910-99.19	BLUETOOTH TRAVEL TIME DETECTION	Each	10		\$0.00
570.00	902-49.75	VIDEO DETECTION SYSTEM	Each	7		\$0.00
580.00	910-37.00	CCTV CAMERA ASSEMBLY, INSTALLED	Each	7		\$0.00
590.00	910-99.20	EXTENSION POLE ON SIGNAL POLE, 20 FOOT	Each	4		\$0.00
600.00	910-99.21	CCTV CAMERA ASSEMBLY ON TOWER, INSTALLED	Each	8		\$0.00
610.00	910-99.22	GGL ARTERIAL DMS, INSTALLED (PREMIER PKWY)	Each	1		\$0.00
620.00	910-99.23	FABRIC INNERDUCT, 3 CELL	LF	1,930		\$0.00
					Signal Subtotal:	\$0.00

Bid Package #1 Base Bid Total \$0.00

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we _____

_____ as principal and _____ as surety, are held and firmly bound unto the state of Missouri (acting by and through the Missouri Highways and Transportation Commission) in the penal sum of _____

_____ Dollars (\$ _____) to be paid to the commission to be credited to the state road fund, the principal and surety binding themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this _____

THE CONDITION OF THIS OBLIGATION is such that

WHEREAS the principal is submitting herewith a bid to the commission on route(s)

_____ in _____ County(ies),
project(s) _____

for construction or improvement of state highway as set out in said bid;

NOW THEREFORE, if the commission shall accept the bid of the principal and if the principal shall properly execute and deliver to the commission the contract, contract bond, and evidence of insurance coverage in compliance with the requirements of the bid, the specifications, and the provisions of section 227.100 RSMo, to the satisfaction of the commission, then this obligation shall be void and of no effect, otherwise to remain in full force and effect.

In the event the said principal shall, in the judgment of the commission, fail to comply with any requirement as set forth in the preceding paragraph, then the state of Missouri, acting by and through the commission, shall immediately and forthwith be entitled to recover the full penal sum above set out, together with court costs, attorney's fees, and any other expense of recovery.

The principal and surety hereby certify that the document is the original or a verbatim copy of the bid bond form furnished by the Commission, in accordance with Sec 102.9 of the Missouri Standard Specifications for Highway Construction.

Principal _____

SEAL By _____
Signature

Surety _____

SEAL By _____
Signature of Attorney in Fact

NOTE: This bond must be executed by the principal, and by a corporate surety authorized to conduct surety business in the state of Missouri.

Subcontractor Disclosure Form: The bidder shall submit with this bid any subcontracts that meet the requirements of Sec 102.

List below the name of each subcontractor that will be furnishing labor or labor and materials, the category of work that the subcontractor will be performing (e.g. asphalt, concrete, earthwork, bridges...) and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed.

If the information is not available at the time of bid the bidder shall submit the "Subcontractor Disclosure Form" pages with the Contracting Authority on or before 4:00 p.m. of the third business day after the bid opening date, directly to St. Charles County, 201 N. Second Street, St. Charles, Missouri 63301. Telefax transmittal to the Contracting Authority will be permitted at fax no. 636-949-7307. The complete signed original documents do not need to be mailed to the Contracting Authority, but the bidder shall have it available if requested by the Contracting Authority.

(ATTACH ADDITIONAL SHEETS IF NEEDED.)

SUBCONTRACTOR NAME	DOLLAR VALUE OF SUBCONTRACT	CATEGORY OF WORK

Company Date By (Signature) Title

By (Please Print name of person signing)

DBE SUBMITTAL FORMS

1. **DBE Submittal Forms:** This form must be submitted by 4 p.m. three (3) business days after bid opening.

a. **DBE Contract Goal:** By submitting this bid, the bidder certifies that the bidder is familiar with the DBE Program Requirements in this contract. The contract DBE goal for the amount of work to be awarded is « 9 »% of the total federal project price. The bidder shall also complete the DBE Submittal Form in accordance with the program requirements.

b. **DBE Participation:** The bidder certifies that it will utilize DBE's as follows:

_____ % OF TOTAL FEDERAL CONTRACT

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

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

DBE SUBMITTAL FORMS

Identification of Participating DBEs: The information shown on this page must be completed. If this page is submitted but not signed, it will not be cause for rejection. The apparent low and second low bidder must file this form with the St Charles County Transportation Department by 4:00 p.m. on the third working day after the bid opening. Fax or email transmittal is permitted. The fax number is 636-949-7307 and the email address for submittal is shelmholt@sccmo.org. The original copy must be mailed by overnight mail to the Local Public Agency the day of the FAX or email transmittal. Contact External Civil Rights at (573) 751-7801 for questions or assistance in completion. (Note: Submittal of this form is not required if the Contract DBE Goal is 0%)

The undersigned submits the following list of DBEs to be used in accomplishing the work of this contract. The work, supplies or services, applicable value and percent of total federal contract each DBE is to perform or furnish is as follows:

(A) DBE Name & Address	(B) Bid Item numbers (Or Line numbers)	(C) \$ Value of DBE of Work ** (Unit Price x Quantity of each item in B, or Lump Sum)	(D) % Of \$ Value Applicable to DBE Goal ** (100%, 60%)	(E) \$ Amount Applicable to DBE Goal for each item (C x D)	(F) % Of Total Contract Amount for each item (E/Total Contract Amount)
1.					
		Total		Total	Total
2.					
		Total		Total	Total
3.					
		Total		Total	Total
4.					
		Total		Total	Total
Total DBE Participation					

** Cannot exceed contract amount for given item of work.

DBE Submittal

(A) DBE Name & Address	(B) Bid Item numbers	(C) \$ Value of DBE of Work ** (Unit Price x Quantity of each item in B, or Lump Sum)	(D) % Of \$ Value Applicable to DBE Goal ** (100%, 60%)	(E) \$ Amount Applicable to DBE Goal for each item (C x D)	(F) % Of Total Contract Amount for each item (E/Total Contract Amount)
Trucking Services Only used if the DBE owns the trucks or is leasing from a DBE firm			100%		
Trucking Services Trucks are leased from non- DBE source				Only Include <u>Fees</u> for Trucking Services	
Brokered Services				Only Include <u>Fees</u> for Brokered Services	
Totals (Page 1)					
Totals (Page 2)					
Totals (additional pages if needed)					
Total DBE Participation					

** Cannot exceed contract amount for given item of work.

Company: _____ Date: _____

By: _____ Title: _____

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM
REQUIREMENTS FOR LOCAL PROGRAMS**

- 1. Disadvantaged Business Enterprise (DBE) Program Requirements.** The subsequent Sections will apply only to contracts involving U.S. Department of Transportation (USDOT) federal-aid or federal financial participation. Federal-aid or federal financial participation includes, but is not limited to, any funds directly or indirectly received by MoDOT, or authorized for distribution to or through MoDOT, by the USDOT or any operating administration within the USDOT. These provisions will not apply to Commission contracts funded exclusively with state funds, or state and local funds. Any contractor, subcontractor, supplier, DBE firm, and contract surety involved in the performance of a federal-aid contract shall be aware of and fully understand the terms and conditions of the USDOT DBE Program, as the terms appear in Title 49 CFR Part 26 (as amended), the USDOT DBE Program regulations; Title 7 CSR Division 10, Chapter 8 (as amended), the Commission's DBE Program rules.
- 2. DBE Program Distinguished From Other Affirmative Action Programs.** The USDOT DBE Program established by the U.S. Congress is not the same as, and does not involve or utilize, any of the elements or authority of other state or local affirmative action programs, nor does the program rely upon state legislation or gubernatorial executive orders for implementation or authorization, other than the general authority given the Commission in Section 226.150, RSMo. The USDOT DBE Program is implemented by the Commission and MoDOT, through and in conjunction with the FHWA, FTA and FAA, as a "recipient" defined in Title 49 CFR 26.5.
- 3. Policy Regarding DBE Firms.** It is the policy of the U. S. Department of Transportation and MoDOT that businesses owned by socially and economically disadvantaged individuals have an opportunity to participate in the performance of contracts financed in whole or in part with federal funds. Consequently, the requirements of 49 CFR Part 26 (as amended) and the Commission's implementing state regulations in Title 7 CSR Division 10, Chapter 8, "Disadvantaged Business Enterprise Program", will apply to any contract with federal funds.
- 4. Opportunity for DBEs to Participate.** Each contractor, subcontractor and supplier working on a contract financed in whole or in part with federal funds shall take all necessary and reasonable steps to ensure that DBEs have an opportunity to compete for and participate in performance on project contracts and subcontracts.
- 5. Required Contract Provision.** The federal-aid contract will include the following provision, as mandated by USDOT at Title 49 CFR 26.13(b):

 - a. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of the contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of the contract, which may result in the termination of the contract or such other remedy, as the recipient deems appropriate.

In this provision, “contractor” will be defined as the contractor on the contract; “subrecipient” will be defined as any subcontractor performing the work. For the purposes of any federal-aid contract awarded by the Commission, “the recipient” will be defined as either the Commission, or MoDOT, or both. The contractor shall include this same contract provision in every supply contract or subcontract the contractor makes or executes with a subrecipient.

6. **Bank Services.** The contractor, and each subrecipient on a federal-aid contract, is encouraged to use the services of banks owned and controlled by socially and economically disadvantaged individuals. Such banking services, and the fees charged for services, typically will not be eligible for DBE Program contract goal credit. Any questions on this subject should be directed to the MoDOT External Civil Rights Administrator. See Sec 7.
7. **DBE Program Information.** DBE Program information may be obtained from the MoDOT External Civil Rights Administrator, P.O. Box 270, Jefferson City, Missouri 65102-0270. Phone (573) 526-2978, Fax (573) 526-0558, E-Mail: dbe@modot.mo.gov. It will be the duty of each contractor, for the contractor and for the contractor’s subrecipients and surety, to take the steps necessary to determine the legal obligations and limitations under the DBE Program, as an element of responsibility. It will be the duty of each certified DBE firm to know, understand and comply with the DBE firm’s legal obligations and limitations under the DBE Program, as a requirement of program participation. A surety providing a bid or contract bond will be bound by those bonds to the duties of the surety’s principal.
8. **DBE Certification, and the Missouri Unified Certification Program.** The Missouri Department of Transportation and other certifying agencies within Missouri have partnered to form the Missouri Regional Certification Committee (MRCC) and developed a Unified Certification Program (UCP) pursuant to 49 CFR 26.81 and 7 CSR 10-8.061. Only DBE firms certified by the MRCC are eligible to perform work on a federal-aid contract for DBE contract goal credit. It is the contractor’s responsibility to ensure firms identified for participation are approved certified DBE firms.

The MRCC DBE Directory can be found at the following link: http://www.modot.mo.gov/business/contractor_resources/External_Civil_Rights/DBE_program.htm
9. **DBE Program-Related Certifications Made By Bidders and Contractors.** If the bidder makes a written, express disclaimer of one or more certifications or assurances in the bid, the bid will be considered non-responsive. By submitting a bid on any call involving USDOT federal financial participation, and by entering into any contract on the basis of that bid, the contractor makes each of the following DBE Program-related certifications and assurances to USDOT, to the Commission, and to MoDOT:
 - a. The bidder certifies that management and bidding officers have reviewed and understand the bidding and project construction and administration obligations of the USDOT DBE Program regulations at Title 49 CFR Part 26 (as amended), the USDOT DBE Program regulations; Title 7 CSR Division

10, Chapter 8 (as amended), and the Commission's DBE Program rules. The bidder further certifies that the contractors management personnel on the project understand and are familiar with the requirements of these federal and state DBE Program regulations; and if the bidder was not familiar with or did not understand the requirements of these regulations, they have contacted the External Civil Rights Unit of MoDOT and have been informed as to their duties and obligations under the DBE Program regulations by MoDOT staff and/or by USDOT DBE Program staff.

- b. The bidder certifies that the bidder has complied with the federal and state DBE Program requirements in submitting the bid, and will comply fully with these requirements in performing any federal-aid contract awarded on the basis of that bid.
- c. The bidder agrees to ensure that certified DBE firms have a full and fair opportunity to participate in the performance of the contract financed in whole or in part with federal funds. The bidder certifies that all necessary and reasonable steps were taken to ensure that DBE firms have an opportunity to compete for, and perform work on the contract. The bidder further certifies that the bidder not discriminate on the basis of race, color, age, national origin or sex in the performance of the contract, or in the award of any subcontract.
- d. The bidder certifies, under penalty of perjury and other applicable penal laws that if awarded the federal-aid contract, the contractor will make a good faith effort to utilize certified DBE firms to perform DBE work at or above the amount or percentage of the dollar value specified in the bidding documents. The bidder further certifies the bidder's understanding that the bidder may not unilaterally terminate, substitute for, or replace any DBE firm that was designated in the executed contract, in whole or in any part, with another DBE, any non-DBE firm or with the contractor's own forces or those of an affiliate of the contractor, without the prior written consent of MoDOT as set out below.
- e. The bidder certifies, under penalty of perjury and other applicable penal laws that a good faith effort was made to obtain DBE participation in the contract, at or above the DBE participation contract goal. The bidder further certifies, under penalty of perjury and other applicable penal laws, that if the bidder is not able to meet the Commission's DBE contract goal, and if the bidder is not able to meet that DBE contract goal by the time the proposed DBE participation information must be submitted, within three business days after bid opening, the bidder has submitted with and as a part of the bid, a true, accurate, complete and detailed written explanation of good faith efforts to meet the DBE Contract Goal.

- f. The bidder understands and agrees that if awarded the contract the contractor is legally responsible to ensure that the contractor and each DBE subcontractor and supplier, comply fully with all regulatory and contractual requirements of the USDOT DBE Program, and that each DBE firm participating in the contract fully perform the designated tasks, with the DBE's own forces and equipment, under the DBE's own direct supervision and management. The bidder certifies, under penalty of perjury and other applicable penal laws, that if it awarded the contract and if MoDOT or the Commission determine that the contractor, a DBE or any other firm retained by the contractor has failed to comply with the DBE Program requirements or federal or state DBE Program regulations, the Commission, through MoDOT, shall have the sole authority and discretion to determine the extent of the monetary value to which the DBE contract goals have not been met, and to assess against and withhold monetary damages from the contractor in the full amount of that breach. The Commission, through MoDOT, may impose any other remedies available at law or provided in the contract in the event of a contract breach. The bidder further understands and agrees that this clause authorizes the Commission, through MoDOT, to determine and fix the extent of the damages caused by a breach of any contractual or regulatory DBE Program requirement and that the damage assessment will be enforced in addition to, and not in lieu of, any other general liquidated damages clause in the contract. By submitting a bid for a federal-aid contract, and by entering into a contract, the bidder irrevocably agrees to such an assessment of liquidated damages for DBE Program purposes, and authorizes the Commission and MoDOT to make such an assessment of liquidated damages against the contractor, and to collect that assessment from any sums due the contractor under the contract, or any other contract, or by other legal process. The bidder makes this certification, agreement and authorization on behalf of itself, its subcontractors and suppliers, and the bid bond and contract bond sureties, for each federal-aid contract.
- g. The surety upon any bid or contract bond acknowledges the surety is held and firmly bound to the Local Agency for each and every duty of the surety's principal provided in any bid or contract regarding the DBE program.

- 10. Designation of DBE firms to perform on contract** The bidder states and certifies, under penalty of perjury or other applicable penal laws, that the DBE participation information submitted in the bid or within the stated time thereafter is true, correct and complete and that the information provided includes the names of all DBE firms that will participate in the contract, the specific line item (s) that each DBE firm will perform, and the creditable dollar amounts of the participation of each DBE. The specific line item must reference the MoDOT line number and item number contained in the proposal. The bidder further states and certifies that the bidder has committed to use each DBE firm listed for the work shown to meet the DBE contract goal and that each DBE firm listed has clearly confirmed that the DBE firm will participate in and perform the work, with the DBE's own forces. Award of the contract will be conditioned upon meeting these and other listed requirements of 49 CFR 26.53.

- a. The bidder certifies the bidder's understanding that as the contractor on a contract funded in whole or in part by USDOT federal funds, the bidder may not unilaterally terminate, substitute for, or replace any DBE firm that was designated in the executed contract, in whole or in any part, with another DBE, any non-DBE firm or with the contractor's own forces or those of an affiliate, without the prior written consent of MoDOT. The bidder understands it must receive approval in writing from MoDOT for the termination of a DBE firm, or the substitution or replacement of a DBE before any substitute or replacement firm may begin work on the project in lieu of the DBE firm participation information listed in the executed contract,
1. The bidder further certifies understanding, that if a DBE firm listed in the bid or approved in the executed contract documents ceases to be certified at any time during the performance of the contract work, and a contract or subcontract with that firm has not yet been executed by the prime and subcontractor, the contractor cannot count any work performed by that firm after the date of the firm's loss of eligibility toward meeting the DBE contract goal. However, if the contractor has executed a subcontract with the firm before the DBE lost eligibility and ceased to be a certified DBE, the contractor may continue to receive credit toward the DBE contract goal for that firm's work.
 2. The bidder further certifies understanding, that if a DBE subcontractor is terminated, or fails, refuses or is unable to complete the work on the contract for any reason, the contractor must promptly request authority to substitute or replace that firm. The request shall include written documentation that the DBE firm is unwilling or unable to perform the specified contract work. The contractor shall make good faith efforts to find another DBE subcontractor to substitute or replace the dollar amount of the work that was to have been performed by the DBE firm. The good faith efforts shall be directed at finding another DBE to perform the same, or more, dollar amount of work that the DBE firm that was terminated was to have performed under the executed contract. The substitute or replacement DBE firm may be retained to perform the same or different contract work from that which the terminated firm was to have performed. The contractor shall obtain approval from MoDOT in writing before the replacement or termination of one firm with another before the work will count toward the project DBE goal.
 3. The bidder further certifies that it is the bidder's understanding that the dollar value of any work completed by a DBE firm prior to approval of the DBE's substitution or replacement, in writing, by MoDOT will not be credited toward meeting the DBE contract goal. The contractor will remain subject to appropriate administrative remedies, including but not limited to, liquidated damages for the full dollar amount that the DBE contract goal is not met. Liquidated damages will also be assessed against the contractor if the original, substitute or replacement DBE firms perform the required contract work, but are not paid in full for some or all of that work by the

contractor, including back charges. No credit toward the DBE goal will be given for any amount withheld from payment to the DBE or “back charged” against monies owed to the DBE, regardless of the purpose or asserted debt.

11. Good Faith Effort to Secure DBE Services. The bidder shall make a good faith effort to seek DBEs in a reasonable geographic area to where the solicitation for subcontracts and material is made. If the bidder cannot meet the goals using DBEs from that geographic area, the bidder shall, as a part of the effort to meet the goal, expand the search to a wider geographic area.

11.1 Bidding Procedure. The following bidding procedure shall apply to the contract, for DBE program compliance purposes.

11.2 Contract Goal, Good Faith Efforts Specified. The bidder may submit the completed “DBE Identification Submittal” information in the bid documents at the same time as, and within the sealed bid, at the time the bid is submitted. However, if that information is not completed and submitted with the initial sealed bid, then as a matter of responsiveness and responsibility, the apparent low and second low bidder shall file the completed “DBE Identification Submittal” pages to the Local Agency on or before 4:00 p.m. of the third business day after the bid opening date. The Local Agency may permit telefax transmittal. The complete and signed original documents shall be mailed to the Local Agency no later than the day of the telefax transmission. No extension of time will be allowed for any reason. The means of transmittal and the risk of timely receipt of the information shall be the bidder’s.

The bidder is responsible to ensure that all submittals are checked for accuracy. Any and all omissions, deletions, and/or errors that may affect the end result of the bid package are the sole liabilities of the bidders. The bid may be found non-responsive if the submittal is not complete and/or accurate.

11.3 Bid Rejection, Bid Security Disposition. The failure of either the apparent low bidder or the second low bidder to file the completed and executed “DBE Identification Submittal”, listing actual, committed DBE participation equal to or greater than the DBE contract goal percentage specified in the bid by 4:00 p.m. on the third business day after the bid opening, will be cause for rejection of that bid, and the bid surety bond or bid guarantee of that bidder will be forfeited to and become the property of the Local Agency upon demand.

a. Any bidder rejected for failure to submit the completed and executed “DBE Identification Submittal” information in the bidding documents, with full documentation of sufficient DBE participation to satisfy the DBE contract goal cannot submit a bid on the same, or substantially similar, project, when and if the project is re-advertised for bids. By submitting a bid on a federal-aid project, the bidder accepts and agrees to this provision, and the disposition of the bidders bid bond or guarantee, on behalf of the bidder and the bidders bid surety or guarantee.

b. The surety separately acknowledges the surety to be held and firmly bound to the Local Agency to immediately upon demand pay the face amount of the bid bond.

11.4 Good Faith Efforts Described. Good faith efforts to meet the DBE contract goal may include, but are not limited to, the following:

- a. Attending a pre-bid meeting, if any, scheduled by the department to inform DBEs of contracting and subcontracting opportunities;
- b. Advertising in general circulation trade association and socially and economically disadvantaged business directed media concerning subcontracting opportunities.
- c. Providing written notice to a reasonable number of specific DBEs so that the DBE's interest in the contract is solicited in sufficient time to allow the firm to participate effectively;
- d. Following-up on initial written notice or solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested.
- e. Maintaining documentation of responses received in the effort to solicit DBE participation.
- f. Selecting portions of work to be performed by DBEs to increase the likelihood of meeting the DBE goal, including, where appropriate, breaking down contracts into economically feasible units to facilitate DBE participation.
- g. Providing interested DBEs adequate information about plans, specifications and requirements of the contract.
- h. Negotiating in good faith with interested DBEs, not rejecting DBEs as unqualified without sound business reasons based on a thorough investigation of the DBE's capabilities.
- i. Making efforts to assist interested DBEs in obtaining bonding, lines of credit or insurance required by the Local Agency or by the bidder.
- j. Making effective use of available disadvantaged business organizations, minority bidders' groups, local, state and federal disadvantaged business assistance offices, MoDOT and other organizations that provide assistance in the recruitment and placement of DBEs.

11.5 Documentation, and Administrative Reconsideration of the Bidder's Good Faith Efforts. In the bidding documents, the bidder has the opportunity and responsibility to provide certified written documentation as to whether the bidder made a good faith effort to meet the DBE contract goal as proposed by MoDOT. Any bidder that has not met the Commission's proposed DBE contract goal at the time of bid opening must submit the completed "Certification of Good Faith Efforts to Obtain DBE Participation". The certification should be included in the bidding documents, fully and in detail, at the time its sealed bid is submitted, however, if that information is not completed and submitted with the initial sealed bid, the bidder must submit the documentation to the Local Agency on or before 4:00 p.m. of the third business day after the bid opening date. The Local Agency may permit telefax transmittal. The complete and signed original documents shall be mailed to the Local Agency no later than the day of the telefax transmission. No extension of time will be allowed for any reason. The means of transmittal and the risk of timely receipt of the information shall be the bidder's responsibility. The bidder shall

attach additional pages to the certification, if necessary, in order to fully detail specific good faith efforts made to obtain certified DBE firm participation in the proposed contract work. If the apparent low bidder appears to have failed to adequately document in the bid that the bidder made a good faith effort to achieve sufficient DBE participation in the contract work, that firm will be offered the opportunity for administrative reconsideration upon written request, before the Local Agency and MoDOT reject that bid as non-responsive. However, regardless of the DBE contract goal participation level proposed by the bidder, or the extent of good faith efforts shown, the apparent low and second low bidders shall each timely and separately file their completed and executed "DBE Identification Submittal" or face potential sanctions and the bid bond or guarantee, as specified in Sec 10 of these provisions may become the property of the Local Agency subject to the Local Agency's demand.

12. DBE Participation for Contract Goal Credit. DBE participation on the contract will count toward meeting the DBE contract goal as follows:

- a. The applicable percentage of the total dollar value of the contract or subcontract awarded to the DBE will be counted toward meeting the DBE contract goal, only if that firm is certified by MoDOT as a DBE at the time the contract or subcontract is executed, and only for the value of the work, goods or services that are actually performed, or provided, by the DBE firm itself.
- b. When a DBE performs work as a participant in a joint venture, the contractor may count toward the DBE goal only that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the contract work that the DBE has performed with the DBE's own forces. The MoDOT External Civil Rights Administrator shall be contacted in advance regarding any joint venture involving both a DBE firm and a non-DBE firm to review and approve the contractor's organizational structure and proposed operation. When a DBE subcontracts part of the work of the contract to another firm, the value of that subcontracted work may be counted toward the DBE contract goal only if the DBE's subcontractor at a lower tier is a MoDOT certified DBE. Work that a DBE subcontracts to a non-DBE firm will not count toward the DBE contract goal. The cost of supplies and equipment a DBE subcontractor purchases or leases from the prime contractor or the prime's affiliated firms, or from another non-DBE subcontractor, will not count toward the DBE contract goal.
- c. The contractor may count expenditures to a DBE subrecipient toward the DBE contract goal only if the DBE performs a commercially useful function (CUF) on that contract.

- d. A contractor may not count the participation of a DBE subcontractor toward the contractor's final compliance with the contractor's DBE contract goal obligations until the amount being counted has actually been paid to the DBE. A contractor may count 60 percent of the contractor's expenditures actually paid for material and supplies obtained from a DBE certified by MoDOT as a regular dealer, and 100 percent of such expenditures actually paid for materials and supplies obtained from a certified DBE manufacturer.
1. A regular dealer will be defined as a firm that owns, operates, or maintains a store, warehouse or other establishment in which the material, supplies, articles or equipment required and used under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the DBE firm shall be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. Packers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions will not be considered regular dealers.
 2. A DBE firm may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt, without owning, operating or maintaining a place of business where it keeps such items in stock, if the DBE both owns and operates distribution equipment for the products it sells and provides for the contract work. Any supplementation of a regular dealer's own distribution equipment shall be by a long-term lease agreement, and not on an ad hoc or contract-by-contract basis.
 3. If a DBE regular dealer is used for DBE contract goal credit, no additional credit will be given for hauling or delivery to the project site goods or materials sold by that DBE regular dealer. Those delivery costs shall be deemed included in the price charged for the goods or materials by the regular dealer, who shall be responsible for their distribution.
 4. A manufacturer will be defined as a firm that operates or maintains a factory or establishment that produces on the premises, the material, supplies, articles or equipment required under the contract and of the general character described by the project specifications. A manufacturer will include firms that produce finished goods or products from raw or unfinished material, or purchase and substantially alter goods and materials to make them suitable for construction use before reselling them.
- e. A contractor may count toward the DBE contract goal the following expenditures to certified DBE firms that are not "regular dealers" or "manufacturers" for DBE program purposes:
1. The contractor may count toward the DBE contract goal the entire amount of fees or commissions charged by a certified DBE firm for providing a bona fide service, such as professional, technical, consultant or managerial services, or for providing bonds or

insurance specifically required for the performance of the federal-aid contract, if the fee is reasonable and not excessive, compared with fees customarily charged for similar services.

2. The contractor may count toward the DBE contract goal the entire amount of that portion of the construction contract that is performed by the DBE's own forces and equipment, under the DBE's supervision. This includes the cost of supplies and material ordered and paid for by the DBE for contract work, including supplies purchased or equipment leased by the DBE except supplies and equipment a DBE subcontractor purchases or leases from the prime contractor or its affiliates.
- f. A contractor may count toward the DBE contract goal 100 percent of the fees paid to a certified DBE trucker or hauler for delivery of material and supplies required on a job site, but not for the cost of those materials or supplies themselves, or for the removal or relocation of excess material from or at the job site, when the DBE certified trucking company is not also the manufacturer of or a regular dealer in those material and supplies, provided that the trucking or hauling fee is determined by MoDOT to be reasonable as compared with fees customarily charged by non-DBE firms for similar services. The certified DBE trucking firm shall also perform a CUF on the project and not operate merely as a pass through for the purposes of gaining credit toward the contract DBE goal. Prior to submitting a bid, the contractor shall determine, or contact the MoDOT External Civil Rights Administrator for assistance in determining, whether a DBE trucking firm will meet the criteria for performing a CUF on the project.
- g. The contractor will receive DBE contract goal credit for the fees or commissions charged by and paid to a DBE broker who arranges or expedites sales, leases or other project work or service arrangements, provided that those fees are determined by MoDOT to be reasonable and not excessive, as compared with fees customarily charged by non-DBE firms for similar services. A broker will be defined as a person or firm that does not own or operate the delivery equipment necessary to transport materials, supplies or equipment to or from a job site; a broker typically will not purchase or pay for the material, supplies or equipment, and if the broker does purchase or pay for those items, those costs will be reimbursed in full. In most instances, the broker is merely the entity making arrangements for delivery of material, supplies, equipment, or arranging project services. To receive DBE contract goal credit, MoDOT must determine that the DBE broker has performed a CUF in providing the contract work or service.

13. **Performing a Commercially Useful Function (CUF).** No credit toward the DBE contract goal will be allowed for contract payments or expenditures to a DBE firm, if that DBE firm does not perform a CUF on that contract. A DBE performs a CUF when the DBE is solely responsible for execution of a distinct element of the contract work, and the DBE actually performs, manages and supervises the work involved with the firm's own forces. To perform a CUF, the DBE alone shall be responsible, and alone must bear the risk, for the material and supplies used on

the contract, selecting a supplier or dealer from those available, negotiating price, determining quality and quantity, ordering the material and supplies, installing those materials with the DBE's own forces and equipment and paying for those materials and supplies. The amount the DBE firm is to be paid under the contract shall be commensurate with the work the DBE actually performs and the DBE credit claimed for the DBE's performance.

- 13.1 Contractor's Obligation to Monitor CUF Performance.** It shall be solely the contractor's responsibility to ensure that all DBE firms perform a CUF. Further, the contractor is responsible to, and shall ensure that each DBE firm fully performs the DBE's designated tasks, with the DBE's own forces and equipment, under the DBE's own direct supervision and management. MoDOT is under no obligation to warn the contractor that a DBE's participation may not count toward the goal, other than through official notification with an opportunity for administrative reconsideration at the conclusion of the contract work.
- 13.2 DBEs Must Perform a Useful and Necessary Role in Contract Completion.** A DBE does not perform a commercially useful function if the DBE's role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.
- 13.3 DBEs Must Perform The Contract Work With Their Own Workforces.** If a DBE does not perform and exercise responsibility for at least 30 percent of the total cost of the DBE's contract with the DBE's own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, MoDOT will presume that the DBE is not performing a commercially useful function.
- 13.4 Factors Used to Determine if a DBE Trucking Firm is Performing a CUF.** The following factors will be used to determine whether a DBE trucking company is performing a commercially useful function (CUF):
- a. To perform a CUF, the DBE trucking firm shall be completely responsible for the management and supervision of the entire trucking operation that the DBE is being paid for on the contract work. There shall not be contrived arrangement, including but not limited to, any arrangement that would not customarily exist under regular construction project subcontracting practices for the purpose of meeting the DBE contract goal.
 - b. The DBE must own and operate at least one fully licensed, insured and operational truck used in performance of the contract work. This does not include a supervisor's pickup truck or a similar vehicle that is not suitable for hauling the necessary materials or supplies.
 - c. The DBE receives 100 percent contract goal credit for the total reasonable amount the DBE is paid for the transportation services provided on the contract using trucks the DBE owns, insures and operates, using drivers that the DBE employs.
 - d. The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE firm that leases trucks from another DBE will receive credit for the total fair market value actually paid for of the transportation services the lessee DBE firm provides on the contract.

- e. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. However, the DBE who leases trucks from a non-DBE is entitled to DBE contract goal credit only for the brokerage fee or commission the DBE receives as a result of the lease arrangement. The DBE will not receive credit for the total value of the transportation services provided by the non-DBE lessee. Furthermore, no DBE contract goal credit will be allowed, even for brokerage fees or commissions, where the DBE leases the trucks from the contractor on the project or a firm owned, controlled by, or affiliated by ownership or control to, the contractor.
- f. For purposes of this section, the lease shall indicate that the DBE firm leasing the truck has exclusive use of and control over the truck. This will not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, provided the lease gives the DBE absolute priority for and control over the use of the leased truck. Leased trucks shall display the name and identification number of the DBE firm that has leased the truck at all times during the life of that lease.

13.5 MoDOT Makes Final Determination On Whether a CUF Is Performed. MoDOT and the Commission will have the final authority to determine whether a DBE firm has performed a CUF on a federal-aid contract. To determine whether a DBE is performing or has performed a CUF, MoDOT will evaluate the amount of work subcontracted by that DBE firm or performed by other firms, and the other firm's forces and equipment. Any DBE work performed by the contractor or by employees or equipment of the contractor will be subject to disallowance under the DBE Program, unless the independent validity and need is demonstrated.

14. Verification of DBE Participation, Liquidated Damages.

14.1 Prior to final payment by the Local Agency, the contractor shall file with the Local Agency a detailed list showing each DBE used on the contract work, and the work performed by each DBE. The list shall show the actual dollar amount paid to each DBE for the creditable work on the contract, less any rebates, kickbacks, deductions, withholdings or other repayments made. The list shall be certified under penalty of perjury, or other law, to be accurate and complete. MoDOT and the Commission will use this certification and other information available to determine if the contractor and the contractor's DBEs satisfied the DBE contract goal percentage specified in the contract and the extent to which the DBEs were fully paid for that work. The contractor shall acknowledge, by the act of filing the detailed list, that the information is supplied to obtain payment regarding a federal participation contract.

14.2 Failure on the part of the contractor to achieve the DBE participation to which the contractor committed in the contract may result in liquidated damages being imposed on the contractor by the Commission for breach of contract and for non-compliance. If the contract was awarded with less than the original DBE contract goal proposed by the Commission, the revised lower amount shall become the final DBE contract goal, and that goal will be used to determine any liquidated damages to be assessed. Additionally, the Commission or MoDOT may impose any other administrative sanctions or remedies available at law or provided by the contract in the event of breach by the contractor by failing to satisfy the contractor's DBE contract goal commitment. However, no liquidated damages will be

assessed, and no other administrative sanctions or remedies will be imposed when, for reasons beyond the control of the contractor and despite the good faith efforts made by the contractor, the final DBE contract goal participation percentage was not achieved. The contractor will be offered the opportunity for administrative reconsideration of any assessment of liquidated damages, upon written request. The administrative reconsideration officer may consider all facts presented, including the legitimacy or business reason for back charges assessed against a DBE firm, in determining the final amount of liquidated damages.

- 15. Prompt Payment Requirements.** In accordance with Title 49 CFR 26.29, the contractor shall comply with the prompt payment requirements of that regulation, Section 34.057, RSMo., the provisions of the Commission’s rule 7 CSR 10-8.111 and the contract. By bidding on a federal-aid contract, and by accepting and executing that contract, the contractor agrees to assume these contractual obligations, and to bind the contractor’s subrecipients contractually to those prompt payment requirements at the contractor’s expense.

- 16. Miscellaneous DBE Program Requirements.** In accordance with Title 49 CFR Part 26 and the Commission’s DBE Program rules in Title 7 CSR Division 10, Chapter 8, the contractor, for both the contractor and for the contractor’s subcontractors and suppliers, whether DBE firms or not, shall commit to comply fully with the auditing, record keeping, confidentiality, cooperation and anti-intimidation or retaliation provisions contained in those federal and state DBE Program regulations. By bidding on a federal-aid contract, and by accepting and executing that contract, the contractor agrees to assume these contractual obligations, and to bind the contractor’s subrecipients contractually, at the contractor’s expense.

CONTRACT AGREEMENT

Gateway Green Light Phase 4: Fiber Expansion & ITS Device Installations CMAQ 5414(632)

COUNTY-CONTRACTORS AGREEMENT

This agreement, made by and between , hereinafter called the CONTRACTOR, and the COUNTY of St. Charles, St. Charles, Missouri, hereinafter called the COUNTY.

Now therefore, CONTRACTOR and COUNTY, in consideration of mutual covenants herein set forth, agree as follows:

1. CONTRACT PRICE

COUNTY shall pay CONTRACTOR in current funds, for completion of the work designated in Article 2 in accordance with the Contract Documents, an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work multiplied by the quantity of that item as indicated in the CONTRACTOR'S Bid, for the total amount of:

(in words)

(\$ _____)
(in figures)

2. SCOPE OF THE WORK

The installation of the proposed fiber optic cables and conduit, network communication devices, and Intelligent Transportation System (ITS) devices for the Gateway Green Light Phase 4 Project.

3. TIME OF COMPLETION

The CONTRACTOR shall commence clearing and grubbing operations upon receiving the written Notice to Proceed from the COUNTY. Project completion shall be defined as 100% completion of all items of the project including correction of deficiencies. The project shall be fully complete under this contract within

180 Calendar Days

from the date of the written "Notice to Proceed". The rate of progress and the time of completion are essential conditions of this Contract. Liquidated damages will be charged as specified herein.

Should the CONTRACTOR, or in case of default, the surety fail to complete the work within the calendar days specified, a deduction of the amount will be made for each and every calendar day that the contract remains uncompleted in accordance with the requirements of Standard Specifications Section 108.8.

In addition to the Liquidated Damages that shall be charged for failure to achieve project completion as specified, a Disincentive Clause has also been established. The Clause is further defined under Article 13 Liquidated Damages and in Section 2.3 "Contract Time for Completion of Work" of the Job Special Provisions. Failure to reach the date established in accordance with the Clause will result in disincentives being charged as specified herein.

4. PAY QUANTITIES AND UNIT PRICES

The COUNTY shall pay the CONTRACTOR for all work done on the basis of final computations for all work acceptably completed according to this Contract, at the unit price shown on the BID FORM for the quantity actually installed.

5. PROGRESS PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment monthly according to "General Requirements" section entitled "Progress Payments". Applications for Payment will be processed by the COUNTY. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as approved by the ENGINEER. All progress payments will be on the basis of the progress of the work measured by the schedule of values, and in the case of Unit Price work based on the number of units completed. No progress payments will be made if the CONTRACTOR does not have a current progress schedule accepted by the COUNTY.

6. FINAL PAYMENT AND ACCEPTANCE

When all work provided for under this contract has been completed in conformance with the specifications and requirements of this contract, and accepted without regard to the provisions of guarantee as provided under the terms of this contract, a final cost estimate shall be prepared by the CONTRACTOR and approved by the COUNTY ENGINEER and filed with the COUNTY and with the CONTRACTOR within fifteen (15) days after the date of acceptance of the work as a statement of the amount due the CONTRACTOR. This estimate shall be based on appropriate unit quantities of material placed, including any charges for extra work ordered and properly chargeable under this contract, and deducting any sum properly deductible under this contract.

7. THE CONTRACT DOCUMENTS

Up to four (4) full sets of drawings and two (2) full sets of specifications will be provided to the successful CONTRACTOR by St. Charles County at no cost to the CONTRACTOR. Additional sets may be purchased by the CONTRACTOR at the printing cost plus ten percent (10%) for handling.

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the work consist of the following:

- a. This County-Contractors Agreement.
- b. Exhibits to this County-Contractors Agreement.
- c. Performance and Payment Bonds.
- d. Notice of Award.
- e. Notice to Proceed.
- f. Specification Sections defined in the Table of Contents
- g. Drawings with each sheet bearing the following general title:

Gateway Green Light Phase 4: Fiber Expansion & ITS Device Installations

Sheet titles are listed on the cover sheet.

- h. Addenda _____ through _____.
- i. Bid Form.
- j. All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents, which may be delivered or issued after the Effective Date of the Agreement, and are not attached hereto.

There are no Contract Documents other than those listed in this article. The Contract Documents may be amended, modified, or supplemented only in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

The requirements of the Contract Documents may be supplemented and minor variations and deviations in the work may be authorized, by a Field Order, or ENGINEER'S written interpretation or clarification.

8. RATES OF PAY

The CONTRACTOR hereby agrees that the prevailing rates of pay shall be paid to skilled and unskilled labor employed under the terms of this contract. The CONTRACTOR shall forfeit to the COUNTY ten (10) dollars for each workman employed, for each calendar day, or portion thereof, such workman is paid less than the said stipulation rates for any work done under said contract, by him or by any Subcontractor under him.

9. PERFORMANCE OF THE WORK

The CONTRACTOR, acting as an independent CONTRACTOR, shall furnish all supervision, labor, equipment, tools, materials, and supplies necessary to perform and shall perform all work in accordance with the Contract Documents and any applicable County ordinances, and state and federal laws. CONTRACTOR represents and warrants that he has special skills which qualify him to perform the work in accordance with the Contract and that he is free to perform all such work and is not a party to any other agreement, written or oral, the performance of which would prevent or interfere with the performance, in whole or in part, of the work. The prime CONTRACTOR must perform, with its own organization, contract work amounting to not less than 40% of the total original contract.

10. SUPERVISION

The CONTRACTOR shall supervise and direct the work, using the CONTRACTOR'S best skill and attention. The CONTRACTOR shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract, unless Contract Documents give other specific instructions concerning those matters.

11. SAFETY

The COUNTY and the CONSULTING ENGINEER may have personnel on the project site from time to time. All information and/or instructions shall be requested in writing by the CONTRACTOR and responded to in writing. No opinion or instructions will be given to the CONTRACTOR on safety.

The CONTRACTOR shall be solely responsible for the safety on and around the project site including shoring, ladders, drop cords, scaffolding, barricades, construction means, methods, techniques, sequences and procedures.

12. INDEMNITY

To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the COUNTY, CONSULTING ENGINEER, their consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property other than the work itself, including loss of use resulting there from, but only to the extent caused in whole or in part by negligent acts or omissions of the CONTRACTOR, a Subcontractor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity, which would otherwise exist as to a party or person described in this Section.

In claims against any person or entity indemnified under the above paragraph by an employee of the CONTRACTOR, a Subcontractor, or anyone directly or indirectly employed by them or anyone whose acts they may be liable, the indemnification obligation under this paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or a Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

The obligations of the CONTRACTOR under this Section shall not extend to the liability of the ENGINEER, the ENGINEER'S consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions, after requested in writing by the CONTRACTOR, or instructions by the ENGINEER, the ENGINEER'S consultants, and agents and employees of any of them provided such instructions or failure to give is the primary cause of the injury or damage.

13. LIQUIDATED DAMAGES

Whenever time is mentioned in this contract, time shall be and is of the essence of this contract. The COUNTY would suffer loss should the CONTRACTOR fail to have the work embraced in this contract fully completed on or before the time above specified: THEREFORE, in order to adjust satisfactorily the damage on account of such failure, and the parties hereto realizing that it might be impossible to compute accurately or estimate the amount of such loss or damages which the COUNTY would sustain by reason of failure to complete fully said work within the

time required by this contract, the CONTRACTOR hereby covenants and agrees to pay the COUNTY, as and for liquidated damages for each and every calendar day during which work remains incomplete and unfinished. Any sum which may be due the COUNTY for such damages shall be deducted and retained by the COUNTY from any balance which may be due the CONTRACTOR for progress payments or when said work shall have been finished and accepted. But such provisions shall not release the bond of the CONTRACTOR from liability according to its terms. In case of failure to complete, the COUNTY will be under no obligation to show or prove any actual or specific damage.

Therefore, the CONTRACTOR will be charged with liquidated damages specified in the amount of **\$1,200** per calendar day for each full day that all work for the construction of:

the proposed conduit and installation of proposed fiber optic cables, network communication devices, and ITS devices for the Gateway Green Light Phase 4 Project

is not completed in excess of the limitation as specified elsewhere in this special contract. It shall be the responsibility of the ENGINEER to determine the quantity of excess days.

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

14. TERMINATION BY COUNTY OR CONTRACTOR

- a. If the CONTRACTOR is adjudged to be bankrupt, or if the CONTRACTOR makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of the CONTRACTOR's insolvency, or if the CONTRACTOR fails, except in cases for which extension of time is provided, to make progress in accordance with the Construction Schedule, or if the CONTRACTOR fails to make prompt payment to Subcontractors or prompt payment for material or labor, or disregards laws, ordinances or the instructions of the COUNTY, or otherwise breaches any provision of the Contract, the COUNTY may, without prejudice to any other right or remedy, terminate the Contract by giving written notice to the CONTRACTOR and his surety. Upon such notification the COUNTY shall be entitled to take possession of the work and of all materials and equipment thereon and finish the work by whatever method the COUNTY may deem expedient, which may include, but is not limited to, the COUNTY itself completing the work or the COUNTY hiring others to complete said work. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Sum shall exceed the expenses of finishing the work, including additional engineering, architectural, managerial and administrative expenses, and liquidated damages, such excess shall be paid to the CONTRACTOR. If such expenses and damages exceed the unpaid balance of the Contract Sum, the CONTRACTOR shall pay the difference to the COUNTY promptly upon demand. In the event of termination pursuant to this paragraph, the CONTRACTOR, upon the request of the COUNTY, shall promptly:

1. Assign to the COUNTY in the manner and to the extent directed by the COUNTY all right, title and interest of the CONTRACTOR under any subcontracts, purchase orders and construction equipment leases to which the CONTRACTOR is a party and which relate to the work or to construction equipment required therefore, and
 2. Make available to the COUNTY to the extent directed by the COUNTY all construction equipment owned by the CONTRACTOR and employed in connection with the work.
- b. Performance of the work hereunder may be terminated by the COUNTY by giving three (3) days prior written notice to the CONTRACTOR if the COUNTY, in its sole discretion, decides to discontinue or suspend construction. In the event of such termination, as opposed to termination pursuant to paragraph (a) of this Article 15, the Contract Sum shall be reduced in an equitable manner by agreement between the parties.

15. AUDIT CLAUSE

Examination of Records

The CONTRACTOR's records which shall include, but not be limited to, accounting records (hard copy, as well as computer readable data), written policies and procedures, Subcontractor files, indirect cost records, overhead allocation records, correspondence, instructions, drawings, receipts, vouchers, memoranda, and any other data relating to this contract shall be open to inspection and subject to audit and/or reproduction by the County Auditor, or a duly authorized representative from the COUNTY, at the COUNTY's expense. The CONTRACTOR shall preserve all such records for a period of three years, unless permission to destroy them is granted by the COUNTY, or for such longer period as may be required by law, after the final payment. Since the CONTRACTOR is not subject to the Missouri Sunshine Law (Chapter 610, RSMo), information regarding the CONTRACTOR's operations obtained during audits will be kept confidential.

IN WITNESS WHEREOF THE PARTIES HERETO HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED IN FOUR (4) ORIGINAL COUNTERPARTS AS OF THE DAY AND YEAR LAST WRITTEN BELOW.

Executed by the County this _____ day of _____, 20____

Executed by the Contractor this _____ day of _____, 20____

CONTRACTOR

ST. CHARLES COUNTY, MISSOURI

By _____

By _____

Title _____

Title _____

ATTEST:

ATTEST:

By _____

By _____

Title _____

County Registrar

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that there is a balance otherwise unencumbered to the credit of the appropriation to which this contract is chargeable, and a cash balance otherwise unencumbered in the treasury to the credit of the fund from which payment is to be made, each sufficient to meet this obligation.

SIGNED: _____
Bob Schnur, Director of Finance

DATED: _____

PAYMENT/PERFORMANCE BONDS

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the Undersigned _____
_____ of _____
(Firm*)

*a (corporation) (partnership) duly authorized by law to do business as a construction CONTRACTOR.(hereinafter called the "Surety"), a corporation duly authorized to do a Surety business under the laws of the State of Missouri, are held firmly bound unto the County of St. Charles, (hereinafter called the "COUNTY"), in the penal sum of

_____ Dollars (\$_____),

lawful money of the United States, for the payment of which to be made unto said COUNTY, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents as follows:

The conditions of this obligation are such that, whereas on the _____
_____ day of _____, 20____, the said Principal entered into a written Agreement, which Agreement is hereby made a part hereof, with the said COUNTY for the construction of:

The proposed conduit and installation of proposed fiber optic cables, network communication devices and ITS devices for the Gateway Green Light Phase 4 Project.

NOW THEREFORE, if the said Principal shall faithfully and properly perform the foregoing contract according to all terms thereof, and shall, as soon as the work contemplated by said contract is completed, pay to the proper parties all amounts due for all labor and material required by this contract in the construction work, and all insurance premiums for both compensation and all other kinds of insurance on said work, and for all labor performed in such work whether by subcontractor or otherwise, then this obligation shall be void, otherwise it shall remain in full force and effect, and may be sued on for the use and benefit by any person furnishing material or performing labor, either as an individual or as a subcontractor, for any CONTRACTOR in the name of said COUNTY.

Every Surety on this bond shall be deemed held, any contract on the contrary notwithstanding, to consent without notice:

- a) To the extension of time to the CONTRACTOR in which to perform the contract.
- b) To changes in the plans, specifications, amount of work or contract.

IN TESTIMONY WHEREOF, the Parties hereunto have caused the execution hereof in _____ original counterparts as of the _____ day of _____, 20____.

(SEAL)

Attest:

_____ BY: _____

(SEAL)

Attest:

_____ BY: _____

PAYMENT AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENT, that we, _____

(Principal and Address)

as Principal, and , _____

(Surety and Address)

as Surety, are held and firmly bond unto the County of St. Charles, Missouri, hereinafter called OBLIGEE, in the amount of \$ _____, for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors, trustees, and assigns firmly by these presents.

WHEREAS, the Principal has entered into a contract with OBLIGEE for _____

The installation of fiber optic cables and conduit, network communication devices, and ITS devices for the Gateway Green Light Phase 4 Project.

and

WHEREAS; the OBLIGEE requires that Principal enter into a surety bond satisfying the terms of Section 107.170 R.S. Mo.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such, that if the Principal shall pay, or cause to be paid in full, the claims of all persons performing labor upon, or furnishing materials to be used in, or furnishing appliances, equipment or power contributing to such work under said contract, then this obligation shall be void; otherwise to remain in full force and effect. The total amount of surety's liability under this bond shall in no event exceed the amount hereof, and in no event shall the undertaking hereby be construed to impose liability on the surety beyond that required by the terms of Section 107.170 R.S. Mo.

Signed and sealed this of the _____ day of _____, 20____.
PRINCIPAL

BY: _____
SURETY

BY: _____

(ACKNOWLEDGMENT FOR PRINCIPAL)

(ACKNOWLEDGMENT AND POWER OF ATTORNEY FOR SURETY)

GENERAL REQUIREMENTS

GENERAL REQUIREMENTS

1. SUMMARY OF WORK

The work to be performed under this Contract shall consist of: the installation of fiber optic cables and conduit, network communication devices, and Intelligent Transportation System (ITS) devices for the Gateway Green Light Phase 4 Project.

2. GENERAL

The Federal Government is participating in the cost of construction of this project. St. Charles County reserves the right to add or reduce any quantity of all Contract bid items at the Contract unit price for that item.

3. DRAWINGS

Accompanying these specifications are the following drawings, which are to illustrate and become a part of these specifications:

<i>Description</i>	<i>Sheet Number</i>
Title Sheet	Cover
Summary of Quantities	G1
General Notes	G1
Traffic Control Plans	G2 – G4
Typical Details	G5 – G6
CCTV Plans	C1 – C6
Video Detection Upgrades / Count Stations Plans	D1 – D5
Wireless Travel Time Detection Plans	W1-W2
DMS Plans	DM1 – DM6
Fiber Expansion & Cross Connect Plans	F1 – F25
Network Diagrams	N1 – N41

MoDOT and St. Charles County Standard Plans are not included in the construction plans but are included by reference. St Charles County Standard Plans shall be considered first in order of precedence, followed by the MoDOT Standard Plans. A listing of the necessary Standard Plans is included in the supplemental Standard Drawings section of these specifications. These drawings and specifications are intended to be so coordinated that any work included in one and not in the other, shall be executed as if included in both.

All work contemplated and described in the specifications shall be carried out in accordance with the general and detail drawings made a part thereof and with such additional detail drawings and directions as may be given from time to time during the progress of the work. On all drawings, computed dimensions shall take precedence over measurements by scale and full-sized details over scale drawings.

The CONTRACTOR shall maintain a record set of drawings at the site and mark thereon any changes as the work proceeds. These drawings shall indicate the vertical and horizontal location of improvements in plan and profile view.

Upon completion of the work, these “as-built” changes shall be transferred, with changes clearly identified, onto blueprint drawings which will be furnished to the COUNTY. These “as-built” drawings, certified by a Land Surveyor or ENGINEER registered in the State of Missouri shall be delivered to the Project ENGINEER for his review and approval prior to final payment.

4. INSURANCE

- a. Errors and Omissions (Professional Liability): With limits of not less than \$1.0 million per claim/\$2.0 million aggregate covering all services provided by the Contract. Coverage to be written on a claims-made basis.
- b. Commercial General Liability (CGL): \$1,000,000/\$3,000,000 including Products/Completed Operations. CGL coverage shall cover all liability arising from premises, operations, independent contractor and personal injury and liability assumed under an insured contract.
- c. Automobile Liability: covering liability arising out of the use of any owned, hired, leased or non-owned vehicle in an amount of no less than \$1,000,000 per occurrence.
- d. Workers Compensation/Employer’s Liability: Statutory WC limits as required by the Statutes of the State of Missouri, (or a qualified self-insurer) and Employers Liability in an amount of no less than \$1.0 million.
- e. Excess Umbrella: liability with a limit of no less than \$1,000,000 in excess of the above policies.
 1. All insurance to be written through a company duly authorized to do business in the State of Missouri with an A.M. Best Rating of A-IX or higher.
 2. The Professional Liability, CGL, Automobile and Umbrella policies shall be endorsed to include the County as an additional insured and provide for 30 days advance written notice of any material change.
 3. A Waiver of Subrogation in favor of the County shall be endorsed on each of the policies.
 4. The required insurance provided by the “Firm” shall be primary insurance with respect to any other insurance or self-insurance programs maintained by the County.
 5. A Certificate of Insurance evidencing the above coverage(s) together with a copy of the required endorsements shall be provided to the County prior to the commencement of any work.

5. PERFORMANCE BOND

A bond will be required for the full amount of the contract price with a surety company, conditioned for the faithful performance of this Contract and the guarantee of the work. Both Contract and bond shall be executed in quadruplicate and in a form acceptable to the COUNTY. The cost of the performance bond shall be incidental to the price bid.

6. PAYMENT AND MATERIALS BOND

A bond will be required for the full amount (100 percent Labor and Material) of the contract price with a surety company. The bond shall be executed in quadruplicate and in a form acceptable to the COUNTY. The cost of the payment and materials bond shall be incidental to the price bid.

7. GOVERNING STANDARD SPECIFICATIONS AND DEFINITION CHANGES

The general requirements, provisions and technical specifications governing the completion of the work contemplated shall be the **Missouri Standard Specifications for Highway Construction, current edition** (hereinafter referred to as the Standard Specifications) for the roadway and insurance requirements. The Missouri Standard Specifications for Highway Construction, current edition, shall take precedence over other specifications.

8. REFERENCE STANDARDS

Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard, specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner, CONTRACTOR, or ENGINEER, or any of their Consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any of ENGINEER's Consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the Work.

9. COORDINATION WITH OTHER CONTRACTORS

There is a possibility that other CONTRACTORS may be working in the vicinity during the construction of this Contract. The CONTRACTOR shall inform himself fully of the conditions relating to construction and labor under which the work will be or is now being performed, and the CONTRACTOR must employ as far as possible such methods and means in carrying out his work as will not cause any interruptions or interference to any other CONTRACTOR.

When necessary for proper prosecution of work, each CONTRACTOR shall permit the other access through the overlapping construction areas and the use of any access or haul roads constructed by others.

10. SHOP DRAWINGS

In all cases where details or shop drawings are required, the CONTRACTOR shall submit (five copies) to the COUNTY ENGINEER, St. Charles County, Missouri for review before any of the work is begun. Should extensive changes be necessary, corrected drawings shall be submitted for final review. Five (5) copies of the final reviewed drawings will be required. (Two (2) copies will be returned to the CONTRACTOR.)

The CONTRACTOR shall thoroughly review the shop drawings for compliance with the Contract drawings and specifications before submitting them to the COUNTY ENGINEER. The shop drawings shall be stamped "reviewed" by the CONTRACTOR BEFORE submitting them to the COUNTY ENGINEER.

When it is required to submit material or equipment, shop drawings, manufacturer's brochures, or samples for review, said submittals are to be made to the COUNTY ENGINEER through the General CONTRACTOR.

Each item submitted for approval must be identified by reference to specification paragraph number and/or plan drawing number.

If the item described or submitted is not exactly as specified by the plans and/or specifications, the procedure shall be as follows:

With the submittal CONTRACTOR shall state in writing that the item is not exactly as specified by the plans and/or specifications and he shall state the difference.

At least five (5) copies of the shop drawings, manufacturer's brochures, or samples shall be submitted to the COUNTY ENGINEER

The COUNTY ENGINEER will then evaluate the submittal and will transmit the accepted or rejected submittal to the CONTRACTOR.

When substitutions for the specified items are approved, the submitting CONTRACTOR will be responsible for all costs incurred due to the changes from plans and/or specifications. This includes additional design costs, material and equipment costs and any appurtenant cost that may be incurred by other trades.

The COUNTY and/or CONSULTING ENGINEER will not be responsible for errors in the shop drawings which their examination and scrutiny may have failed to detect, and the CONTRACTOR shall be absolutely responsible for the correctness of the drawings furnished by him or his subcontractors.

Within two (2) weeks after signing the Contract between the COUNTY and the CONTRACTOR, the CONTRACTOR shall submit a complete list of shop drawings and samples for items of work and the approximate dates on which they will be submitted for approval. The CONTRACTOR'S first payment can be withheld if this requirement is not met.

The following shop drawings and/or manufacturers data shall be required:

Concrete Mix Design (each type to be used)	Fiber Optic Cables
Asphalt Mix Design (each type to be used)	Sign Materials
DMS Equipment	DMS Structural Equipment
ITS Surveillance and Detection Devices	
Communication Network Switches and Equipment	

11. TRUCK TICKETS

All items, except reinforcing, structural and fabricated steel, to be paid for on the basis of weight, shall be weighed on a licensed scale and the weight ticket issued at the scale for each load of material shall be furnished to the ENGINEER at the time of delivery of the material.

Tickets shall show the following information:

- Date
- CONTRACTOR's Name
- Job Name
- Gross and Tare Weights or Volume
- Time Left Plant
- Ticket Number
- Load Number
- Type of Material Delivered

12. RIGHTS-OF-WAY

All improvements will be constructed within the public right-of-way shown on the plans.

Upon completion of the contract work, the CONTRACTOR shall restore, without additional cost to the COUNTY, all improvements within the right-of-way to substantially the same conditions as they were at the commencement of the construction work, unless otherwise noted.

At Project Closeout, the ENGINEER will ensure the conditions of areas located outside of the Existing right-of-way were not damaged, and if damaged were repaired to the same as at the commencement of the work. Non-approval can result in the withholding of final payment.

All costs resulting from the maintenance or improvement of areas outside the construction limits depicted on the plans – such as incidental grading, and the repair of improvements damaged by the CONTRACTOR – shall be borne by the CONTRACTOR.

13. INSPECTIONS

The CONTRACTOR shall assure that representatives of the COUNTY, MoDOT and FHWA shall have the privilege of inspecting and reviewing work done by the CONTRACTOR or his subcontractors on this project, in accordance with Section 105.10 of the Standard Specifications.

The CONTRACTOR shall also assure that all of his subcontractors, if any, maintain all books, documents, papers and other evidence pertaining to cost incurred in connection with the Contract and make such materials available at such CONTRACTOR's office at all reasonable times during the contract period.

The COUNTY ENGINEER or his representative on the following items of work will generally make inspections and job control tests. It shall be the responsibility of the CONTRACTOR to notify the COUNTY ENGINEER or his representative by 3:00 P.M. of the day preceding any operation that affects these items.

All Earthwork Operations	Backfill (soil against concrete)
All Concrete Operations	All storm sewer pipe installation
All Asphalt Operations	All aggregate base installation
Backfill (storm sewer)	Temporary pavement installation
Seeding & Sodding	Striping and signage installation
Erosion control installation	All prefabricated bridge preparations & installation
Lighting installation	All mailbox and bench installations
Communication Network Devices	Fiber Optic Cables
ITS Devices and Equipment (incl. DMS)	Guardrail installation

If any operation which affects the above mentioned items is to be performed on a Monday, notification must be made to the COUNTY ENGINEER or his representative by 3:00 P.M. of the preceding Friday. The lack of supervision or inspection by the COUNTY ENGINEER or his representative shall not relieve the CONTRACTOR of the responsibility to construct the project according to the plans and specifications. Any work performed or materials used without authorization by the COUNTY ENGINEER or his representative may be ordered removed and replaced at the CONTRACTOR'S expense.

The COUNTY, MoDOT and FHWA shall also reserve the right to inspect any fabricated or manufactured items at the place of fabrication and/or manufacture, in accordance with Section 105.10 of the Standard Specifications. The COUNTY'S representative shall be notified in advance of the beginning of the shop work so the COUNTY'S representative may be present if the COUNTY'S representative desires. Requests for shop inspection shall be made a minimum of five (5) working days in advance of the need for inspection. The COUNTY'S, MoDOT's and FHWA's representative shall have full access to all parts of the shop or project site where material is being fabricated or assembled for inspection, and shall be provided with every reasonable facility for determining the character of material, acceptability of fabrication, and the masses of the pieces.

14. LABOR RECORDS

The prime CONTRACTOR and each subcontractor on all projects are required to submit one certified copy of labor payrolls for each week that work is in progress. In the event that work is temporarily suspended, the last payroll shall be marked appropriately to note that it will be the last payroll until work is resumed.

Payrolls to be submitted shall be checked for compliance with the contract requirements. All payrolls shall be retained by the local agency for a period of three years after the date on which the local agency received reimbursement of their final invoice from MoDOT, during which time they shall be open to inspection by MoDOT.

A certified copy of each weekly payroll must be submitted by the prime CONTRACTOR within 7 days of the payment date of the payroll. The certification may be attached to the payroll or may be on the payroll itself. The prime CONTRACTOR will be responsible for the submittal of payrolls and certifications for all subcontractors on the project.

The local agency shall check payrolls, with the following checks being made to insure proper labor compliance:

- a. The employee's full name as shown on his social security card, his address and social security number shall be entered on each payroll;
- b. Check the payroll for correct employee classification;
- c. Check the payroll for correct hourly wage and, where applicable, the correct overtime hourly rate;
- d. Check the daily and weekly hours worked in each classification including actual overtime hours worked (not adjusted hours);
- e. All deductions are listed and the net wage shown. The Form WH-347 (explained in a subsequent paragraph) is to be used where fringe benefits are paid into established programs. However, if fringe benefits are paid in cash to the employee, the amount shall be indicated on the payroll.
- f. To assure that the payrolls are arithmetically correct, approximately 10% of the extensions on the first three payrolls shall be checked. The CONTRACTOR is to be advised of any violations noted on the labor payroll. All the errors are to be corrected by means of a supplementary payroll.
- g. All checking by the local agency shall be made in red pencil and initialed by the checker.
- h. Final payrolls shall be marked "Final" or "Last Payroll".
- i. A record of all payrolls is to be maintained by the local agency.

The prime CONTRACTOR and each subcontractor are required to submit a weekly statement of compliance within seven days of the payment date of each payroll period. This statement, Form WH-347, is to be submitted in the prescribed form as set out in the "Required Contract Provisions" included in the contract. A record of all statements is to be maintained by the COUNTY.

15. LABOR POSTINGS

The following information is required to be posted on the project and in the St. Charles County Highway Department office. Postings of any such other information as required by State and/or Federal wage/labor laws shall also be made.

- a. In the COUNTY ENGINEER'S office:
 1. Missouri Equal Employment Opportunity Notice
 2. PR-206, Title 18, Section 1020, Notice on False Statements
- b. On the project:
 1. Federal Equal Employment Opportunity Notice
 2. Federal Wage Rates
 3. PR-206, Title 18, Section 1020, Notice on False Statement
 4. Form PR-809, Wage Rate Information

5. CONTRACTOR's and Subcontractor's EEO Policy Statements and name, 5address and telephone number of designated EEO Officers

16. COORDINATION OF WORK

The CONTRACTOR shall cooperate with and so coordinate his work under this Contract to minimize cross-interference with the following:

- a. Utility relocation arranged or constructed by the COUNTY.
- b. Any utility relocation performed by any private utility. CONTRACTOR needs to show on his schedule how he plans to work with the utility relocations. Utility scheduling is further addressed in Section 2.1.4 of the Job Special Provisions. CONTRACTOR's attention is directed to Section 105.7 of the Standard Specifications regarding coordination with utility companies.
- c. Local access to abutting property owners.
- d. Mail delivery service. CONTRACTOR must coordinate with the Post Office to ensure that mail delivery is not interrupted on any parcel at any time during the project. If temporary mail boxes are required, the CONTRACTOR will be responsible for procuring, installing and maintaining. All work associated with providing mail service is considered incidental and no direct payment will be made. Reinstallation of the permanent mail boxes will be done in such a manner that the mail box is in equal or better condition than at the beginning of construction. No direct payment for mailbox construction will be made.
- e. **(Project Name)** construction, performed by forces under contract with the **(Entity or Sponsor Name)**.

17. CONFLICT WITH PERSONNEL

If a conflict between personnel of the CONTRACTOR and the COUNTY escalates to the point that it hinders the progress of the Work and cannot be settled amicably, the CONTRACTOR's personnel involved in the conflict shall be removed from the project.

A personnel conflict shall not give cause for the CONTRACTOR to terminate this Contract nor to pull off employees from active job sites. If the CONTRACTOR withdraws crews, the COUNTY may, at its sole discretion, consider the Contract to be terminated under the provisions of Article 15 of the County-CONTRACTORS Agreement. If the COUNTY so determines, notices shall be given as set forth therein.

18. NOTICE TO OWNERS AND AUTHORITIES

CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.

When it is necessary to temporarily deny access to property, or when any utility service connection must be interrupted, CONTRACTOR shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, shall include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

19. CONSTRUCTION AND TRAFFIC CONTROL SIGNS AND BARRICADES

All signs and barricades as detailed on the Plans shall be furnished, installed and maintained by the CONTRACTOR. The CONTRACTOR shall meet all requirements of the FHWA "Manual on Uniform Traffic Control Devices". No traffic switches will be made without the necessary temporary or permanent signage and/or striping in place meeting the requirements of the Standard Specifications and/or the "MUTCD".

20. TESTS

The CONTRACTOR shall notify the COUNTY ENGINEER of the sources of all materials in order that required tests and approval of source materials can be made without delaying the project. The COUNTY shall perform its own testing or employ a testing agency to make soil, compaction asphalt, and other tests identified in these specifications. Concrete cylinders will be made in accordance to ASTM C 39. Unless otherwise directed, the cylinders shall be tested at the following intervals:

- 1 at 7 days
- 1 at 14 days
- 1 at 28 days
- 1 held until completion of project

CONTRACTOR may request additional cylinders be made and broken early. The cost of the additional cylinders and testing will be borne by the CONTRACTOR.

The COUNTY at their discretion and at their cost may make additional concrete tests and the CONTRACTOR shall cooperate. The CONTRACTOR is responsible to certify that all necessary tests have been performed on prefabricated assemblies such as precast box culverts and modular wall units.

21. EMERGENCY PROVISIONS AND INCIDENT MANAGEMENT (DSP-90-11F)

- a. 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 COUNTY ENGINEER's office shall also be notified when the CONTRACTOR requests emergency assistance.
- b. 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 (314) 340-4000
Fire and Ambulance: 911
St. Charles County Police: (636) 949-3000

- c. 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.

- d. 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.
- e. 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.

22. EROSION CONTROL MEASURES

The COUNTY will provide as a part of the Construction Plans an Erosion Control Plan, but the CONTRACTOR shall provide adequate erosion control features in accordance with any local, state and federal regulations, this includes the St. Charles County Erosion Control and Sediment Guidelines as well as in accordance with the Construction Plans. The CONTRACTOR shall submit any additions or deletions from the provided erosion control plan to the COUNTY for approval prior to the start of construction.

23. PROGRESS SCHEDULE

The CONTRACTOR shall, prior to or at the preconstruction meeting, prepare and submit to the COUNTY ENGINEER for approval a detailed schedule of all operations showing the following:

- a. The anticipated time of commencing and completion of various operations to be performed under this Contract.
- b. The estimated time required for fabrication and/or delivery of all materials and equipment required for the work.
- c. Utilities relocations by others and how it affects CONTRACTOR schedules.

The COUNTY ENGINEER may require the CONTRACTOR to adjust his plan, equipment or construction forces, if progress falls behind the approved schedule such that completion within the specified time appears doubtful.

The CONTRACTOR must update the progress schedule and resubmit to the County for acceptance anytime work falls behind the current accepted schedule.

24. PROGRESS REPORTS

The CONTRACTOR shall submit progress reports on a monthly basis beginning the first Friday after award of the project and continuing through closeout of the project. The reports shall briefly describe work accomplished during the time period and projected work for the next time period. They shall indicate the project number, and the days the CONTRACTOR was unable to work due to conditions beyond his control (list specific reason, i.e. rain, cold, etc.). They shall be in a neat, legible form and submitted to the COUNTY (four copies).

25. PROGRESS PAYMENTS

CONTRACTOR shall submit original signed monthly pay requests to the COUNTY ENGINEER by the tenth of the month. Payment will be made by the first of the next month. The pay request will reflect the following changes and totals made on past invoices for:

- Contract Amount
- Total Change Order amounts
- Pay Item quantities of work completed that month
- Additional pay items
- Previously paid invoices
- Total retainage to date
- Total amount due this pay request

Retainage shall be administered in accordance with Section 109.9 of the *Missouri Standards Specifications for Highway Construction, 2011*. All references therein to "Commission" are understood as replaced with "County." Section 109.9.1.2 shall be disregarded in its entirety.

Retainage, as defined per the *Missouri Standards Specifications for Highway Construction, 2011*, shall be further administered in accordance with RSMo 34.057, which is included in its entirety for informational purposes as follows:

34.057 RSMo

Nothing in this section shall prevent the owner from withholding payment or final payment from the CONTRACTOR, or a subcontractor or material supplier. Reasons for withholding payment or final payment shall include, but not be limited to, the following: liquidated damages; unsatisfactory job progress; defective construction work or material not remedied; disputed work; failure to comply with any material provision of the contract; third party claims filed or reasonable evidence that a claim will be filed; failure to make timely payments for labor, equipment or materials; damage to a CONTRACTOR, subcontractor or material supplier; reasonable evidence that a subcontractor or material supplier cannot be fully compensated under its contract with the CONTRACTOR for the unpaid balance of the contract sum; or citation by the enforcing authority for acts of the CONTRACTOR or subcontractor which do not comply with any material provision of the contract and which result in a violation of any federal, state or local law, regulation or ordinance applicable to that project causing additional costs or damages to the owner.

First payment will not be made until the following items have been approved by the COUNTY.

- Project Schedule
- Erosion Control Plan
- Traffic Control Plan

Subsequent progress payments will be suspended unless the CONTRACTOR's project schedule is up to date and acceptable to the County, and weekly payroll statements of compliance are current.

26. HOURS OF WORK

During Central Standard Time, all work is to be accomplished between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and between 7:30 a.m. and 5:00 p.m. on Saturday. During central daylight savings time, all work is to be accomplished between the hours of 6:30 a.m. and 6:00 p.m. Monday through Friday and between 7:30 a.m. and 5:00 p.m. on Saturday. CONTRACTOR shall notify COUNTY no less than 48 hours in advance of any work scheduled to be done on Saturday. No work shall be performed on Sunday. Work outside of these hours, including incidentals, can only be done following a written request to and subsequent written approval from the COUNTY ENGINEER.

27. PROTECTION DURING CONSTRUCTION

During the progress of the work, the CONTRACTOR shall protect all existing and new work from injury or defacement and particular care shall be taken of all finished parts. Any damage occurring to the work from any cause, including any damage caused by others and utilities, shall be properly repaired and/or replaced at the CONTRACTOR'S expense to the satisfaction of the COUNTY ENGINEER.

The CONTRACTOR is also responsible for any repair and/or maintenance required throughout the project from Notice to Proceed until final acceptance. These maintenance items or repairs include but are not limited to pothole repair, resurfacing temporary roads, maintenance of utility cuts, mowing, etc.

28. CLEANING UP

The CONTRACTOR shall have all rubbish and debris removed from the premises from time to time as directed by the COUNTY ENGINEER. Upon the completion of the work, the premises shall be left in a neat and presentable condition.

29. TEMPORARY FACILITIES

Temporary Toilet For Workmen --The CONTRACTOR shall provide temporary toilet facilities conforming to requirements of all Health and Sanitation Codes for use by workmen employed on the project. The location of the toilet shall be as directed by the COUNTY ENGINEER and the facilities shall be kept in a clean, sanitary condition at all times. The cost for the temporary toilet shall be included in the bid price for other work.

Temporary Light and Power -- The CONTRACTOR shall provide and pay all charges for temporary light and power, as required for the work.

Temporary Water -- The CONTRACTOR shall provide and pay for temporary water service, as required for the work.

Temporary Field Office -- The CONTRACTOR may provide and maintain a temporary field office for his use. The COUNTY ENGINEER shall approve the location of the proposed office. No direct payment will be made for this work.

30. HAULING OVER STREETS

All streets over which hauling is performed shall be kept reasonably clean of spilled or tracked-on materials at all times and shall be thoroughly cleaned of such materials daily, within one hour after the suspension of hauling operations if said street is used by the traveling public.

The CONTRACTOR will be required to secure from the proper City, County, and State authority any permits which may be required to haul over city, County or state streets, and any hauling operation shall be subject to the requirements of such permits and to any applicable City, County or State regulations and ordinances governing hauling and the movement of equipment over said city, County, or state streets. CONTRACTOR is reminded that they must follow posted weight limits for bridges.

31. PROJECT SUBMITTALS AND CLOSEOUT

a. Although not an all-inclusive list, the following submittals shall be required by the CONTRACTOR prior to the start of construction:

- Bid Guaranty (IB-5) Submitted:_____
- Contract Agreement Submitted:_____
- Performance Bond (PB-1&2, GR-2) Submitted:_____
- Payment & Materials Bond (PMB-1, GR-2) Submitted:_____
- Certificate of Insurance (GR-3) Submitted:_____
- Preliminary Work Schedule (GR-10) Submitted:_____
- List of Desired Substitutions (IB-8&9) Submitted:_____
- List of Subcontractors (IB-2-4, IB-6, P-9, P-12-14) Submitted:_____

b. The following documents are required from the CONTRACTOR to make Final Payment and to submit with the Final Reimbursement Request to MoDOT:

- Prevailing Wage Affidavit Submitted:_____ (Prime & Subcontractors)
- CONTRACTOR's Certification Regarding Settlement of Claims (Prime) Submitted:_____
- CONTRACTOR's Final Lien Waiver (Prime) Submitted:_____
- CONTRACTOR's Final Pay Invoice (Prime) Submitted:_____
- CONTRACTOR's Final Breakdown of D.B.E. Submitted:_____ DBE Participation. If goals were not met, include documentation as to why (Prime).

- c. The CONTRACTOR shall close out the project in the following manner or as otherwise directed by the COUNTY ENGINEER:
- Final inspection and approval by the COUNTY ENGINEER.
 - Any claim from his subcontractors, utilities, or adjacent property owners must be cleared.
 - Final inspection and approval from all State and COUNTY agencies involved in the project.
 - CONTRACTOR shall supply as-built markups, if required, on a clean set of drawings to the COUNTY ENGINEER at closeout.
 - CONTRACTOR, including all subcontractors, shall supply final lien waivers for all material, labor and equipment with final pay request.
- d. The following documents are required to final out a Federal-aid Contract. The CONTRACTOR shall ensure that all the documents from paragraph 31.2 above are submitted in a timely manner and shall assist the COUNTY in completing the items in paragraph 31.4.a below as required.

The Local Agency will provide these documents:

- Final Change Order (If needed.) – Submit enough copies for MoDOT to retain two (2). This item may be submitted ahead of time to secure Federal Funding.
- Final Inspection and Acceptance Letter - On Local Entity (Sponsor) Letterhead (LPA Manual Pg XI-11, items 1 and 2)
- Final Certification Letter - On Local Entity (Sponsor) Letterhead. (Conformity of materials, field tests, project construction. See LPA Manual Pg. XI-11, Item 3a, b and c)
- Local Agencies Recommendation regarding the CONTRACTOR's fulfillment of DBE requirements (LPA Manual Pg. XI-11, item 4b)
- Final Invoice - On Local Entity Letterhead

Refer to sections XI and XII of the Local Public Agency Manual for further explanation and examples of required certifications.

32. CUTTING AND PATCHING

The CONTRACTOR shall do all cutting, fitting, or patching of his work that may be required to make its several parts connect with the existing conditions as shown upon, or reasonably implied by the plans and specifications and as may be directed by the ENGINEER.

Any cost caused by defective or ill-timed work shall be borne by the party responsible therefore as determined by the COUNTY.

The CONTRACTOR shall not endanger any work by cutting, digging, or otherwise, and shall not cut or alter the work of any other CONTRACTOR without the consent of the ENGINEER.

33. WORK IN EXISTING DRAINAGE AREA

The attention of the BIDDER is directed to the fact that the site of the work conveys overland and piped storm water drainage. The CONTRACTOR shall inform himself fully, of the conditions relating to the construction and labor under which work will be performed. The CONTRACTOR shall employ as far as possible such methods and means in carrying out his work as not to cause any interruptions or interference to the flow of storm water. The CONTRACTOR shall take special care to prevent the obstruction of the existing or new storm water facilities. In addition, all debris and material that could cause obstruction to downstream culverts, if a storm were to occur, must be removed immediately. All excavation shall be planned and executed in a manner to minimize the duration of exposure of unprotected soils. All borrow areas and embankments shall be managed to prevent sediment from entering nearby water or land. Disturbed areas shall be restored with permanent vegetative diversion, or siltation retention facilities shall be provided to protect water courses.

GGL SPECIAL PROVISIONS

GGL SPECIAL PROVISIONS

1. WORK ZONE TRAFFIC MANAGEMENT PLAN JSP-02-06A

- 1.1. 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. 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.
- 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.

3. WORK HOUR RESTRICTIONS

- 3.1 There are three major holiday periods: Thanksgiving Day, Christmas Day, and New Year's 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.

4. DETOURS AND LANE CLOSURES

- 4.1 At least one lane of traffic in each direction on all routes 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.
- 4.2 Work Zone Traffic Management Plan. The Contractor shall develop a Work Zone Traffic Management Plan which provides a safe work zone at all times to handle existing traffic, while providing the proper working room necessary for their own operations and follows the other requirements of this provision. The Work Zone Traffic Management Plan shall follow the requirements as outlined in MODOT Traffic Control for Field Operations manual (TCFOM) and the Manual on Uniform Traffic Control Devices (MUTCD) for the placement of advance signage other than those as outlined elsewhere in the provision, signage through the work zone, warning devices, tapered speed reductions, channelizers, cones, changeable message signs, impact devices, and any other devices required to meet standard requirements.
- 4.2.1 The TCFOM is available on the MoDOT website at:
http://epg.modot.org/index.php?title=616.23_Traffic_Control_for_Field_Operations
- 4.2.2 The MUTCD is available at:
http://mutcd.fhwa.dot.gov/kno_2009.htm
- 4.2.3 The Contractor shall develop a Work Zone Traffic Management Plan and submit to the Engineer in writing, supplemented by any necessary drawings, for each work zone.
- 4.2.4 The Contractor shall identify each Work Zone Traffic Management Plan with a unique number, with any sub-phases for the same work zone identified with a unique letter.
- 4.2.5 Requests for approval for the specific use of any one traffic handling method for work zone as numbered by the Contractor must include the following statement:
- 4.2.6 The Work Zone Traffic Management Plan for work zone number *X* (*Contractor is to include their unique zone number in place of X*) is in compliance with the requirements of the TCFOM and the MUTCD, and the requirements of the Job Special Provisions, and provides (*Insert*

Contractor's or Joint Venture's name here) the working room necessary to handle traffic to safely and successfully complete construction operations for the work zone requested herein, within the schedule as set forth by the contract.

- 4.2.7 The Contractor shall notify the Engineer a minimum of five (5) working days prior to conducting construction operations for any one work zone location and must receive approval from the Engineer in writing prior to commencement of construction operations for the requested work zone and/or sub-phase.
- 4.2.8 The Engineer will review and return the Contractor's submittal within 3 working days of receipt. Any subsequent submittals will be reviewed returned within 2 working days of receipt. The County will not be responsible for delays and/or costs incurred by the Contractor due to multiple reviews resulting from the submittal of incomplete, illegible, or inaccurate traffic handling plans.
- 4.2.9 The Engineer's acceptance of the Contractor's Work Zone Traffic Management Plan in no way shall limit the liability of the Contractor from properly following the requirements of this provision or following and maintaining their plan for the necessary duration of the project. The County accepts no liability for the Contractor's deployment and maintenance of their Work Zone Traffic Management Plan.

5 BASIS OF PAYMENT

- 5.1 Payment shall be made at the contract lump sum price for the preparation, submittal, and deployment of work zone traffic control devices. No additional payment will be made for any labor or equipment costs, inconvenience, or rescheduling that may be experienced by the Contractor because of the aforementioned provision requirements or changes required by the Contractor's operations.

Item No.	Type	Description
616-10.05	Sq Ft	Construction Signs
616-10.40	Each	Flashing Arrow Panel
616-10.34	Each	Directional Indicator Barricade (with light)
612-30.00a	Each	Truck or Trailer Attenuator
616-10.25	Each	Channelizer (Trim Line)

6. EMERGENCY PROVISIONS AND INCIDENT MANAGEMENT JSP-90-11

- 6.1 Description. 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.
- 6.2 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: (314) 340-4000
Fire and Ambulance: 911
St. Charles County Police: (636) 949-3000

- 6.2.1 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.
- 6.2.2 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.
- 6.3 Basis of Payment. 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.

7. COOPERATION BETWEEN CONTRACTORS

- 7.1 Description. This contract is one of several projects essential to the overall signal and ITS improvements throughout St. Charles County through the Gateway Green Light program. The contractor shall coordinate the work on this project with other overlapping signal and ITS projects occurring within St. Charles County. Each contractor involved shall so schedule and conduct their work as to avoid unnecessary inconvenience and delay to another and shall conduct their work in such a manner as not to damage work being performed or completed by another.
- 7.2 Construction Requirements. When necessary for proper prosecution of work, each contractor shall permit the other access through the overlapping construction areas.
- 7.3 Basis of Payment. No direct payment will be made to the contractor to recover any and all costs required to fulfill the above provisions.

8. SITE RESTORATION

- 8.1 Description. Restore to its original condition any disturbed areas at sites including, but not limited to; pull box, conduit, pole base installations and relocated signs. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas shall be fertilized and seeded and mulched. The Engineer will have the final authority in determining the acceptability of the restoration work.
- 8.2 Construction Requirements. The contractor shall take special care to minimize the disturbance of the existing ground.
- 8.3 Basis of Payment. The cost of restoration of disturbed areas, including erosion control during construction, will be incidental to the unit price of conduit, and/or pull boxes. No direct payment will be made for any materials or labor, which is performed under this provision.

9. FIBER OPTIC CABLE AND CONNECTIONS

- 9.1 Description. This work shall consist of installing, splicing and terminating fiber optic cables. All work and materials shall comply with Section 902.12.6 of standard specs as modified by the following.
- 9.2 Materials.
- 9.2.1 Cable. Fiber optic cable shall be of loose tube construction. Provide certification by an independent testing laboratory that the cable meets all requirements of Rural Utilities Service Bulletin 1753F-601a *Minimum Performance Specification for Fiber Optic Cables* (http://rurdev.sc.egov.usda.gov/SupportDocuments/UTP_Bulletins_1753F-601a.pdf). The cable shall be gel free, all dielectric, and have 12 fibers per tube. The cable sheath shall have length markings in feet and shall indicate that the unit of measure is feet. The cable shall have single mode fibers whose attenuation does not exceed 0.35 dB/km and 0.25 dB/km for 1310 nm and 1550 nm signals, respectively. The cable shall have a short-term tensile rating of at least 600 lbs. The cable shall have an operating temperature range of -40° C to 70° C.
- 9.2.1.1 The cables shall be constructed with 12 fibers per tube, 6 tubes per cable (72 SMFO), or 12 fibers per tube, 4 tubes per cable (48 SMFO), or 12 fibers per tube, two tubes per cable (24 SMFO), or as 12 fibers per tube, one tube per cable (12 SMFO).
- 9.2.2 Connector. Connectors shall be ST compatible, with ceramic ferrules. They shall be suitable for use in traffic cabinets and shall be designed for single mode fibers.
- 9.2.3 Pigtail. Pigtails shall be factory-made, buffered, and strengthened with aramid yarn to reduce the possibility that accidental mishandling will damage the fiber or connection. Pigtails shall be yellow. They must use the type of connector specified in Sec 2.2 of this provision. Each must contain one fiber. Length shall suffice to provide two feet of slack after installation. No direct payment for pigtails will be made and will be subsidiary to cabinet and fiber bid items.

- 9.2.4 Jumper. Jumpers shall meet the requirements for pigtails but shall have a connector on each end. The second connector shall be as specified in Sec 2.2 of this provision except where a different connector is required for compatibility with the equipment to which the jumper connects. Length shall suffice to provide approximately five feet of slack after installation. Jumper cables contain a pair of fibers. Quantities shown in the plans for fiber optic jumpers were estimated to the best knowledge of the design engineer and have a built-in 20% contingency.
- 9.2.5 Splice Trays or Cassettes. Contractor shall be responsible to provide splice trays or cassettes that allow field connection of terminations as shown in the plans. Splice trays shall be aluminum with clear plastic covers, designed for outdoor use. Each tray shall accommodate 24 fusion splices. The trays shall have a black powder coat finish. The trays shall have both perforations for cable ties and crimp able metal tabs for buffer tube strain relief.
- 9.2.5.1 Splice cassettes shall support fusion splicing of individual or ribbon fibers, with heat shrinks, pigtail slack and cable slack managed within a single space. The cassette shall have a modular design to allow access to the fibers in each individual cassette without disturbing the other fibers in the housing. Cassettes shall be provided with all adapter configurations and mounting rails as needed for splicing and installation in the cabinet.
- 9.5.5.2 No direct payment will be made for splice trays or cassettes and will be subsidiary to cabinet and fiber bid items.
- 9.2.6 Rack-Mounted Interconnect Center. General material and construction requirements shall meet the provisions of GGL SP H – Equipment Cabinets. An interconnect center is an Equipment Cabinet that has a patch panel built into one of its walls. Within the interconnect center, fibers in cables are spliced to pigtails and the pigtails are plugged into the patch panel from the inside. This allows jumper cables (not part of the interconnect center) to plug into the patch panel from the outside, connecting the fibers to equipment in the cabinet or to other fibers on the patch panel. Within an interconnect center, some fibers may be spliced to the corresponding fiber in a mating cable, rather than to a pigtail. Other fibers may be coiled, unterminated.
- 9.2.6.1 The enclosure shall have brackets and all other hardware required for rack mounting in an EIA standard 19-in. equipment rack. It shall take up no more than three rack units (1¾ inch each) in the cabinet. It shall have front and rear doors. It shall be made of powder-coated aluminum.
- 9.2.6.2 The enclosure shall hold at least four splice trays or cassettes meeting the requirements of Sec 2.5 of this provision. Contractor shall provide enough trays for all splices made in the interconnect center. The enclosure's patch panel shall have at least 48 positions or as indicated on the plans, compatible with the connectors specified in Sec 2.2 of this provision. It shall have provisions for cable strain relief and for connector labeling. No direct payment for rack mounted interconnects centers will

be made and will be subsidiary to cabinet and fiber bid items.

- 9.2.7 Wall-Mounted Interconnect Center. The enclosure shall be designed for wall or panel mounting and occupy no more than 350 square inches of wall space. It shall be made of powder coated aluminum and have a gasketed, hinged door. It shall have provisions for cable strain relief and connector labeling.
- 9.2.7.1 It shall have a patch panel with at least 24 positions or more as indicated on the plans, compatible with the connectors specified in Sec 2.2 of this provision. It shall accommodate at least six splice trays or cassettes as specified in Section 2.5 of this provision and shall be equipped with enough trays for all the splices made in the interconnect center.
- 9.2.8 In-ground Splice Enclosure. In-ground (underground) splice enclosures shall provide capacity for 144 fiber splices unless otherwise noted in the plans. Enclosure shall be: suitable for outdoor applications with a temperature range of -30 to 60 degrees Celsius, protect splices from moisture and damage, non-reactive and not support galvanic cell action, waterproof, re-enterable, sealed with a gasket, permit selective splicing to allow one or more fiber strands to be cut and spliced without disrupting other fibers, equipped with a basket to accommodate the slack from all fibers routed into the enclosure, capable of holding splice trays from various manufacturers, input/output capacity of four 18 mm cables, equipped with a termination block to terminate the central strength members of the fiber optic cables.
- 9.2.8.1 Splice trays shall be: compatible with fiber splices and splice enclosure, equipped with polyethylene tubes to protect exposed individual fibers within the enclosure, stackable within the splice enclosure. Vinyl markers shall be supplied to identify each fiber to be spliced. Each splice shall be individually mounted and mechanically protected on the splice tray. Loose tube buffers shall be secured with a tube guide or channel snap. Slack fiber shall be placed in an oval shape along an inside wall of the tray.
- 9.2.9 Certifications. The fiber optic cable shall be factory certified to meet the requirements in this specification. In addition, the manufacturer shall certify that the fiber optic cable has a life expectancy of 20 years
- 9.2.10 Documentation. Provide the GGL board, and the individual GGL Agency having jurisdiction, with a copy of the final as-built documentation in Visio and/or MicroStation formats and any relevant notes that would aid in the understanding of the fiber configuration.
- 9.3 Construction Requirements.
- 9.3.1 Cable Installation. Prior to installation, perform such tests as indicated in Sec 3.6 of this provision to confirm that the cable is in good condition and complies with the specifications. Any defects found after installation will be deemed the fault of the contractor.
- 9.3.1.1 Install the cable such that the optical and mechanical characteristics of the fiber are not degraded. Do not violate the minimum bend radius or

the maximum tension, both during and after installation.

- 9.3.1.2 Before any cable installation is performed, provide the Engineer with four copies of the cable manufacturer's recommended maximum pulling tensions for each cable size. These pulling tensions shall be specified for pulling from the cable's outer jacket. Also, provide a list of the minimum allowable cable bending radius and the cable manufacturer's approved pulling lubricants. Only those lubricants approved by the cable manufacturer will be permitted.
- 9.3.1.3 If the cable is pulled by mechanical means, use a clutch device to ensure the allowable pulling tension is not exceeded. Also, attach a strain gauge to the pulling line at the cable exit location, and at a sufficient distance from the take-up device, such that the strain gauge can be read throughout the entire cable pulling operation.
- 9.3.1.4 Do not leave the let-off reel unattended during a pull, in order to minimize the chance of applying excess force, center pull, or back feeding.
- 9.3.1.5 Use an approved lubricant, in the amount recommended by the cable manufacturer, to facilitate pulling the cable. After the cable has been installed, wipe the exposed cable in a pull box, junction box, or field terminal cabinet clean of cable lubricant with a cloth before leaving the pull box, junction box, or cabinet.
- 9.3.1.6 In each intermediate pull box, store a minimum of 50 feet of slack fiber optic cable for each cable that passes through the pull box. Store slack cable neatly on the walls of the pull box using racking hardware acceptable to the Engineer. Additional slack cable that is included in the pay quantity includes 50 LF of each cable at a splice point within the GGL or Agency fiber pull box.
- 9.3.1.7 Seal the fiber optic cable ends to prevent the escape of the filling compound and the entry of water.
- 9.3.1.8 Label every cable immediately upon installation. Label the cables at every point of access, including junction boxes, pull boxes, and termination points. Use self-laminating vinyl labels at least 1.5" wide and long enough that the translucent portion of the label completely covers the white area bearing the legend. The vinyl shall have a layer of pressure sensitive acrylic adhesive. The labels shall resist oil, water, and solvents and shall be self-extinguishing. The legend shall be machine printed in letters at least 3/32" high. Consult with the Engineer concerning the desired method of identifying each cable. Labeling cables is incidental to the installing the cable and will not be paid separately.
- 9.3.2 Splicing. Splice all optical fibers, including spares, to provide continuous runs. Splices shall be allowed only in equipment cabinets and splice enclosures except where shown on the plans.
 - 9.3.2.1 Make all splices using a fusion splicer that automatically positions the fibers using either the Light Injection and Detection (LID) system or the High-resolution Direct Core Mounting (HDCM) system. Provide all

- equipment and consumable supplies.
- 9.3.2.2 Secure each spliced fiber in a protective groove. Completely re-coat bare fibers with a protective room temperature vulcanizing (RTV) coating, gel or similar substance, prior to insertion in the groove, so as to protect the fiber from scoring, dirt or micro bending.
- 9.3.2.3 Prior to splicing to a fiber installed by others, measure and record the optical loss over that fiber. See Sec 3.6 of this provision.
- 9.3.2.4 Use a different splice tray for each buffer tube color. If an enclosure contains multiple buffer tubes of the same color, but none of the fibers in one of the tubes are spliced to fibers in other tubes of the same color, use a separate splice tray for that tube.
- 9.3.2.5 Splicing quantities were estimated to the best of the design engineer's knowledge and the quantity listed in the plan quantities has a built in 20% contingency.
- 9.3.3 Terminations. Terminate fibers by splicing them to factory-made pigtails. Cap all connectors that are not connected to a mating connector. If the existing termination panel does not have the capacity to conform to the project documents and specifications, it is the contractor's responsibility to replace or expand the termination panel at no additional cost to the project. Pigtails are subsidiary to this bid item.
- 9.3.3.1 Termination quantities were estimated to the best of the design engineer's knowledge and the quantity listed in the plan quantities has a built in 20% contingency.
- 9.3.4 Jumper Management. Use spiral wrap to guide and protect bundles of jumpers between the patch panel and equipment. Affix the spiral wrap to the wall of the field terminal cabinet or vertical member of the rack. Label the jumpers at each end, numbering them sequentially.
- 9.3.5 Acceptance Testing
- 9.3.5.1 General. Test the fiber after installation, including all splicing and terminations. For each fiber optic link terminated at the field terminal cabinet patch panels, determine whether the optical loss is within the limits permitted by these specifications. A link is a continuous segment of fiber between one connector (or unterminated end) and another connector (or unterminated end).
- 9.3.5.2 Test Procedure. For each fiber link, follow this procedure:
- 9.3.5.2.1 For each fiber link, the Contractor shall test one fiber strand per each tube of the fiber cable. If any individual fiber in a tube is found to be broken or nonfunctioning, the Contractor shall test at a minimum two (2) additional random fibers from the same tube to confirm that the fiber acceptance issue is not widespread. If additional fibers in tube are found to be deficient, corrective measures, including replacement of the cable through the identified trouble segment, may be required at the Engineers discretion, at no additional cost to the project.

- 9.3.5.2.2 Calculate the maximum allowable losses for the contractor installed fiber link, both at 1310 nm and at 1550 nm. Use the following formula:
Maximum link loss = (Fiber length in km) x (0.35 for 1310 nm and 0.25 for 1550 nm)
+ (Number of fusion splices) x (0.05)
+ (Number of mechanical splices [for temp. connection]) x (0.3)
+ (Number of connections) x (0.5)
Provide this calculation to the engineer along with the test results.
- 9.3.5.2.3 Provide the engineer documentation that the optical time domain reflectometer to be used in testing has been calibrated and is working properly.
- 9.3.5.2.4 Use an optical time domain reflectometer to assess the losses along the contractor furnished and installed fiber paths. Record the result at both 1310 nm and 1550 nm. Arrange for the engineer or his representative to witness these tests.
- 9.3.5.2.5 Use an optical time domain reflectometer and other test equipment to troubleshoot the link. Take whatever corrective action is required, including cable replacement, to achieve a loss less than the calculated maximum.
- 9.3.5.3 Test Result Documentation. Contractor shall prepare a line diagram showing each of the fiber links and the individual strands tested in this project. For the cables installed in this project, preparer shall show the field terminal cabinets, splices, and pigtails. On each line representing a link or fiber strand, show the maximum allowable loss and the actual loss. The actual loss shall be the one measured after all corrective actions have been taken. Submit this diagram to the Engineer, along with the calculations for the maximum allowable loss. Submit the diagrams and calculations in an electronic format acceptable to the Engineer.
- 9.4 BASIS OF PAYMENT
- 9.4.1 Measurement and payment for items covered by this specification include the documentation and acceptance testing, in addition to all materials and equipment necessary for a fully operational system.

9.4.2 Payment for the following bid items will be made as follows:

Item No.	Type	Description
910-99.01	LF	12 Count SMFO Cable (Branch Cable Only)
910-99.02	LF	24 Count SMFO Cable (Cross Connect Only)
910-99.03	LF	48 Count SMFO Cable
910-99.04	LF	72 Count SMFO Cable
910-99.05	Each	GGL Splicing (per splice)
910-99.06	Each	GGL Fiber Termination (per termination)
910-99.07	Each	Fiber Optic Jumper
910-99.08	Each	In-ground Splice Enclosure

10. CONDUIT

- 10.1 Description.
- 10.1.1 Furnish and install conduits as shown on the plans and as described within this section. The plans depict conduit routing in schematic form only. Determine final routing based on actual field conditions at each site, including utility locator service markings, to assure no conflicts with existing utilities.
- 10.1.2 Inspect the project area prior to submittal of bid to determine the types and extent of incidental removal, relocation and replacement items to include in the unit price of conduit and pull boxes.
- 10.2.0 Material
- 10.2.1 Conduits shall meet the requirements of current MoDOT Standard Specifications Sec 1060.
- 10.2.2 Non-metallic rigid conduit shall be color coded orange for communication cable and black for power cable.
- 10.2.3 Pull ropes or tapes shall be polypropylene with a minimum tensile strength of 600 pounds. Pull ropes or tapes are incidental to the cost of conduit.
- 10.2.4 Locator wire shall be stranded copper wire, AWG 14, type THHN, with blue insulation, and is incidental to the cost of the conduit.
- 10.2.5 4 Inch, rigid, steel conduit shall be used for installation within any railroad rights of way as indicated in the plans.
- 10.2.6 2 Inch, rigid, steel conduit shall be used for building entries as indicated in the plans.
- 10.3.0 Construction Requirements.
- 10.3.1 General. The contractor shall comply with Sec 902.16, except as noted in this special provision.

- 10.3.1.1 Warning tape shall be furnished and installed in all trenches containing conduit.
- 10.3.1.2 Pull ropes shall be furnished and installed in all empty conduit cells.
- 10.3.1.3 Install locator wire in all underground non-metallic conduits and into each pull box or base. Affix the wire to the sidewall of each pull box. Locator wire is incidental to the conduit and will not be paid for separately.
- 10.3.1.4 Non-metallic duct shall not be spliced. All runs shall be continuous.
- 10.3.2 Directional Drilling.
 - 10.3.2.1 Preliminary Site Work. Determine all utility locations near the path of the proposed bore, including depth. Use this information to avoid damage to utilities and/or facilities within the work area. Provide this information, including the sources, to the engineer a minimum of five working days prior to boring. Do not bore until the engineer approves that submittal. Prior to boring, expose all utilities for which it is customary and safe to do so.
 - 10.3.2.2 Boring. The diameter of the drilled hole shall conform to the outside diameter of the conduit as closely as practical. Pressure grout, as directed by the engineer, to fill any voids which develop during the installation operation. Remove and replace any conduit damaged in directional drilling operations at no expense to the project.
 - 10.3.2.3 Drilling Fluids. The use of water and other fluids in connection with the drilling operation will be permitted only to the extent necessary to lubricate cuttings. Jetting will not be permitted, and the use of water alone as a drilling fluid will not be permitted. Use a drilling fluid/slurry consisting of at least 10% high grade, processed Bentonite to consolidate excavated material, seal the walls of the hole, and furnish lubrication for subsequent removal of material and immediate installation of the pipe.
 - 10.3.2.3.1 Provide a means of collecting and containing drilling fluid/slurry that returns to the surface, such as slurry pit, or a method approved by the engineer. Provide measures to prevent drilling fluids from entering storm sewer systems. Prevent drilling fluid/slurry from accumulating on or flowing onto sidewalks, other pedestrian walkways, driveways, or streets. Immediately remove any slurry that is inadvertently deposited on pedestrian walkways. Transport waste drilling slurry from the site and dispose of it. Do not allow slurry to enter wetlands. Protect wetlands using appropriate soil erosion control measures approved by the engineer.
 - 10.3.2.4 Drilling Control. Use a digital walkover locating system to track the drill head during the bore. At minimum, the locating system shall be capable of determining the pitch, roll, heading, depth, and horizontal position of the drill head at any point along the bore. During each drilling operation, locate the drill head every 10 feet along the bore and prior to crossing any underground utility or structure. Upon completion of the drilling

operation and conduit installation, furnish the engineer with an as-built profile drawing and plan drawing for the drilled conduit showing the horizontal and vertical locations of the installed conduit.

- 10.3.3 Wall and Building Penetrations. Penetrations of existing concrete retaining walls or buildings shall be performed by the drilling, or other approved construction means, of an opening with a minimum diameter of 1 inch greater than the outside diameter of the conduit(s) to be inserted through the wall. Reinforcing bars shall be located on the fill face of any retain walls using non-destructive scanning techniques. Openings shall be located to avoid cutting or otherwise damaging reinforcing bars on the fill face side of retaining walls or damaging structural elements or equipment within buildings. Sufficiently remove any rough edges from the wall or building opening to prevent damage to the conduit(s). The penetrations shall be filled with a Type III epoxy grout conforming to Sec 1039. The cost of wall and building penetrations will be considered incidental to the unit price of conduit.
- 10.3.4 Install Conduit into Existing Pull Box. Where indicated on the plans, install a proposed conduit into an existing pull box. No direct payment will be made for installing conduit into an existing pull box.
 - 10.3.4.1 Carefully expose the outside of the existing pull box without disturbing any existing conduits or cabling.
 - 10.3.4.2 Drill the appropriately sized hole for the entering conduit at a location within the pull box that will not disturb the existing cabling, and that will not hinder the installation of new cabling within the installed conduit.
 - 10.3.4.3 Fill any void area between the drilled hole and the conduit with an engineer approved filling material to protect against conduit movement and the entry of fill material.
 - 10.3.4.4 Backfill shall be carefully tamped in place. All disturbed areas shall be restored in accordance with the provisions of GGL SP D.
- 10.3.5 ITS Pull Boxes. ITS Pull boxes shall be installed per plan and as required to allow the successful installation of the fiber cables per manufactures recommendations. ITS Pull Boxes at traffic signal locations, building penetrations, or Cross-Connect cabinets shall be Class 5. ITS Pull Boxes in-line on conduit run shall be Class 2. The cost of ITS Pull Boxes will be considered incidental to the unit price of conduits.
 - 10.3.5.1 All pull boxes shall be affixed with a permanent label identifying the function of the pull box and the maintaining agency. Material, method, and legend of labeling shall be approved by the engineer.
 - 10.3.5.2 All pull boxes installed within sidewalks or raised paved shoulders shall be installed flush with the surrounding pavement, with slip-resistant cover, allowing for ADA-compliant pedestrian path. Any sidewalk pavement removed and replaced shall be incidental to the cost of the conduit.
- 10.4 Shop Drawing Submittal Requirements.

10.4.1 Contractor shall develop shop drawings illustrating the material and method for externally mounting rigid conduit on bridge structures or retaining walls for new conduit segments along various routes. These shop drawings shall be submitted to the Engineer for review and approval. Contractor shall include in the bid time for two sets of revisions to the shop drawings to incorporate Engineers review comments. Final shop drawings and calculations showing support system design shall be signed and sealed by a Professional Engineer registered in the State of Missouri. Contractor shall provide Engineer with a copy of the approved final shop drawings in MicroStation format.

10.4.2 Catalog cuts shall be provided for all conduit types.

10.5 Basis of Payment.

10.5.1 All pull boxes; expansion fittings, liquid-tight flexible conduits, hangers, supports, resin anchor systems, and all hardware are incidental to the cost of conduit.

10.5.2 Conduit may be installed by either directional boring or trenching regardless of how installation is shown on the plans based on Contractors preferred method of installation, unless specifically noted on the plans due to some specific installation limitations. All conduit shall be paid for at the unit rate per the Bid Items below regardless of installation method.

10.5.3 The pay items for conduit are:

Item No.	Type	Description
910-72.01	LF	Conduit, 2 In., Rigid, Underground
910.75.02	LF	Conduit, 2 In., Rigid, External on Structure
910.72.99	LF	Conduit, 4 In., Rigid, Underground (Steel)

11. ASPHALT AND CONCRETE REMOVAL AND REPLACEMENT FOR CONDUIT AND PULL BOX INSTALLATION

11.1 Description. If the contractor elects and receives approval from the engineer for alternate trench and/or pull box locations, any areas of concrete slope protection, sidewalk, pavement, shoulders, islands and medians – as well as any similar improvements consisting of asphaltic concrete materials – removed in conjunction with their construction shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cuts; the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in their replacement shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

- 11.2 Basis of Payment. Unless quantities and pay items for removal and subsequent replacement of improvements are contained in the plans for a specific location of removal work, no direct payment will be made for full depth saw cutting and the removal and subsequent replacement of asphalt or concrete slope protection, sidewalk, pavement, shoulders, islands, medians and the required dowel and tie bars removed and replaced by the contractor as a result of his election to vary the location of conduit runs and pull boxes.

This work will be considered as included in the various unit bid prices for conduit.

12. EQUIPMENT CABINETS

- 12.1 Description. This work shall consist of furnishing and installing new cabinets and base adapters.
- 12.2 Materials.
- 12.2.1 All cabinets shall include a grounding system. Connection to ground must be bare AWG # 6 copper wire or equivalent bonding strap.
- 12.2.2 All powered cabinets shall be wired for three-wire 240/120-volt AC service. Provide a lightning arrestor designed to protect 120/240 VAC split phase breaker panels. The protector shall use metal oxide varistors as the protective elements. The response time shall be under five nanoseconds and the maximum surge current shall be at least 40,000 amps. The clamping voltage shall not exceed 400 volts. The device shall protect line-to-line and line-to-neutral.
- 12.2.3 Provide an additional surge protector just for the circuits powering the communication and traffic management equipment (excluding the dynamic message sign, which has its own surge protectors). This shall be a filtering, two-stage surge protector. Install it on the load side of the appropriate breaker. The protector shall provide radio frequency noise filtering and be capable of protecting equipment drawing a total of at least 10 amps. If the maximum load on the circuit exceeds 10 amps, the contractor shall split the load among multiple circuits, each with a surge protector. The protector shall clamp both the main line and the main neutral at 250 volts, both relative to each other and relative to the cabinet ground. The response time shall be such that the voltage never exceeds 250 volts. The surge protector shall suppress surges of up to 20,000 amps.
- 12.2.4 All circuit breakers shall be molded case units with quick-make, quick-break, trip-free mechanism, and with a minimum interrupting capacity of 10,000A (RMS Symmetrical). The circuit breakers shall be of fixed trip type and UL listed. Circuit breakers shall be listed on the latest Qualified Products List QPL-W-C-375 maintained by the Defense Supply Center.
- 12.2.5 All doors shall have cabinet identification labels displaying the cabinet identifier. The engineer will provide a list of the identifiers for each location, as well as the format for the labels.
- 12.2.6 All seams shall be continuously welded and ground smooth.

- 12.2.7 All fasteners must be stainless steel.
- 12.2.8 All cabinets shall have a natural aluminum finish, free from blemishes.
- 12.2.9 Provide terminal blocks for all conductors entering the cabinet. Except for blocks used for coaxial cable, the blocks shall be the barrier type with nickel-plated brass screw terminals and solid backs. Terminal blocks for conductors carrying more than 60 volts must be covered by a clear acrylic shield.
- 12.3 Type 336S Cabinet (Cross Connect)
- 12.3.1 Provide a NEMA 3R, aluminum cabinet. The aluminum shall be at least 0.188 inches thick, except that the doors and top need be only 0.125 inches thick. The cabinet shall be approximately 46 inches high, 24 inches wide and 22 inches deep. The cabinets shall have two doors. The cabinet shall have a three-point door latch. It shall also have provision for padlocking with a 5/8" Hasp. The door hinge shall be continuous and shall be affixed by nuts and bolts that are concealed when the door is closed.
- 12.3.2 Contractor shall furnish electrical service and power cables needed for a fully functional cabinet. The electrical service and any required power cables are considered incidental to the cost of the cabinet and no direct pay shall be made.
- 12.3.2.1 The cabinet shall be equipped with the following:
- Rack: For mounting 19-inch equipment. The mounting rails must have holes of the EIA standard size and spacing for the entire height of the cabinet.
 - Mounting panels: For terminal blocks, breakers, surge protectors and other small items on the back and side walls.
 - Fluorescent light: Controlled by a door switch.
 - Duplex ground fault interrupt outlet: For use by technicians. No permanent traffic management equipment shall be plugged into the GFI outlet.
 - Thermostatically controlled fan and heater: The fan shall move 100 CFM through vents at the top of the cabinet. The air intake shall be through louvers in the door, and the air shall pass through a replaceable filter as it enters the cabinet. The heater shall use at least 250 watts and shall be designed to prevent accidental contact with dangerous heat or voltage.
 - Electrical distribution system: Consisting of two 10-amp main circuit breakers, one within the MoDOT or Agency signal cabinet connected to the existing circuit power feeds and the second within the Cross Connect cabinet. These breakers shall serve the communication and traffic management equipment in the cabinet. Provide at least four outlets on this circuit. The main breaker shall also power auxiliary devices in the cabinet, such as the fan, light, and GFI technician outlet.

- Sunshield: On the top.

- 12.4 Construction Requirements.
- 12.4.1 Ground Mounted Cabinets. The Contractor shall mount the cabinet on a concrete base at a height of 3 feet and provide conduit as shown in the plans to connect to an adjacent cabinet or DMS structure.
- 12.4.2 Bonding and Grounding. Connect base-mounted cabinets directly to a ground rod.
- 12.5 Acceptance Testing.
- 12.5.1 Develop a proposed test procedure for the cabinets and submit it to the engineer for approval. It shall include visual inspection, testing of lights, fan, heater, power outlets and alarm sensors. It shall also include a test in which each branch circuit is shorted to the cabinet wall to confirm that the breaker trips. Revise the proposed test procedure until it is acceptable to the engineer.
- 12.5.2 Provide all equipment and personnel needed to safely conduct the tests, arrange for the engineer's representative to witness the tests, and give the engineer a report documenting the result of every visual inspection and test. Include a summary indicating whether the cabinet passed every test. The cabinet must pass every test to be accepted.
- 12.5.3 If the cabinet fails, correct the problems and arrange for a new test. If the test of the breakers reveals breakers that do not trip, the resistance to ground is too high; lower the resistance by adding more ground rods and improving the connections in the ground system.
- 12.6 Documentation.
- 12.6.1 Prior to purchasing the cabinets, provide one electronic submittal by email of complete shop drawings, layout drawings, catalog cuts, and schematics. The layout drawings shall be dimensioned drawings showing the proposed location of all equipment for each cabinet. The drawings shall demonstrate that all the equipment will fit, and that all controls, connections, and other service points are readily accessible. It should also demonstrate that incoming conductors reach surge suppressors as soon as they enter the cabinet. Lay out all cabinets that have the same equipment in the same way and submit a single drawing for all like cabinets. Revise the layout as instructed by the engineer and resubmit the drawings until they are accepted.
- 12.6.2 After installation, provide one electronic submittal by email of the cabinet wiring diagram for each cabinet in Visio file format. The diagrams shall be nonproprietary. They shall reflect as built conditions and shall identify all circuits in such a manner as to be readily interpreted. A paper copy of the diagrams shall be placed in a heavy duty, clear plastic pouch and attached to the front cabinet door. The pouch shall be of such design and material that it provides adequate storage and access to the wiring diagram.

- 12.7 Guarantee. All items covered by this specification shall carry a two-year guarantee from the date of acceptance against any imperfections in workmanship or materials.
- 12.8 Basis of Payment. Measurement and payment for items covered by this specification include the documentation and acceptance testing, in addition to all materials, including base adapters and equipment needed for a fully functional cabinet. Payment will be made as follows:

Item No.	Type	Description
910-99.09	Each	Type 336S Ground Mount Cabinet (Cross Connect)
910-91.00	Each	Base, Concrete

13. TESTING

- 13.1 Description. Verify that equipment is installed and operating in accordance with manufacturer's recommendations. Equipment to be tested includes but is not limited to: fiber optic cable, category 5E cable, RF cable, communication cable, conductors, media converters, communications equipment, Ethernet switches, and modifications to existing signal control cabinets.
- 13.1.1 Testing will be limited to new equipment installed at the sites unless existing equipment is noted for upgrade or modification as part of the project.
- 13.1.2 For each piece of equipment, contractor shall develop a test plan and submit to the Engineer for review and approval. Modify and resubmit the test plans as directed by the Engineer until approved. Test plan shall incorporate requirements listed herein and manufacturer's testing procedures. Test plans shall clearly demonstrate that the equipment has been installed and is operating in accordance with manufacturer's recommendations. Test plans shall include at a minimum the following: name of the equipment being tested, date of the testing, name of the person(s) performing the testing, pass/fail check boxes for each testing procedure, lines for signature of tester and Engineer's testing witness.
- 13.2 Materials. Provide test plan, testing equipment, incidental materials, patch and interconnect cables and labor necessary to successfully test and demonstrate that the equipment has been installed and is operating in accordance with manufacturer's specifications and requirements listed herein.
- 13.3 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 this provision.

14. MAINTENANCE AND WARRANTY

- 14.1 Maintenance. Maintain all equipment and cables installed in this project until the equipment has passed all testing requirements specified herein and has operated without problems for a four (4) week continuous

operational period, and all work at the specific site is complete including cleanup and labeling. During the four-week operational period, the Engineer may test the device to verify that it is working. If the device is found to have an operational problem, the problem shall be resolved, and the operational period will restart at zero (0) weeks.

- 14.2 Warranty. Obtain, assign and furnish to the owning agency written manufacturer's warranties for all electronic equipment consistent with those provided as customary trade practice.
- 14.3 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 this provision.

15. COMMUNICATIONS DRAWINGS

- 15.1 Description.
 - 15.1.1 Contractor is cautioned that the existing "as-built" drawings have not been field verified and the Contractor is responsible for field verifying all existing conditions along the fiber optic path.
 - 15.1.2 Any changes needed to existing GGL or MoDOT communication plans either discovered or modified by the contractor shall be edited from the original Microsoft Visio files and submitted to GGL or MoDOT in the latest Visio format. If Visio files are not available, the contractor shall remain responsible for providing all communication drawing revisions as needed in existing GGL or MoDOT cabinets. Contractor shall follow all previous plan formatting when making any adjustments.
 - 15.1.3 MODOT Network: Any new communication drawings needed for any portion of this project that impacts the MoDOT network shall follow the latest MoDOT approved communication plan formatting. The Engineer shall provide examples of the needed formatting detail for contractor's use. No deviation in formatting shall be allowed on any submitted plans without Engineer approval. Contractor is to use the latest version of Microsoft Visio to develop all communication plans and submit both Visio and PDF files.
 - 15.1.4 GGL Network: Any new communication drawings needed for any portion of this project that impacts the GGL network shall follow the latest GGL approved communication plan formatting. The Engineer shall provide examples of the needed formatting detail for contractor's use. No deviation in formatting shall be allowed on any submitted plans without Engineer approval. Contractor is to use the latest version of Microsoft Visio to develop all communication plans and submit both Visio and PDF files.
 - 15.1.5 At existing standalone cabinets (no connection to external communication) provide cabinet wiring diagrams in Visio formats including the new communications equipment (LAN switch, cellular modem, etc.) installed by this contract in the proper format based on the owning agency of the installation (i.e. either GGL or MoDOT).
 - 15.1.6 At existing cabinets with connection to external communications,

Contractor shall develop shop drawings illustrating the proposed demolition of existing and installation of new network equipment. Shop drawings shall illustrate the removal and reconnection of all existing network cabling. These shop drawings shall be submitted to the Engineer for review and approval. Contractor shall include in the bid time for two sets of revisions to the shop drawings to incorporate review comments. The contractor shall NOT move any cables from port to port on the network without prior approval.

15.2 Basis of Payment. There is no pay item associated with this item. No direct payment shall be made for providing documentation per this provision.

16. MODOT ITS EQUIPMENT WITHIN PROJECT LIMITS

16.1 Description. MoDOT owned fiber optic cable and conduit, critical MoDOT power supplies and power cables, and pull boxes for fiber and power cabling and other above and underground ITS (Intelligent Transportation System) facilities are present within the limits of this project. Damage or interruption of these items can cause extensive outages to the MoDOT network.

16.2 Construction Requirements. The contractor shall exercise reasonable care while completing work near these facilities, and shall take steps necessary to protect these facilities from damage for all items that are not specifically identified as being removed and/or relocated in the plans. Should any of the existing wiring or conduit be damaged by the contractor, it shall be replaced at the contractor's expense and the system in full operation within 4 hours of when the damage occurred. If it is mutually agreed upon between the Commission and the Contractor that the repairs will require more than 4 hours to complete, a mutually agreed upon time for repairs to be complete will be determined.

16.2.1 The contractor shall not modify any existing network or electrical connections within equipment cabinets, unless coordinated with MoDOT ITS staff. Existing connections include, but are not limited to, fiber jumpers, CAT5(e) cables, power supplies, and power strips. The connection to specific fiber and copper ports on network equipment shall also not be modified, unless coordinated with MoDOT ITS staff, as the network equipment has been configured specifically for each equipment cabinet. Significant network outages and unnecessary troubleshooting to investigate outages can occur, even with minor changes to existing connections within the cabinet.

16.3 Liquidated Damages. In the event of damage, if the system is not repaired and in full operation within 4 hours of the damage occurring, or within the timeframe agreed upon, the contractor will be charged with a liquidated damage specified in the amount of \$100.00_per hour for each full hour that the system is not fully operational. This damage will be assessed independently of the liquidated damages specified elsewhere in the contract.

16.3.1 The MoDOT Engineer will also have the option of issuing a work order

for MoDOT's on-call ITS Maintenance contractor to make repairs, if it is the Engineer's opinion that the contractor creating the damage will not be able to make repairs in a timely manner. Contractor's reimbursement for MoDOT expense for this option shall be in addition to the liquidated damages.

- 16.4 Basis of Payment. No direct payment shall be made for compliance with this provision.

17. MODOT ITS MANAGEMENT TOOL UPDATING

- 17.1 Description. For all locations where any MoDOT ITS (Intelligent Transportation System) components are existing, modified, or added to, the contractor shall be responsible for populating and updating MoDOT's fiber management tool to reflect the final condition of the entire ITS system within the project limits as shown on the plans. Updating shall be performed by MoDOT approved staff (currently NexusWorx).
- 17.2 Construction Requirements.
- 17.2.1 Contractor shall provide any relevant notes to a specific location that can be entered into the tool to aid in the understanding of the device configuration and location. At a minimum, this will include providing the required latitude and longitude coordinates of each pull box, DMS, CCTV, node cabinet, conduit, cable, and fiber, along with any serial numbers and/or identification information. The Contractor shall locate the conduit every 100 feet using a GIS locating device that is accurate to the nearest foot. The Contractor shall provide a GIS based map of the conduit route and a complete listing of all of map coordinates in an electronic format. Population of the fiber management tool will be required for all devices that have been installed to date as well as any devices installed under this contract.
- 17.2.2 The contractor shall furnish to MoDOT approved staff a copy of the final plans relevant to all of the MoDOT ITS components in Visio and/or Microstation formats, if relevant.
- 17.2.3 The contractor shall be provided one licensed read-only access login by MoDOT before work begins.
- 17.3 Acceptance Testing.
- 17.3.1 All entries and updates shall be completely entered and available for use within 30 days from final acceptance of the project.
- 17.3.2 Commission staff shall verify population of the fiber management tool, including accuracy and completeness of details for each component prior to acceptance and payment.
- 17.4 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 this provision, unless specified elsewhere in the contract document.

18. COORDINATION WITH MoDOT ITS STAFF AND UTILITY LOCATES

- 18.1 Description. Any work that will impact the existing MoDOT communications network must be coordinated with MoDOT's St. Louis District ITS staff. This includes but not limited to removal and replacement of any existing communications equipment, adding new devices and changes to power sources or disconnects. Minor modifications to the existing communications network can have significant impacts on the system and operation of other ITS and traffic signal systems.
- 18.1.1 MoDOT is a member of MO-One-Call System. Prior to any excavation or work within MoDOT Right-Of-way, the contractor must contact MO-One Call at 1-800-DIG-RITE and request for Utility Locates within noted project limits. If the scope of work contains modification, addition and/or expansion of existing underground MoDOT ITS, lighting, or signal facilities, the contractor must notify the MoDOT Utilities Locate staff prior to any work, in order for MoDOT to update MoDOT utility location records with Missouri One Call.
- 18.2 Contact. Initial contact must be made at least seven calendar days before work that may impact the existing MoDOT communications network commences. Contact the ITS staff via an email at SLITS@modot.mo.gov. The engineer shall be notified prior to making contact with ITS staff. For MoDOT Utility location updates, the contractor must contact MoDOT TMC at 314-275-1500 and ask for Utility Locate Section at least seven calendar days before performing any work.
- 18.3 The MoDOT ITS and network devices located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when adding, removing, or modifying any existing MoDOT ITS and network devices. This may require the contractor to perform work that will affect existing network devices during nighttime and/or weekend hours, at the discretion of the Engineer. Allowable timeframes for this work will be subject to the need for ITS devices in the area to be used to manage other traffic impacting workzones.
- 18.4 Basis of Payment. No direct payment shall be made for compliance with this provision.

19. CABINET AND NETWORK DEVICE CUTOVER

- 19.1 Description.
- 19.1.1 This work includes the network device cutover for each cabinet location that is to be connected to the GGL network.
- 19.2 Materials.
- 19.2.1 Contractor shall provide any necessary cables/connectors needed to properly connect the IP addressable devices to the network switch. This includes but is not limited to outdoor rated Cat5/6 cables.
- 19.3 Construction Requirements.

- 19.3.1 Contractor shall reprogram all IP addressable devices within the cabinet per the assigned IP addresses (to be provided by Engineer).
- 19.3.2 Contractor shall verify that all IP addressable devices are properly connected to the network switch, that the devices are fully accessible through the network, and the devices are fully functional.
- 19.3.3 Contractor shall coordinate with the Engineer and/or GGL Operator to ensure network connectivity prior to acceptance.
- 19.4 Basis of Payment. Measurement and payment for items covered by this specification include the documentation and acceptance testing, in addition to all materials and equipment necessary for a fully operational system. Measurement and payment shall be per cabinet location that is to be cutover onto the network.

Payment will be made as follows:

Item No.	Type	Description
910-99.10	Each	Cabinet and Network Device Cutover

20. UTILITIES JSP-93-26C

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

<u>Utility Name</u>	<u>Known Required Adjustment</u>
Ameren UE (Electric) 2100 Bluestone Drive St. Charles, MO 63303 Telephone: (636) 925-3236	No
AT&T/SBC (Telephone) 402 North Third Street St. Charles, MO 63303 Telephone: (636) 949-1315	No
City of St. Charles (Sewer & Water) 200 North Second Street St. Charles, MO 63303 Telephone: 636-949-3237	No
Charter Communications 941 Charter Commons Drive Town & Country, MO 63017 Telephone: (636) 387-6643	No

The County does not warrant that the above listing or the depiction of utility lines or facilities on other bidding documents are complete or accurately reflect either all utilities or their precise locations within or adjacent to the project limits or the status of any relocation work.

- 20.1.1 The existence and approximate location of utility facilities known to exist, as shown on the plans, are based upon the best information available at this time. This information is provided "as-is" and the County 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 County 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.
- 20.1.2 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.
- 20.1.3 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 County from damages to any utility facilities interruption of service by it or it's subcontractor's operation.
- 20.2 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.

21. NETWORKING EQUIPMENT

- 21.1 Description. This work shall consist of installing and programming switches, routers and any other networking equipment that shall be used to build the Gateway Green Light (GGL) Traffic Network.

21.2 Materials.

21.2.1 Industrial Ethernet LAN Switch (2 direction): Furnish and install LAN switch with extended temperature, vibration, shock and surge and noise immunity ratings to comply with specifications for ITS environments. LAN switch shall include the following features:

- Operating Temperature: -40 to 167 degrees F.
- Operating Relative Humidity: 10 to 95% (condensing).
- PLC form factor design.
- Removable memory allowing switch replacement without having to reconfigure.
- PROFINET v2 certification with PROINET conformance class B compliance.
- Provide for 300 deployment configurations, supporting a range of access port densities, copper and fiber uplinks, fiber access ports and power input.
- DIN-rail or 19" rack mountable.
- Eight (8) Ethernet 10/100 ports and two (2) dual purpose uplink ports (one 10/100/1000BaseTX and one SFP port (fiber type as required), port active).
- Controllable via either Web interface or Command Line interface.
- 24/48/125VDC and 100-220VAC power input options.
- Alarm relay contacts can be used for an external alert system.
- Simple Network Management Protocol (SNMP) (v1/v2/v3) support.
- Alarm relay contacts can be used for an external alert system.
- Supports Virtual LANs (VLANs).
- 16 Gbps switching fabric and jumbo frames up to 9018 bytes.
- Supports IGMPv3 snooping for fast client joins and leaves of multicast streams.
- IEEE 802.1d Spanning Tree Protocol support for redundant backbone connections and loop-free networks.
- Provides Resilient Ethernet Protocol (REP) for network redundancy of up to 200 nodes at a convergence speed of 50ms or less.
- Provides IEEE 802.1x with VLAN assignment, guest VLAN, and voice VLAN for dynamic port-based security, and user authentication.
- Provides Port-based ACLs for Layer 2 interfaces for application of security policies on individual switch ports.
- Provides MAC address filtering to prevent the forwarding of any type of packet with a matching MAC address.
- Provides TACACS+ and RADIUS authentication.

- Provides MAC address notification to notify administrators of users added to or removed from the network.
- Provides Dynamic Host Configuration Protocol (DHCP) snooping.
- Supports Up to 512 ACLs, with two profiles: Security (384 Security ACL entries and 128 QoS policies), and QoS (128 Security ACL entries and 384 QoS polices).

Industrial Ethernet LAN Switch (2 direction) shall be CISCO IE 3000-8TC, unless alternate LAN switch is approved by Engineer prior to project bid opening. All provided power supplies shall be Cisco model PWR-IE50W-AC-IEC= Expansion Power Module which supports Input AC 100-240V/1/25A 50-60Hz, Output DC 24V/2.1A, IEC Plug, and DIN-Rail Mount.

21.2.2 Industrial Ethernet LAN Switch (4 directional): Install LAN switch with extended temperature, vibration, shock, surge and noise immunity ratings to comply with specifications for ITS environments. LAN switch shall include the following features:

- Operating Temperature: -40 to 167 degrees F.
- Operating Humidity: 5% to 95% Non-condensing.
- 4-Port Gigabit RJ45/SFP combo (10/100/1000BASE-TX, 1000BASE-X)
- 16-Port 10/100BASE-TX (minimum)
- Controllable via either Web interface of Command Line interface.
- Alarm relay contacts for external alert system.
- IEEE 802.1Q VLAN tagging
- IEEE 802.1D Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1S Multiple Spanning Tree Protocol (MSTP)
- IGMP V1/V2/V3
- SNMP V1/V2/V3
- IEEE 802.1X Port Based Network Access Control
- RADIUS authentication

Industrial Ethernet LAN Switch (4 direction) shall be CISCO IE-4000-16T4G-E unless alternate LAN switch is approved by Engineer prior to project bid opening. All provided power supplies shall be Cisco model PWR-IE50W-AC-IEC= Expansion Power Module which supports Input AC 100-240V/1/25A 50-60Hz, Output DC 24V/2.1A, IEC Plug, and DIN-Rail Mount.

21.2.3 Enterprise Layer 3 Switch (AGENCY): Procure and provide Layer 3 switches in GGL agency buildings. Pre-approval of installation locations and programming shall be made by the design engineer. Layer 3 switch shall include the following features:

- Minimum of 12 1/10 SFP+ (12 SFP+) Ethernet ports. Each SFP+ receptacle must support both Gigabit Ethernet and 10 Gigabit

Ethernet module.

- Dual redundant, modular power supplies and fans
- Two 350W AC Power supplies with associated power cords
- Media Access Control Security (MACsec) hardware-based encryption
- Flexible NetFlow and switch-to-switch hardware encryption
- Open Shortest Path First (OSPF) for routed access in IP Services feature set
- IPv4 and IPv6 routing, Multicast routing and advanced quality of service (QoS)
- USB Type-A and Type-B ports for storage and console and Ethernet management port
- Manufacturer must be able to provide 24/7/365 engineer level support.

Enterprise Ethernet Layer 3 Switch shall be CISCO WS-C3850-12XS-E, unless alternate Enterprise switch is approved by Engineer prior to project bid opening. All provided power supplies shall be the appropriate Cisco make and model for the provided switch.

21.2.4 SFP (Layer 2 Switch): Provide a small form-factor pluggable (SFP) for each fiber port available on each Layer 2 network switch installed. The SFPs shall be GLC-LX/LH Cisco Compatible SFP 1000 Base-LX/LH standard for fiber optic link spans of up to 10km on single mode fiber and shall have LC connectors. Temperature range for Layer 2 Switch SFP's shall be -40 to 85 degrees Celsius.

21.2.5 SFP (Layer 3 Switch): Provide a small form-factor pluggable (SFP) for each fiber port available on each Layer 3 network switch installed. The SFPs shall have LC connectors. Temperature range for Layer 3 Switch SFP's shall be 0 to 70 degrees Celsius. The following number and type of SFP transceivers are required for each of Layer 3 Switch:

GGL Agency Layer 3 Switch (Cisco WS3850-12SX-E)

- Four (4) each GLC-T Cisco Compatible SFP 10/100/1000Base-T (RJ45) 100m CAT5
- Four (4) each GLC-LX/LH Cisco Compatible SFP 1000Base-LX/LH (LC) Industrial Temperature 10km single mode (SM)
- Four (4) each GLC-EX Cisco Compatible SFP 1000Base-EX (LC) Industrial temperature 40km single mode (SM)
- Four (2) each SFP-10G-ER Cisco Compatible SFP+ 40km Single Mode (SM)

21.2.6 Provide communication cables (Category 5E patch cords, fiber optic patch cords, RF and short serial cables) as required. There shall be no additional payment for cables or other incidental items required for operation and installation of switches.

21.3 Construction Requirements

21.3.1 Provide to the Engineer a detailed schedule of installation of Ethernet LAN switch equipment, at least thirty (30) days before commencing this type of work. Additionally, coordinate such work with the Engineer.

21.3.2 For equipment installed in cabinets, mount the equipment in the existing rack and power from existing outlets. If there are insufficient outlets or rack space, provide power strips and mounting racks as required. All needed rails, racks, or mounting hardware shall be provided by the Contractor and is incidental to the cost of the network equipment.

21.3.3 Contractor shall coordinate with the County approved design engineer to determine switch settings. Once the device is programmed and installed, acceptance of the installation shall be approved once the design engineer verifies that the switch is operational on the County Traffic Network.

21.3.4 Due to the complexity of the GGL network architecture and communication protocols, the Contractor shall coordinate with the GGL selected network integration contractor (gba Systems Integrators) for network programming, bench testing, and installation of the Contractor procured and provided Enterprise Layer 3 Switches, network modules, and associated SFP transceivers. gbaSI will program, test, and install all Enterprise Layer 3 Switches with equipment provided by the Contractor. The switches shall be procured and delivered to gbaSI within 45 days after the Notice to Proceed. Ship or deliver switches to:

gba Systems Integrators, LLC
9801 Renner Blvd
Lenexa, KS 66219
(913) 577-8361

21.4 Basis of Payment.

21.4.1 Payment shall be made upon network equipment delivery, installation, and successful operational testing. Payment will be made as follows:

Item No.	Type	Description
910-99.11	Each	Furnish & Install Industrial Ethernet LAN Switch (2 direction)
910-99.12	Each	Industrial Ethernet LAN Switch (4 direction)
910-99.13	Each	Enterprise Layer 3 Switch (Agency)
910-99.14	Each	Enterprise Layer 3 Switch (TMC)
910-99.15	Each	SFP (GLC-LX/LH – 10 km)
910-99.16	Each	SFP (GLC-EX – 40 km)
910-99.17	Each	SFP (GLC-T – RJ45)
910-99.18	Each	SFP+ (SFP-10G-ER – 40 km)

22. BLUETOOTH TRAVEL TIME SYSTEM

- 22.1 Description. This specification sets forth the minimum requirements for a Bluetooth Travel Time Detection system that detects vehicles, bicycles, and pedestrians by identifying and comparing unique MAC (Media Access Control) addressed electronic devices, both discoverable and non-discoverable.
- 22.2 Materials. The Contractor shall provide BlueTOAD Spectra detection system, including all elements and hardware for a fully functional final product, meeting requirements set in this specification and the satisfaction of the Engineer.
- 22.3 Construction Requirements. Construction requirements shall conform to Section 902 of the MoDOT specifications.
- 22.3.1 The system shall include all equipment shown on the plans and described in these specifications, plus any incidental items necessary for the satisfactory operation and maintenance of the system. The Bluetooth detection system shall be installed per the manufacturer's recommendations. The installer shall be certified by the Bluetooth detection system's manufacturer to install the system. All cable runs shall be continuous without splice from the cabinet to the Bluetooth unit. If requested by the engineer, a factory-certified representative from the supplier shall be available for on-site assistance for a minimum of one day during installation.
- 22.3.2 The Bluetooth unit shall be mounted as shown in the plan details.
- 22.3.3 The Bluetooth detection system will be defined as the complete assembly of all required equipment and components for detection of MAC addresses of Bluetooth-enabled devices. Each complete system shall include lightning arrester and surge suppression, POE unit, software and license for system control via a local cabinet connection, software and licenses for integration of the new units into the central BlueTOAD server, integration of the new units and associated pairs into the existing ATMS software, and any ancillary communication components.
- 22.3.4 The contractor shall be responsible for any changes or additions to either an existing or new cabinet in order to provide a properly functional system, including shelf relocation and component reorganization. No direct pay is warranted for any changes or additions. All required connections to the field network will be considered part of the Bluetooth detection system installation.
- 22.4 Maintenance and Support. The Contractor shall arrange for the product supplier to be on-site as needed during the installation process, including testing and troubleshooting during integration of the new units into the central servers. The supplier shall maintain an ongoing program of technical support and software updates for the Bluetooth detection system following expiration of the warranty period. The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the Bluetooth detection system.

- 22.5 Warranty. The Bluetooth detection system shall be warranted free of defects in material and workmanship for a minimum of three (3) years, with the units being warranted for the same for three (3) years. During the warranty period, technical support from factory certified personnel or factory certified installers shall be available from the supplier. Ongoing software support by the supplier shall include updates for the processor unit and computer software and shall be provided at no cost during the warranty period. The update of the processor unit software to be National Transportation Communications for ITS Protocol (NTCIP) compliant shall be included.
- 22.6 Training. A minimum of one day (up to 6 hours) of training shall be provided in the operation, setup and maintenance of the Bluetooth detection system. The Contractor shall contact the Engineer to set up said training.
- 22.7 Method of Measurement. Method of measurement shall conform to Section 902.
- 22.8 Basis of Payment. Accepted Bluetooth detection systems will be made at the contract unit price per each intersection deployed. Payment will be considered full compensation for all labor, equipment and material to complete the described work.
- 22.8.1 No direct payment will be made for programming the Bluetooth detection system and its local intersection controller. Payment will be made as follows:

Item No.	Type	Description
902-99.19	Each	Bluetooth Travel Time Detection System

23. CCTV CAMERA ASSEMBLIES

- 23.1.0 Description. Provide and install an IP (Internet Protocol) closed circuit television (CCTV) assembly as indicated in the plans. Provide mounting brackets, camera power supply, surge protection, cabling and extension pole as indicated on the plans. Provide cables connecting the camera to the equipment in the cabinet/tower building and to ground, set up the camera assembly, and test for proper operation. Refer to page C2 in the plans for the signal pole extension detail and the locations for all CCTV installations.
- 23.2 Materials.
- 23.2.1 CCTV Camera Assembly, Installed: CCTV Camera Assemblies to be installed at existing signalized intersections shall be BOSCH MIC IP starlight 7000i (MIC-7502-Z30W), PELCO Esprit Enhanced Surevision ES6230 series (ES6230-12P), WTI Viper H.264HD (with camera enclosure pressurization), COHU RISE 4260 HD (Model # 4261-1100) or Engineer approved equal.
- 23.2.2 CCTV Camera Assembly On Tower, Installed: CCTV Camera Assemblies on towers shall be BOSCH MIC IP starlight 7000i (MIC-7502-Z30W), WTI Viper H.264HD (with camera enclosure pressurization), COHU RISE 4260 HD (Model # 4261-1100) or Engineer

approved equal.

- 23.2.2.1 Camera assemblies to be installed on towers shall include providing and installing a 24" x 24" ice shield to be mounted on the tower leg above the camera. The ice shield shall be adjustable and weigh no more than 70 lbs. Ice shield to be provided must be approved by the St Charles County Radio Department prior to use.
- 23.2.3 Camera assembly and cables, mounting bracket, power supply, surge suppressors, bonding conductors and grounding lugs will be provided by the Contractor.
- 23.2.3.1 Outdoor Surge Protectors to be provided by contractor shall be the recommended type for the camera that is supplied for each application.
- 23.2.4 Camera assembly shall be outdoor rated IP, power-over-ethernet, pan-tilt-zoom, positioner style cameras with the following features:
- HDTV (1080p)
 - Electronic Image Stabilization
 - Wide Dynamic Range
 - 30x optical zoom
 - Dual Video Streams (min)
 - Video Compression: H.264 / Motion JPEG
 - Security: Password Protection, IP address filtering, HTTPS encryption, IEEE 802.1X
 - Supported protocols: IPv4/v6, HTTP, HTTPS, SSL, QoS, FTP, SMTP, UPnP, SNMP v1/v2c/v3, DNS, DDNS, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP
 - Operating Temperatures: -40° C to 60°C
 - Storage Conditions: -20° C to 60°C
 - IP66 Standard (Waterproof)
 - ONVIF support
 - Support high power PoE++ up to 60 Watts
 - Minimum 3-Year Manufacturer Warranty
- 23.2.5 The contractor shall provide, install, and test any PoE++ and data communication cables for PTZ camera operation. There will be no additional payment for these cables.
- 23.2.6 Provide stainless steel bands to affix the mounting bracket to the pole. The banding shall be 1-inch wide, 0.044-inch thick, stainless steel.
- 23.3 Construction Requirements.
- 23.3.1 Install the camera so that the pole does not block the camera's view of traffic.
- 23.3.2 Terminate all the cables on surge protectors, install the power supply in the cabinet/tower building, and connect the camera power circuit to the

power supply.

- 23.3.3 Restrict the camera's field of view, if necessary, so that a user cannot use the cameras to look in the windows of dwellings. To the extent that it does not interfere with the use of the camera for traffic management purposes, ensure that a camera cannot be used to view residential property. Prior to creating these restrictions, submit to the engineer a written description of the proposed restrictions to be installed at each camera, and the proposed method of achieving them. It shall not be possible for an operator to override these restrictions without intervention by a supervisor. Highlight situations in which there is a conflict between the need to protect privacy and the need to view traffic situations. Revise the field of view restrictions as directed by the engineer.
- 23.3.4 Special Requirements for Installation on Towers
- 23.3.4.1 Installation practices shall meet or exceed the Motorola R56 Standards and Guidelines for Communication Sites.
- 23.3.4.2 Safety Requirements. The following requirements must be met for all work done on the tower sites:
- 23.3.4.2.1 Maintain safe working conditions, take all necessary and required safety precautions, and comply with all applicable laws, ordinances, rules, regulations, and orders during the performance of Services pursuant to this Agreement.
- 23.3.4.2.2 Provide all necessary and required training and equipment to prevent damage, injury, or loss to persons and property.
- 23.3.4.2.3 Ensure that all personnel (including Contractor's employees and any subcontractors) can demonstrate compliance with all training requirements by carrying a wallet card or other documentation at all times during the performance of Services.
- 23.3.4.2.4 Have available for inspection safety and fall protection training certificates for all employees and subcontractors on Site including, at a minimum:
- Competent Climber Training
 - Safety Connection Fall Protection Training
 - Tower Rescue Training
 - Radio RF Hazards Training
- 23.3.4.2.5 Have in place emergency procedures specific to each Site which state the location of the nearest emergency healthcare facility.
- 23.3.4.2.6 Have a documented rescue plan and rescue equipment on site. All safety and rescue equipment plans and material should be OSHA- and ANSI-approved.
- 23.3.4.2.7 Prior to using any hazardous substance, give written notice of the chemical composition thereof to its employees, subcontractors and County. In the event Contractor encounters any material at any Site that

is reasonably believed to be hazardous, Contractor shall immediately stop work and report the condition to the County in writing. The work in the affected area shall not resume until the condition has been abated or adequately addressed.

23.3.4.2.8 Report any injury or death to County immediately. Contractor shall also immediately notify its insurance carrier(s) of any such injury or death and shall provide to Country a copy of any investigation, report or notification.

23.4 Acceptance Testing.

23.4.1 After installing the camera assembly, test it using the procedures developed by the manufacturer and approved by the engineer. In addition, demonstrate that the agreed upon viewing restrictions have been implemented. If the installed camera assembly fails to operate properly, and the problem cannot be fixed by changing the wiring or setup parameters, the camera assembly will be deemed defective and the contractor shall return it to the manufacturer for replacement. The cost of replacement shall be borne entirely by the contractor.

23.5.0 Basis of Payment. Measurement and payment includes camera, mounting brackets, power supply, surge protection, all cables including IP CCTV Camera Cable, ice shield, testing, grounding, and all miscellaneous hardware required for a safe, fully operational camera assembly.

Measurement and payment for Extension Pole on Signal Pole, 20 ft. shall include mounting hardware, post cap, and powder coated paint (where applicable) for a fully functional extension pole. Payment will be made as follows:

Item No.	Type	Description
910-37.00	Each	CCTV Camera Assembly, Installed
910-99.20	Each	Extension Pole on Signal Pole, 20 ft
910-99.21	Each	CCTV Camera Assembly on Tower, Installed

24. VIDEO DETECTION SYSTEM

24.1 Description. This specification sets forth the minimum requirements for a video detection system that detects vehicles, bicycles, and motorcycles on a roadway by processing video images and that provides vehicle presence, traffic flow data, event alarms, and full-motion video for real-time traffic control and management systems and allows for multi-user access that is critical for use in the GGL network.

24.2 Materials. The Contractor shall provide a complete video detection system, including all elements and hardware for a fully functional final product, meeting requirements set in this specification and the satisfaction of the Engineer.

24.2.1 System Hardware. The video detection system shall be comprised of two major hardware components: a video sensor and a

communications interface panel. An optional wired input/output card shall be available for certain cabinet types.

- 24.2.1.1 Video Sensor. The video detection system shall include a video sensor that integrates a high-definition (HD) camera with an embedded processor for analyzing the video and performing detection.
 - 24.2.1.1.1 Camera and Processor
 - 24.2.1.1.1.1 The camera shall be a color CMOS imaging array.
 - 24.2.1.1.1.2 The camera shall have HD resolution of at least 720p (1280x720 pixels).
 - 24.2.1.1.1.3 The camera shall include a minimum 10X optical zoom.
 - 24.2.1.1.1.3.1 It shall be possible to zoom the lens as required to satisfy across-the-intersection detection objectives, including stop line and advance detection.
 - 24.2.1.1.1.3.2 It shall be possible to zoom the lens remotely from a City facility for temporary traffic surveillance operations or to inspect the cleanliness of the faceplate.
 - 24.2.1.1.1.4 The camera shall have direct, real-time iris and shutter speed control by the integrated processor.
 - 24.2.1.1.1.5 The processor shall support H.264 video compression for streaming output.
 - 24.2.1.1.2 Video Sensor Enclosure Assembly
 - 24.2.1.1.2.1 The camera and processor shall be housed in a sealed IP-67 enclosure. The enclosure and all associated hardware, including elements needed for mounting to a signal structure, shall be black in color.
 - 24.2.1.1.2.1.1 The faceplate of the enclosure shall be glass and shall have hydrophilic coating on the exterior surface to reduce debris accumulation and maintenance.
 - 24.2.1.1.2.1.2 The faceplate shall have a thermostatically-controlled indium tin oxide (ITO) heater applied directly on the interior surface to keep the faceplate clear of condensation, snow, ice and frost.
 - 24.2.1.1.2.2 An adjustable aluminum visor shall shield the faceplate from the sun and extraneous light sources.
 - 24.2.1.1.2.3 An integral aiming sight shall assist in aiming the camera for the detection objectives.
 - 24.2.1.1.2.4 A removable rear cap and cable strain relief shall seal the power connection.
 - 24.2.1.1.2.4.1 The rear cap shall be tethered to the enclosure to avoid dropping the cap during installation.
 - 24.2.1.1.2.4.2 The rear cap shall be fastened to the body of the video sensor with a single, captive bolt.

- 24.2.1.1.2.5 The rear cap and enclosure shall include Gore breathers to equalize internal and external pressure.
- 24.2.1.1.2.6 The sensor shall be self-supporting on manufacturer's mounting brackets for easier fastening during installation.
- 24.2.1.1.2.6.1 It shall be possible to rotate the field-of-view 360° without changing the angle of the visor.
- 24.2.1.1.3 Power and Communications
- 24.2.1.1.3.1 Power and communications for the video sensor shall be carried over a single three- conductor cable.
- 24.2.1.1.3.1.1 Termination of the three-conductor cable shall be inside the rear cap of the enclosure on a three-position, removable terminal block. Each conductor shall be attached to the plug via a screw connection.
- 24.2.1.1.3.2 The video sensor shall operate normally over an input voltage range of 89 to 265 VAC at 50 or 60 Hz.
- 24.2.1.1.3.3 Power consumption shall be no more than 16 watts during typical operation.
- 24.2.1.1.3.4 No supplemental surge suppression shall be required outside the cabinet.
- 24.2.1.1.3.5 All communications to the video sensor shall be broadband-over-power via the same three-conductor cable that powers the unit. Coaxial cable shall not be required.
- 24.2.1.2 Communications Interface Panel. The video detection system shall include an interface panel in the signal cabinet that manages communications between the video sensors, the City/County facilities or MoDOT TMC, a maintenance technician, and the traffic cabinet itself.
- 24.2.1.2.1 Video Sensor Connection
- 24.2.1.2.1.1 The communications interface panel shall provide connection points for four video sensors.
- 24.2.1.2.1.1.1 Each sensor connection shall be a 3-pole terminal block, which supplies power and broadband-over-power communications to the sensor.
- 24.2.1.2.1.1.2 The broadband-over-power communications shall provide a throughput of 70 to 90 Mbps.
- 24.2.1.2.1.1.3 The broadband-over-power connection shall support at least 1,000 feet of cabling to the video sensor.
- 24.2.1.2.1.1.4 Each video sensor connection shall include a power switch.
- 24.2.1.2.1.1.5 There shall be an LED for each video sensor to indicate the state of the power to the sensor and an LED for each video sensor to indicate the status of communications.
- 24.2.1.2.1.1.6 Each video sensor connection shall contain a resettable fuse.

- 24.2.1.2.1.1.7 Each video sensor connection shall provide high-energy transient protection.
- 24.2.1.2.2 Communications
 - 24.2.1.2.2.1 An Ethernet port shall be provided within the video detection hardware in the signal cabinet to connect to the City/County facilities or MoDOT's TMC.
 - 24.2.1.2.2.1.1 The remote connection shall support 10/100/1000 Mbps Ethernet communication.
 - 24.2.1.2.2.1.2 The communications interface panel shall proxy all network requests that arrive on the remote connection to avoid unwanted network traffic from reaching the broadband-over-power network between the communications interface panel and the video sensors.
 - 24.2.1.2.2.1.3 All communications to the video detection system through the remote connection shall be to a single IP address.
 - 24.2.1.2.3 Local User Communications
 - 24.2.1.2.3.1 A wired Ethernet port shall be provided to connect the technician at the cabinet to the video detection system for setup and maintenance purposes.
 - 24.2.1.2.3.1.1 The maintenance port shall support 10/100/1000 Mbps Ethernet communication.
 - 24.2.1.2.3.1.2 All communications to the video detection system through the maintenance port shall be to a single IP address.
 - 24.2.1.2.3.1.3 The maintenance port shall support DHCP to automatically assign an IP address to the user's computer, if desired.
 - 24.2.1.2.3.2 An 802.11g Wi-Fi access point shall allow wireless connection to the video detection system at the cabinet for setup and maintenance purposes.
 - 24.2.1.2.3.2.1 All communications to the video detection system through the Wi-Fi access point shall be to a single IP Address.
 - 24.2.1.2.3.2.2 The Wi-Fi access point shall support DHCP to automatically assign an IP Address to the user's computer.
 - 24.2.1.2.3.2.3 The Wi-Fi access point shall include a dipole, omnidirectional antenna.
 - 24.2.1.2.3.2.4 A momentary pushbutton shall allow the user to turn the Wi-Fi access point on or off.
 - 24.2.1.2.3.2.5 The Wi-Fi access point shall turn itself off automatically after a period of inactivity from connected devices of 30 minutes.
 - 24.2.1.2.3.2.6 An LED shall indicate when the Wi-Fi access point is enabled.
 - 24.2.1.2.3.2.7 The Wi-Fi access point shall operate simultaneously with the wired maintenance port and with the remote connection.

- 24.2.1.2.4 Traffic Controller Connection. The communications interface panel shall provide one connection to communicate to the traffic controller through the cabinet.
- 24.2.1.2.4.1 The traffic controller connection shall support a TS2 Type 1 or TS2 Type 2 cabinet configuration.
- 24.2.1.2.4.1.1 The traffic controller connector shall be a 15-pin female metal shell D sub-miniature type connector to support a standard NEMA TS2 or TEES SDLC cable.
- 24.2.1.2.4.1.2 The traffic controller connection shall support a protocol interface to SDLC-capable traffic controllers (NEMA or TEES).
- 24.2.1.2.4.1.3 The traffic controller connection shall support the NEMA TS2 SDLC protocol to include up to 64 detector outputs and 32 inputs.
- 24.2.1.2.4.2 The traffic controller connection shall be able to connect to a wired input/output card, which supports wired I/O in cabinets without a SDLC-capable controller.
- 24.2.1.2.4.2.1 The wired I/O data communications link shall support at least 24 outputs and 16 inputs.
- 24.2.1.2.4.3 It shall be possible to connect and use both SDLC communications and communication to the wired input/output card simultaneously.
- 24.2.1.2.5 USB Ports
- 24.2.1.2.5.1 The communications interface panel shall include two USB 2.0 ports.
- 24.2.1.2.5.1.1 If a communications interface panel fails to start and run due to a software or operating system failure, it shall be possible to reinstall all system and application software from a USB memory stick without necessitating removal of the communications interface panel from the cabinet.
- 24.2.1.2.6 Power
- 24.2.1.2.6.1 The communications interface panel shall accept input voltage in the range of 89-265 VAC, 50/60 Hz power from the transient-protected side of the cabinet.
- 24.2.1.2.6.2 The communications interface panel shall be protected by two slow blow fuses. Two (2) spares shall be attached to the panel.
- 24.2.1.3 Wired Input/Output Card. The video detection system shall support an optional wired input/output card that communicates with the communications interface panel for real-time detection states and other I/O to the traffic controller. The card may reside in a standard detector rack or shelf-mount enclosure with power module.
- 24.2.1.3.1 The optional wired input/output card shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack.
- 24.2.1.3.1.1 The card shall occupy two slots of the detector rack.
- 24.2.1.3.1.2 The card shall provide four detector outputs on its rear-edge connector.

- 24.2.1.3.1.3 A front connector shall provide communication to the communications interface panel.
- 24.2.1.3.1.4 A front connector shall allow 16 inputs and 24 contact-closure detector outputs for wiring into the cabinet.
- 24.2.1.3.1.4.1 A front panel LED for each of the 16 inputs and 24 outputs shall indicate the state of the input or output. The wired input/output card shall support optional expansion cards in other slots.
- 24.2.1.3.1.5 Each expansion card shall support 4 outputs to the back edge of the card.
- 24.2.1.3.1.6 The wired input/output card shall support optional harnesses for connection to Input Files or C1, C4, C11, and C12 ports to support Type 170 or Type 2070 controllers.
- 24.2.2 System Software. The Contractor shall provide management software for configuration, monitoring and data collection purposes with the video detection system. Configuration software shall be provided to the owning agency.
- 24.2.2.1 Management Software
 - 24.2.2.1.1 Management software shall be a Windows-based application.
 - 24.2.2.1.1.1 The software shall be compatible with Windows 7 and Windows 10 operating systems.
 - 24.2.2.1.1.2 The software shall allow access to multiple users simultaneously.
 - 24.2.2.1.1.3 The software shall communicate with the video detection system via Ethernet.
 - 24.2.2.1.2 The management software shall automatically determine all video sensors and communications interface panels available on the local network and populate a list of all devices.
 - 24.2.2.1.3 The management software shall provide the user a means to name individual video sensors and communications interface panels.
 - 24.2.2.1.4 The management software shall provide a means for the user to zoom the camera optics while viewing a live video stream.
 - 24.2.2.1.5 The management software shall provide a means for the user to calibrate distances in the field of view.
 - 24.2.2.1.6 The management software shall provide the user a means to create 4-sided detection zones in the field of view using either a still snapshot or live video.
 - 24.2.2.1.6.1 The management software will overlay an outline of each detection zone over the background image.
 - 24.2.2.1.6.2 It shall be possible for the user to place detection zones anywhere in the field of view for stop line detection and/or advance detection.
 - 24.2.2.1.6.3 It shall be possible for the user to set the desired color of both the on and off states of the detection zone overlay.

- 24.2.2.1.6.4 It shall be possible for the user to alter the size and shape of any previously created zone.
- 24.2.2.1.6.5 It shall be possible for the user to overlap zones, either partially or fully.
- 24.2.2.1.6.6 It shall be possible for the user to name each zone uniquely.
- 24.2.2.1.6.7 It shall be possible for the user to assign each zone to detect vehicles, to detect bicycles, or to detect both, and to specify different outputs for each type.
- 24.2.2.1.6.8 It shall be possible for the user to assign the same output to multiple zones such that the output will be on if any of the zones are detecting a vehicle or bicycle.
- 24.2.2.1.6.9 It shall be possible for the user to assign a single zone to more than one output such that if a vehicle or bicycle is detected, all the assigned outputs shall be turned on.
- 24.2.2.1.6.10 The management software shall be capable of creating at least 99 detection zones per video sensor.
- 24.2.2.1.7 It shall be possible for the management software to retrieve all configuration parameters from video sensors or communications interface panels.
- 24.2.2.1.7.1 It shall be possible for the user to save all the settings for a video sensor or a communications interface panel to a laptop file.
- 24.2.2.1.7.2 The management software shall provide a means to read or import all the settings from a previously saved configuration file for a video sensor or a communications interface panel.
- 24.2.2.1.8 The management software shall be able to download a new version of the application software into a communications interface panel and its attached video sensors.
- 24.2.2.1.9 The management software shall provide a video image module to monitor operation of a video sensor.
- 24.2.2.1.9.1 The monitoring screen shall include a live video stream from the video sensor with at least HD 1280x720 pixel resolution.
- 24.2.2.1.9.2 The video monitoring screen shall show indications of detection in real time by changing the color of the detection zone.
- 24.2.2.1.9.3 It shall be possible for the user to configure different indications for vehicle detections vs. bicycle detections when both are configured for the same zone.
- 24.2.2.1.9.4 The monitoring screen shall include the following optional, configurable objects:
- It shall be possible for the user to size and position them anywhere on the screen and to change the color and size of text.
 - An indication of when an output is on or off, along with a user-configurable name for that indicator.

- The current time in the video sensor.
 - A user-configurable title or name.
 - The version number of the video sensor software.
- 24.2.2.1.9.4.1 An indication of when an output is on or off, along with a user-configurable name for that indicator.
- 24.2.2.1.9.4.2 The current time in the video sensor.
- 24.2.2.1.9.4.3 A user-configurable title or name.
- 24.2.2.1.9.4.4 The version number of the video sensor software.
- 24.2.2.1.10 The management software shall provide a screen to monitor operation of the intersection with a quad-view video stream from the communications interface panel.
- 24.2.2.1.10.1 The quad-view video stream shall have a resolution of at least HD 1280x720 pixels, where each of the sensor videos comprising the quad-view shall be at least 640x360 pixels.
- 24.2.2.1.10.2 It shall be possible for the user to configure the order that the sensor videos appear in the quad-view.
- 24.2.2.1.10.3 The real-time quad-view video stream shall be capable of displaying the overlay graphics for all four sensors simultaneously.
- 24.2.2.1.11 While monitoring the video of a single video sensor or of the quad-view, it shall be possible for the user to request a “snapshot” or single-frame image to save to a named file on a laptop.
- 24.2.2.1.12 While monitoring the video of a single video sensor or of the quad-view, it shall be possible for the user to record a period of the video to save to a named file on a laptop.
- 24.2.3 System Functionality. The video detection system shall provide the following features and functionality.
- 24.2.3.1 Detection Performance
- 24.2.3.1.1 For detection zones placed at the stop line, the probability of not detecting the presence of a vehicle shall be 1% or less under all operating conditions when the video sensor is installed and configured per manufacturer recommendations.
- 24.2.3.1.2 It shall be possible to place advance detector zones such that the farthest point of the zone is up to 600 feet from the video sensor. Advance detector zone placement shall include 2- 3 car lengths of field-of-view beyond the farthest point of the zone.
- 24.2.3.1.3 The video detection system shall be configured by the Contractor or their vendor to collect continuous turning movement counts for each approach to the intersection. The turning movement counts shall be accurate to a +/- 5% level.
- 24.2.3.1.4 To ensure statistical significance for the above detection performance specifications, at a minimum, the data shall be collected over two

separate 2-hour time intervals with at one of those intervals occurring during low-light conditions (so as to avoid a single lighting condition) and shall contain a minimum of one hundred (100) detected vehicles per lane. The calculations of detection performance will not include turning movements where vehicles do not pass through the detectors, vehicle lane-change anomalies, or where they stop short or stop beyond the combined detection zones.

24.2.3.1.5 The Contractor shall propose a testing method meeting or exceeding the above requirements, to prove accuracy levels required above, to be performed by the Contractor or their vendor and approved by the Engineer.

24.2.3.1.6 If the required performance measures are not met, the Contractor shall make adjustments to the system configuration until required levels of accuracy are met.

24.2.3.2 Failsafe Mode

24.2.3.2.1 The video detection system shall provide three (3) failsafe options during optical contrast loss. The default shall be maximum recall. The end-user may choose to use minimum recall or fixed recall in which a user-defined number of seconds may be implemented to hold call during green.

24.2.3.2.1 The video sensor shall continuously monitor the overall contrast in the video. If the overall contrast falls below a preset level (such as caused by dirty faceplate, severe glare, extreme fog, or temporary ice/snow on the faceplate), the sensor shall enable the chosen failsafe mode. When sufficient contrast is restored in the video, the sensor will exit the failsafe mode.

24.2.3.2.1 The communications interface panel shall continuously monitor the connectivity status of the attached video sensors. If any video sensor goes offline due to either electrical failure or internal software failure, the communications interface panel shall enable the failsafe mode for that video sensor. If the video sensor comes back online, failsafe mode shall end.

24.2.3.3 Data Collection

24.2.3.3.1 The video detection system shall automatically collect and store traffic flow data in non-volatile memory for later retrieval and analysis. A minimum of 7 days of traffic data shall be stored in each camera, at which time the oldest data stored may be overwritten by the most recent data collected. No additional hardware or software outside of the camera housing shall be necessary to store traffic data. The data shall include:

24.2.3.3.1.1 Vehicle counts, including turning movement counts per approach.

24.2.3.3.1.2 Vehicle average speeds.

- 24.2.3.3.2 The management software shall be able to retrieve collected data for a specified period of time or for all currently stored data and save into a standard CSV file.
- 24.2.3.4 Operations Log
 - 24.2.3.4.1 The communications interface panel and each video sensor shall maintain a time-stamped operations log of routine and special events in non-volatile memory for later retrieval and analysis.
- 24.2.3.5 Time Synchronization
 - 24.2.3.5.1 The video detection system and management software shall provide three methods to synchronize the time of day clocks in the communication interface panel and the video sensors, as follows:
 - 24.2.3.5.1.1 Manual time synchronization operation by the user, which sets the time to the current time on the laptop where the management software is running.
 - 24.2.3.5.1.2 A configuration setting to allow the communications interface panel to automatically obtain time from the NEMA TS2 protocol on the SDLC channel and broadcast it to the video sensors.
 - 24.2.3.5.1.3 A configuration setting to allow the communications interface panel to automatically obtain time from up to five Network Time Protocol (NTP) sources and broadcast it to the video sensors.
- 24.2.3.6 Video Streaming
 - 24.2.3.6.1 In addition to the ability to view video streams in the management software, it shall be possible to view video from individual sensors or to view the quad-view from the communications interface panel using a third-party video player application on a tablet, smartphone or laptop computer.
 - 24.2.3.6.2 Video bitrate shall be user-definable between 100 Kbps-5000 Kbps. The default shall be 2048 Kbps. All bitrates shall provide 30 fps.
- 24.3.0 Construction Requirements. Construction requirements shall conform to Section 902 of the MoDOT specifications.
- 24.3.1 The system shall include all equipment shown on the plans and described in these specifications, plus any incidental items necessary for the satisfactory operation and maintenance of the system. All original identifying information from the packaging of each installed camera shall be placed in the signal cabinet. Up to date reference manuals or user guides are required in pdf format. The video detection system shall be installed per the manufacturer's recommendations. The installer shall be certified by the video detection system's manufacturer to install the system. All cable runs shall be continuous without splice from the cabinet to the camera. If requested by the engineer, a factory-certified representative from the supplier shall be available for on-site assistance for a minimum of one day during installation.

- 24.3.2 The bottom of the video camera shall be mounted a minimum of 6 feet (1.8 m) above the Mast Arm, unless otherwise indicated on the plans or approved by the Engineer.
- 24.3.3 A separate grounded 120 VAC service outlet surge protector shall be provided in the controller cabinet for supplying power to the parts of the video detection system requiring AC power. Use of the grounded service outlet located on the cabinet door will not be permitted.
- 24.3.4 The video detection system will be defined as the complete assembly of all required equipment and components for detection of vehicles. Each video detection system shall consist of the video camera(s), lightning arrester for video cabling, processor unit(s), control device (track ball or keypad; no mouse allowed), software and license for system control via a computer (if applicable), communication components, and a color monitor. All camera views shall be obtainable without requiring the disconnection and reconnection of cables within the system.
- 24.3.5 The video detection system shall be compatible with NEMA TS1 or TS2 cabinet configurations, or cabinets meeting the ATC standards.
- 24.3.6 The contractor shall be responsible for any changes or additions to either an existing or new cabinet in order to provide a properly functional video detection system and monitor display. This may include, but is not limited to, additional SDLC connectors, an MMU (malfunction management unit), shelf relocation and component reorganization. No direct pay is warranted for any changes or additions. All required connections will be considered part of the video detection system installation.
- 24.3.7 The video detection system shall be provided for either single camera or multiple camera installations as shown on the plans. Multiple camera installations shall be configured so that failure of 1 camera or control module shall not affect the operation of the remaining cameras or control modules
- 24.3.8 The video detection system shall come complete with a "MINI DETECTION PROGRAMMING KIT", consisting of a mini computer with monitor screen and mouse.
- 24.4.0 Testing Requirements. For detection zones placed at the stop line, the probability of not detecting the presence of a vehicle shall be 1% or less under all operating conditions when the video sensor is installed and configured per manufacturer recommendations.
- 24.4.1 The video detection system shall be configured by the Contractor or their vendor to collect continuous turning movement counts for each approach to the intersection, including vehicle classification. The turning movement counts shall be accurate to a +/- 5% level.
- 24.4.2 To ensure statistical significance for the above detection performance specifications, at a minimum, the data shall be collected over two separate 2-hour time intervals with at least one of those intervals occurring during low-light conditions (so as to avoid a single lighting

condition) and shall contain a minimum of one hundred (100) detected vehicles per lane. The calculations of detection performance will not include turning movements where vehicles do not pass through the detectors, vehicle lane-change anomalies, or where they stop short or stop beyond the combined detection zones.

- 24.4.3 The Contractor may propose an alternate testing method meeting or exceeding the above requirements, to prove accuracy levels required above, to be performed by the Contractor or their vendor and approved by the Engineer.
- 24.4.4 If the required performance measures are not met, the Contractor shall make adjustments to the system configuration until required levels of accuracy are met.
- 24.4.5 Post-construction documentation shall be provided to the Engineer depicting installed video detection systems met the above accuracy requirements, prior to acceptance of the work.
- 24.5 Maintenance and Support. The supplier shall maintain an ongoing program of technical support and software updates for the video detection system following expiration of the warranty period. The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the video detection system.
- 24.6 Warranty of Video Detection System. The video detection system shall be warranted to be free of defects in material and workmanship for a minimum of three (3) years, with the cameras being warranted for the same for three (3) years. During the warranty period, technical support from factory certified personnel or factory certified installers shall be available from the supplier. Ongoing software support by the supplier shall include updates for the processor unit and computer software and shall be provided at no cost during the warranty period. The update of the processor unit software to be National Transportation Communications for ITS Protocol (NTCIP) compliant shall be included.
- 24.7 Training of Video Detection System. A minimum of one day (up to 6 hours) of training shall be provided in the operation, setup and maintenance of the video detection system. The Contractor shall contact the Engineer to set up said training.
- 24.8 Method of Measurement. Method of measurement shall conform to Section 902.
- 24.9 Basis of Payment. Accepted video detection systems will be made at the contract unit price per each. Payment will be considered full compensation for all labor, equipment and material to complete the described work.

- 24.9.1 No direct payment will be made for programming the video detection system and its local intersection controller. Payment will be made as follows:

Item No.	Type	Description
902-49.75	Each	Video Detection System

25. GGL ARTERIAL DYNAMIC MESSAGE SIGN

- 25.1 General.
- 25.1.1 Description. Furnish and install dynamic message sign (DMS) assembly, controller, control cables, Layer 2 network switch, Bluetooth travel time system, support structure, foundation, cabinets, electrical service, power cables, pad-mounted meter and disconnect, electrical and communication conduit, pull boxes, required guardrail, and fiber optic cables from the main fiber run to the DMS location.
- 25.1.2 Qualified Personnel. Before construction begins for the devices, the Contractor shall present to the Engineer certification from the manufacturer for the installation of the devices in this Section. Specifically, the Contractor must be trained in the unpacking, assembly, mounting to the sign truss, positioning, and connection to the fiber optic communication cable, integration, and testing of the DMS. If not already certified, the Contractor shall arrange with the Engineer on-site training sessions to include both Contractor and GGL personnel at a location specified by the GGL representatives. If already certified, the Contractor shall arrange with the Engineer this same training after installation is completed.
- Do not perform any work until the manufacturer has certified the contractor as qualified. Contractors certified under a previous MoDOT or GGL contract need not be trained a second time, but only personnel who received the training shall participate in the sign installation and testing.
- 25.1.3 Delivery and Storage. The Contractor shall be responsible for receipt and storage of the DMS assembly and associated materials upon delivery from the manufacturer. After delivery, the contractor shall conduct a visual inspection and bench testing of the sign assembly, to check for damage during shipping and to ensure full functionality of the DMS. Bench testing check points shall match those used by the manufacturer prior to shipment and be approved by the engineer. Any defects found during this testing shall be coordinated between the Contractor and the manufacturer for resolution and/or repair.
- 25.2 Materials.
- 25.2.1 Contractor shall furnish dynamic message sign (DMS) assembly, controller, control cables, support members, cabinets, electrical service, power cables, and network switch.

- 25.2.1.1 The GGL Arterial DMS Sign Assembly shall be a Daktronics Vanguard VF-2420-80x160-20-RGB with the following functional specifications:
- Full-matrix display with variable text/graphics at 20mm pixel pitch
 - Pixel matrix of at least 80 rows x 160 columns
 - High-intensity LED, full-color red-green-blue (RGB) display
 - Ability to show at least 12 characters in 3 rows of 12" text and 16 characters in 4 rows of 9" text
 - Viewing angle of 30° x 30°
 - Operate using 120/240 VAC, single-phase power
 - Configured for operation with fiber optic and direct ethernet communications
- 25.2.1.2 Use an AWG # 6 wire or equivalent bonding straps to bond the sign to the structure. Use an AWG # 6 solid, bare copper wire to bond the sign structure to the ground rod(s).
- 25.2.1.3 Contractor shall furnish and install power and communication cables as specified by the sign manufacturer.
- 25.2.1.4 Contractor shall furnish and install a Layer 2 Switch in each DMS cabinet for communication to the GGL network. The Layer 2 Switch shall meet the requirements as stated in JSP I (Networking Equipment). The switches to be procured for the DMS shall be considered incidental to the installation of the DMS sign and no direct payment shall be made.
- 25.2.1.5 Contractor shall furnish and install a Travel Time System on each DMS assembly. The travel time system shall meet all requirements as stated in JSP M (Travel Time System). The travel time system procured and installed for each DMS installation shall be considered incidental to the installation of the DMS and no direct payment shall be made.
- 25.2.2 Contractor shall furnish and install a drilled shaft foundation for the DMS structure and assembly based on the details on Sheet DM4 of the plans.
- 25.2.2.1 The drilled shaft foundation shall follow the requirements of Sec 701 of the current MoDOT Standard Specifications except for the following:
- Delete Sec 701.4.10.3.2
- Delete Secs 701.4.11 through 701.4.11.4
- Delete Secs 701.6.4 and 701.6.5
- Replace Sec 701.7.1 with Section 5.1 below.
- Delete Secs 701.7.5 thru 701.7.9
- 25.2.3 The Contractor shall furnish and install a DMS support structure as shown on the plans.
- 25.2.3.1 Shop drawings shall be required and shall be prepared in strict accordance with the design details shown on the plans. If details are lacking, the details shall be supplied and shall conform to the design plans and specifications. All drawings shall be completely titled in

accordance with the contract plans and shall pertain to only a single structure. All welding procedures shall be prepared by the fabricator as a written procedure specification and shall be submitted with the shop drawings for approval. Shop drawings shall indicate the specific welding procedure to be used for each joint. All drawings shall be clear and complete and shall be thoroughly checked before submittal. Three sets of shop drawings shall be submitted to the engineer for approval. The approval of shop drawings will cover only the general design features and in no case shall this approval be considered to cover errors or omissions in shop details. The contractor shall be responsible for the accuracy of the shop drawings, the fabrication of material and the fit of all connections. All changes in the fabrication necessary for satisfactory results shall be at the contractor's expense. After shop drawings have been approved, no changes in the dimensions or substitutions of sections shall be made without the written approval from the engineer. Shop drawings shall be revised to show any authorized changes and the required number of prints shall be furnished to the engineer.

- 25.2.3.2 The GGL DMS structure and all equipment attached to it, including the GGL DMS Sign Assembly, Type 7 Modified Base Mounted Cabinet, mounting hardware, and any conduit, shall be powder coated ebony black.
- 25.2.4 The Contractor shall furnish and install a Type 7 Modified Cabinet as shown in the plans.
 - 25.2.4.1 The cabinet shall include a grounding system. Connection to ground must be bare, solid AWG # 6 copper wire or equivalent bonding strap.
 - 25.2.4.2 The cabinet shall be wired for three-wire 240/120-volt AC service. Provide a lightning arrestor designed to protect 120/240 VAC split phase breaker panels. The protector shall use metal oxide varistors as the protective elements. The response time shall be under five nanoseconds and the maximum surge current shall be at least 40,000 amps. The clamping voltage shall not exceed 400 volts. The device shall protect line-to-line and line-to-neutral.
 - 25.2.4.3 Provide an additional surge protector just for the circuits powering the communication and traffic management equipment (excluding the dynamic message sign, which has its own surge protectors). This shall be a filtering, two-stage surge protector. Install it on the load side of the appropriate breaker. The protector shall provide radio frequency noise filtering and be capable of protecting equipment drawing a total of at least 10 amps. If the maximum load on the circuit exceeds 10 amps, the contractor shall split the load among multiple circuits, each with a surge protector. The protector shall clamp both the main line and the main neutral at 250 volts, both relative to each other and relative to the cabinet ground. The response time shall be such that the voltage never exceeds 250 volts. The surge protector shall suppress surges of up to 20,000 amps.
 - 25.2.4.4 All circuit breakers shall be molded case units with quick-make, quick-

break, trip-free mechanism, and with a minimum interrupting capacity of 10,000A (RMS Symmetrical). The circuit breakers shall be of fixed trip type and UL listed. Circuit breakers shall be listed on the latest Qualified Products List QPL-W-C-375 maintained by the Defense Supply Center.

- 25.2.4.5 All doors shall have cabinet identification labels displaying the cabinet identifier. The engineer will provide a list of the identifiers for each location, as well as the format for the labels.
- 25.2.4.6 All seams shall be continuously welded and ground smooth.
- 25.2.4.7 All fasteners must be stainless steel.
- 25.2.4.8 The cabinet shall be powder coated black, free from blemishes.
- 25.2.4.9 Provide terminal blocks for all conductors entering the cabinet. Except for blocks used for coaxial cable, the blocks shall be the barrier type with nickel-plated brass screw terminals and solid backs. Terminal blocks for conductors carrying more than 60 volts must be covered by a clear acrylic shield.
- 25.2.4.10 The Type 7 Modified Cabinet shall be NEMA 3R aluminum cabinet with two doors, front and back. The aluminum shall be at least 0.188 inches thick, except that the door and top need be only 0.125 inches thick. The cabinet shall be approximately 36 inches high, 20 inches wide, and 22 inches deep. The cabinets shall be designed for concrete pad mounting. The cabinet shall have a three-point door latch. It shall also have provision for padlocking. The door hinge shall be continuous and shall be affixed by nuts and bolts that are concealed when the door is closed.
- 25.2.4.11 The cabinet shall be equipped with the following:
- Rack: For mounting 19-inch equipment. The mounting rails must have holes of the EIA standard size and spacing for the entire height of the cabinet.
 - Mounting panels: For terminal blocks, breakers, surge protectors and other small items on the back and side walls.
 - Termination Panel/Fiber Distribution Unit (FDU): The termination panel/FDU shall be appropriately sized for the number of terminations required for the entering fiber cable(s).
 - LED light: Controlled by a door switch.
 - Duplex ground fault interrupt outlet: For use by technicians. No permanent equipment shall be plugged into the GFI outlet.
 - Thermostatically controlled fan and heater: The fan shall move 100 CFM through vents at the top of the cabinet. The air intake shall be through louvers in the door, and the air shall pass through a replaceable filter as it enters the cabinet. The heater shall use at least 250 watts and shall be designed to prevent accidental contact with dangerous heat or voltage.
 - Electrical distribution system: Consisting of two 15-amp main circuit breakers, one for each side of the split phase service. One of the

main breakers shall serve the communication and traffic management equipment in the cabinet. Provide at least four outlets on this circuit. The second main breaker shall power auxiliary devices in the cabinet, such as the fan, heater, light, and GFI outlet. If the cabinet feeds power to other cabinets, the contractor shall provide two separate branch circuits for each of the other cabinets (one circuit for communication and traffic management equipment and the other circuit for the remaining devices). The contractor shall equip those branch circuits with 15-amp breakers.

- Sunshield: Placed on top of the cabinet, sloping to one or both sides.

25.2.5 Guardrail shall be installed per current MoDOT Standard Specifications and Standard Drawings.

25.2.6 Conduit, pull box, fiber optic cable, power cables, and network switches for the DMS installation shall meet the requirements for those materials specified elsewhere in this contract.

25.3.0 Construction Requirements.

25.3.1 Provide and install power and install provided control cables between the sign and a nearby cabinet. The cables shall be as specified by the sign manufacturer. It shall be possible to disconnect the sign from all power using a breaker or switch in the cabinet. Run the cables going from the cabinet to the sign through the structure. Use liquid-tight flexible metallic conduit between the sign structure and the sign and provide a small junction box as shown in the plans. The cost of this box and conduit is incidental to the sign installation.

25.3.2 Bond the bottom of the sign structure to one or more ground rods, using exothermic welding at each end of the ground wire (unless the steel structure has a suitable grounding lug). Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 10 ohms. Add more ground rods if necessary, to achieve this requirement.

25.4 Acceptance Testing.

25.4.1 Upon delivery of the sign to the jobsite, the Contractor and the engineer will conduct a visual inspection to check for shipping damage. After installation, the Contractor shall perform the same tests using the same procedures as those used after delivery from the manufacturer to demonstrate that the sign is still in satisfactory condition. The test will be witnessed by the engineer. The Contractor shall be responsible for fixing any new problems uncovered by these tests.

25.4.2 The acceptance test shall also include a demonstration that each branch circuit breaker in the sign's breaker box trips when the hot side of the circuit is shorted to ground. If the sign fails this test, reduce the resistance to ground by adding ground rods and improving electrical connections.

- 25.5 Basis of Payment. Measurement and payment for GGL Arterial DMS installation includes testing and all equipment including the DMS assembly, controller, control cables, support structure, foundation, cabinets, electrical service, power cables, pad-mounted meter and disconnect, electrical and communication conduit, pull boxes, fiber optic cables from the main fiber run to the DMS location, network switch, and miscellaneous hardware required for a safe, fully operational sign.
- 25.5.1 Included in the lump sum cost of the DMS assembly is full compensation for all reinforcing steel, anchor bolts and templates, washers, nuts, disposal of excavated soil, restoration of site around the drilled shaft, costs of drilling (including temporary casing), excavation, slurry, cleaning, an acceptable method of inspection as required, furnishing and placing concrete, grouting and incidental work and material required by the contract documents for the DMS foundation. No additional compensation will be made for concrete required to fill an oversized casing or for oversized excavation. No additional compensation will be made if the method of construction requires that drilled shaft casing be seated into the sound rock such that the bottom of the casing is below the determined top of sound rock elevation. No additional compensation will be made if sound rock is encountered within the excavation at which point a rock auger, core barrel or other rock-removing specialty tool must be used by the contractor before the top of the sound rock elevation to be used as “top of the rock socket” is confirmed by the engineer.
- 25.5.2 Measurement and payment for the GGL Arterial DMS Assembly includes the DMS support structure, including the furnishing and the installation of the DMS support structure and catwalk (as applicable), and all miscellaneous hardware required for a fully operational support structure system as shown on the plans.

Payment will be made as follows:

Item No.	Type	Description
910-99.22	Each	GGL Arterial DMS, Installed (Premier Pkwy)

26. FABRIC INNERDUCT

- 26.1.0 Description. Provide and install a fabric innerduct in conduit as mentioned in plans. Refer to page F2 in the plans for the locations where fabric innerduct is required.
- 26.2.0 Materials.
- 26.2.1 Fabric innerduct shall be a flexible fabric mesh textile innerduct and have the following features:
- Minimum 3 Cells
 - Accommodate minimum 0.70” cable diameter per cell
 - Fit within an occupied 2 inch rigid conduit
 - Includes pull rope/tape for each cell
 - Melting point 400°F min

- Resistant to ground chemicals and petroleum products
- Max pull length of 1500'
- Minimum 3-Year Manufacturer Warranty

26.2.1 Additional lubrication for cables as recommended by manufacturer to be provided by the Contractor

26.3 Construction Requirements.

26.3.1 Swivels should be used for installation of fabric innerduct in order to avoid twisting, provided by the Contractor.

26.3.2 Factory installed pull tapes must remain free-floating during installation.

26.4 Basis of Payment. Measurement and payment for fabric innerduct includes fabric innerduct, installation, and all miscellaneous hardware required for installation.

Payment will be made as follows:

Item No.	Type	Description
910-99.23	LF	Fabric Innerduct, 3 Cell

27. MoDOT ITS ASSETS RELOCATION

27.1 Description. The work consist of relocating existing MoDOT Intelligent Transportation System (ITS) facilities (conduit, cable, and/or pull boxes) that may be in conflict with this project construction sections as noted in the plans.

27.2 Materials. The materials used for relocating MoDOT ITS facilities shall be per MoDOT Approved Product List (APL) and meet all MoDOT Specifications. If the material is not in the APL, the contractor shall submit material specification documents to the Engineer and the MoDOT ITS group (via an email in advance to SLITS@modot.mo.gov) for review and approval.

27.3 Construction Requirements. The Contractor shall be aware there are numerous utilities present along the route in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown.

27.3.1 The contractor shall exercise reasonable care relocating MoDOT ITS Assets. Damage to any MoDOT facilities within the area of work caused by the contractor will be deemed by the Engineer as either “non-emergency” or “emergency” upon notification of the damages. Repair to damages will be performed as follows:

27.3.1.1 Non-Emergency: Contractor will have 4 hours to propose a repair plan to the Engineer for a complete repair within 3 business days.

27.3.1.2 Emergency: Upon notification of the damage, Contractor must immediately submit a repair plan to the Engineer which will take no more than 4 hours to respond on-site and complete repairs within 48 hours of notification of damage.

- 27.3.1.3 In either case, if the proposed plan is unacceptable for any reason to MoDOT, repairs will be made by MoDOT with all costs billed to the Contractor.
- 27.3.2 The ITS In-Ground Facilities located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when replacing, removing, or modifying any existing ITS In-Ground Facilities.
- 27.3.3 Prior to any in-ground work, the Contractor shall request for utility locates by contacting Missouri One Call (1-800 DIG-RITE or mo1call.com) for any in-ground installation locations as per plans. If there are any conflicts with MoDOT ITS Assets, the Contractor is responsible for relocation to the satisfaction of the Engineer prior to any in-ground work.
- 27.3.4 In the case of a conduit conflict, the Contractor shall trench an area beyond the in-ground work limits, install one or two conduits (must be the same quality as the existing conduit) using Split Duct Method, relocate the existing cables into the new conduit, and seal the conduit joints per manufacturer specifications.
- 27.3.5 The Contractor shall coordinate this work with the MoDOT ITS group and have the Engineer's approval prior to performing this task.
- 27.3.6 The contractor shall perform a fiber testing (see below requirements) before and after relocating MoDOT fiber cables at the nearest Node Cabinet at each site as shown on the plans and submit that report to the SLITS Group for review and approval.
- 27.3.6.1 Test Procedure. For each fiber link, follow this procedure:
- 27.3.6.1.1 If the link includes fiber installed by others, use an optical loss test set to measure and record the optical loss over that portion of the link before it is spliced to new fiber.
- 27.3.6.1.2 Calculate the maximum allowable loss for the completed link, both at 1310 nm and at 1550 nm. Use the following formula:
Maximum link loss = Measured loss over portion installed by others
+ (Fiber length in km) x (0.35 for 1310 nm and 0.25 for 1550 nm)
+ (Number of fusion splices) x (0.05)
+ (Number of mechanical splices [for temp. connection]) x (0.3)
+ (Number of connections) x (0.5)
- Provide this calculation to the engineer along with the test results.
- 27.3.6.1.3 Calibrate an optical loss test set and provide evidence satisfactory to the engineer that the set produces accurate results at both wavelengths. This can be a demonstration that the set correctly measures the loss of a test fiber whose loss is known.
- 27.3.6.1.4 Use the test set to measure the loss of the link under test. Record the result at both 1310 nm and 1550 nm. Arrange for the engineer or his representative to witness these tests.

- 27.3.6.1.5 If the measured loss exceeds the calculated maximum, use an optical time domain reflectometer and other test equipment to troubleshoot the link. Take whatever corrective action is required, including cable replacement, to achieve a loss less than the calculated maximum.
- 27.3.6.2 Test Result Documentation. Prepare a diagram showing all of the links tested in this project. For the portions installed in this project, show the equipment cabinets, splices, and pigtails. On each line representing a link, show the maximum allowable loss and the actual loss. The actual loss shall be the one measured after all corrective actions have been taken. Submit 5 copies of this diagram to the engineer, along with the calculations for the maximum allowable loss. Submit the diagrams and calculations in an electronic format acceptable to the engineer.
- 27.3.6.3 Documentation. Provide the engineer mark-ups of the plans, neat and legible, illustrating as-built versions of the splice and connection diagrams that are contained in the plans.
- 27.3.6.4 Certifications. The fiber optic cable shall be factory certified to meet the requirements in this specification. In addition, the manufacturer shall certify that the fiber optic cable has a life expectancy of 20 years.
- 27.3.7 The Contractor shall trench an area beyond the in-ground work limits, install one or two conduits (must be the same quality as the existing conduit) using Split Duct Method, relocate the existing cables into the new conduit, and seal the conduit joints per manufacturer specifications.
- 27.3.8 Upon completion of this work, the Contractor shall contact the MoDOT ITS group (via email at slits@modot.mo.gov or by calling 314-275-1526) to verify that all existing MoDOT ITS devices are online and request inspection of this work. Acceptance of this work shall be the sole judgment of the Engineer and the MoDOT ITS group's engineer.
- 27.3.9 The contractor shall restore those areas disturbed by this work or installation according to specifications herein.
- 27.4 Basis of Payment. Payment for "MoDOT ITS Assets Relocation" shall be paid as Linear Feet and shall include the trenching, conduit installation, conduit coupling, pull boxes, sealing materials, cable relocation, needed fiber testing, restoration of all disturbed area, all labor and work incidental thereto, and shall be considered to be completely covered by the contract unit price for the following pay item:

Item No.	Unit	Description
910-99.24	Linear Feet	MoDOT ITS Assets Relocation

28. NORFOLK-SOUTHERN RAILROAD REQUIREMENTS

- 28.1 Description.
- 28.1.1 At the railroad crossings included in the project, the contractor shall abide by construction requirements as stated by the railroad for transverse pipe and wire crossings in the Norfolk-Southern specifications NSCE-8, as well as the license agreement between the

railroad and the applicable municipality or St. Charles County.

28.1.2 The contractor shall review the permit application requirements and construction requirements available from the railroad (<http://www.nscorp.com>) prior to submitting the bid for the project.

28.1.3 The contractor shall provide a certificate of insurance for each of the 2 license agreements with the applicable municipality or St. Charles County as stated in each license agreement.

28.2 Materials.

28.2.1 2 HDPE conduit material shall meet the following material characteristics:

- 1.917" inside diameter
- 2.375" outside diameter
- 0.216" wall thickness

28.2.2 A polypropylene pull rope with a minimum tensile strength of 600 pounds shall be placed in the HDPE conduit with the proposed fiber optic cable.

28.2.3 Conduit marker delineators on perforated square steel tubing breakaway bases shall be installed as shown in the plans.

28.3 Construction Requirements.

28.3.1 Conduit Boring. The contractor shall install the HDPE conduit utilizing directional boring Method "A" as described in NSCE-8 specifications.

28.3.2 Notification. The contractor shall notify the Norfolk Southern construction representative prior to beginning work on or near the railroad right of way. The contractor shall follow all notification requirements applied by the agreement with the railroad. The Engineer will provide contact information for the Norfolk Southern representative at or before the pre-construction meeting for the project.

28.4 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 this provision, unless specified elsewhere in the contract document.

MODOT SPECIAL PROVISIONS

MODOT SPECIAL PROVISIONS

MoDOT and St. Charles County Standard Plans are not included in the construction plans but are included by reference. St Charles County Standard Plans shall be considered first in order of precedence, followed by the MoDOT Standard Plans. A listing of the necessary Standard Plans is included in the supplemental Standard Drawings section of these specifications. These drawings and specifications are intended to be so coordinated that any work included in one and not in the other, shall be executed as if included in both.

1. MODIFICATIONS TO THE MoDOT STANDARD SPECIFICATIONS

SECTION 109 – MEASUREMENT AND PAYMENT

Delete Section 109.9.1 Withholding of Retained Percentage, and replace with the following:

109.9.1 Withholding of Retained Percentage. Retainage of the CONTRACTOR's payment will not automatically be applied; however, the County may withhold payment for any of the following deficiencies, or for others as determined by the ENGINEER:

- liquidated damages
- unsatisfactory job progress
- defective construction work or material not remedied
- disputed work
- failure to comply with any material provision of the contract
- third party claims filed or reasonable evidence that a claim will be filed
- failure to make timely payments for labor, equipment or materials
- damage to a CONTRACTOR, subcontractor or material supplier
- reasonable evidence that a subcontractor or material supplier cannot be fully compensated under its contract with the CONTRACTOR for the unpaid balance of the contract sum
- citation by the enforcing authority for acts of the CONTRACTOR or subcontractor which do not comply with any material provision of the contract and which result in a violation of any federal, state or local law, regulation or ordinance applicable to that project causing additional costs or damages to the owner.

Delete Section 109.9.2 Release of Retained Percentage, and replace with the following:

109.9.2 Release of Retained Percentage. That portion of the CONTRACTOR's payment that is retained for project deficiencies, including but not limited to those identified in Section 109.9.1, shall be released upon correction of the deficiency prompting the retained payment to the satisfaction of the ENGINEER.

Delete Section 109.9.3 Release with Pending Claims

SECTION 203 – UNSUITABLE SUBGRADE

Description: Unsuitable subgrade locations will be determined by the ENGINEER based on field conditions. This Item Number will be paid at the unit price of \$35 per cubic yard according to Sec. 203.7.2 of the Standard Specifications.

The quantity on the bid form is an estimate; the actual quantity will be adjusted as determined by the amount of unsuitable material encountered, as determined by the ENGINEER. A change in quantity will not be considered as a basis for a claim by the CONTRACTOR.

SECTION 609 – ROCK LINING

Description: In accordance with Section 609.72 Materials, the following requirements shall be utilized for Type 2 Ditch Liner where indicated on the plans.

Type 2 Rock Ditch Liner shall consist of material with a predominant rock size of 6 inches (150 mm), a maximum rock size of 10 inches (250 mm) and a gradation such that no more than 15 percent will be less than 3 inches (75 mm).

SECTION 620.90 – EPOXY PAVEMENT MARKING MATERIAL

Add Section 620.90.3.3.9 to the *St. Charles County Standard Specifications for Arterial Highway Construction, 2006*:

620.90.3.3.9 On new asphaltic concrete pavement, cleaning operations shall not begin until after the new mat has reached ambient temperature. The extent of cleaning on new asphaltic concrete shall be such that 75 percent of the stone substrate is exposed.

SECTION 805 - SEEDING

Description: In accordance with Section 805.3.2, the following seed mixture shall be applied at the rate specified.

<u>Seed Name</u>	<u>Pounds of Pure Live Seed/Acre</u>
Alta Fescue	50
Annual Ryegrass	30
Creeping Red Fescue	50
Sweet Clover	25

SECTION 806.30 – TEMPORARY DITCH CHECKS

Delete Section 806.30.2.1 of the *St. Charles County Standard Specifications for Arterial Highway Construction, 2006* and substitute the following:

806.30.2.1 Rock Ditch Checks. Rock ditch checks shall be constructed of clean rock with 60 percent of the pieces having a volume of 1 cubic feet or more. On the upstream side of the rock ditch check, 2 to 3 inch clean rock shall cover the face. If constructed in a dry ditch, the ditch check shall be 2.5 feet tall. If constructed in a stream with flowing or standing water, the berm shall extend 2.5 feet above the surface of the normal water elevation as determined by the ENGINEER. Hand

or mechanical placement will be allowed. Rock berms shall completely cover the ditch, swale, or stream, and the center of the rock ditch check shall be lower than the edges.”

2. ADDITIONS TO STANDARD SPECIFICATIONS

2.1 *Gateway Green Light: Traffic Signal Equipment and Communication Upgrades* SPECIFIC REQUIREMENTS

2.1.1 Traffic Control and Detours

2.1.1.1 The handling of traffic shall be the responsibility of the CONTRACTOR and shall consist of furnishing, locating, and maintaining all barriers, warning lights, signs, flagmen, and other work and materials which may be required to properly protect the work and provide safety to the public. Battery type flashers will be used by the CONTRACTOR in areas he deems necessary; however, no direct payment shall be made for flashers. Such devices shall be organized following the guidelines of the "Manual on Uniform Traffic Control Devices" (MUTCD).

2.1.1.2 Roadways shall remain open at all times during construction except for short intervals of time 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 shall be as authorized by the ENGINEER. Two-way traffic shall be maintained when specified by the use of temporary pavement, ramping of drives and streets and gapping of pavement placement. The use of high-early strength concrete pavement or other means may be used to maintain two-way traffic at the CONTRACTOR'S request, if approved by the ENGINEER.

2.1.1.3 Except during working hours, the CONTRACTOR shall not park vehicles or store equipment or materials within 30 feet of the edge of pavement carrying traffic, unless the equipment, vehicles, or materials are located in a properly protected area or an off-site storage area or as otherwise directed by the ENGINEER.

2.1.1.4 In addition to Section 616 of the Standard specifications, when two-way vehicular traffic is handled over a single lane, each flagger (minimum of 2) involved in controlling traffic through and along the work area shall be equipped with a portable transceiver radio when not within sight of each other. Under NO circumstances shall two-way traffic be handled over a single lane without the proper flagmen in place each equipped with a stop-slow hand signaling device meeting the requirements of the MUTCD.

2.1.1.5 The ENGINEER shall have the authority to limit or cease any of the CONTRACTOR'S operations which, in his opinion, may hamper or impede the safe flow of traffic.

- 2.1.1.6 Appropriate signs shall be provided and maintained by the CONTRACTOR throughout the project per Part VI of the Manual on Uniform Traffic control Devices. The number of signs, locations, and wording shall be approved by the ENGINEER before installation.
- 2.1.1.7 Traffic control devices shall conform to latest edition of MODOT Standard Specification Sections 612, 616, 617, and 620. The CONTRACTOR shall maintain traffic during construction in accordance with MODOT Standard Specification Section 104.7.
- 2.1.1.8 The CONTRACTOR shall provide access to driveways at all times unless approval has been otherwise given by the property owner. Proof of such approval must be provided to the ENGINEER.

Method of Measurement and Payment

- 2.1.1.9 The work provided herein will not be measured for payment, as it will be considered incidental to the contract, except for channelizers, construction signs, Type III movable barricades, temporary asphalt pavement, and temporary signing and striping. These items will be paid for at the contract unit price indicated in the bid form. Furnishing, installing, relocating, and maintaining all traffic control devices not included under other bid items including warning lights, flagmen, and other work and materials which may be required to properly protect the work and provide safety to the public will not be paid for separately and shall be considered incidental.
- 2.1.1.10 The placement of channelizers, signage, etc. shall be in the proper quantity and spacing as specified in the MUTCD and/or Standard Specifications.
- 2.1.1.11 Construction signs will be paid for at the unit bid price for providing the signs and initial placement on the project. Maintenance of the construction signs and relocations within and between stages will be considered incidental to other contract work.
- 2.1.1.12 Type III movable barricades will be paid for at the unit bid price for providing the barricades and initial placement on the project. Maintenance of the barricades and relocations within and between stages will be considered incidental to other contract work.
- 2.1.1.13 Temporary striping will be paid for at the unit bid price for placement of temporary striping. Removal of temporary striping shall be incidental to the price for temporary striping and no additional payment shall be paid for removal.
- 2.1.1.14 No payment will be made for any temporary work (pavement repair, steel plates, etc.) associated with staging of sewer construction.
- 2.1.1.15 Temporary, short term, daytime closures of one lane of the existing roadways may be permitted for the placement of storm sewers, paving operations and other types of work, provided the proper signage and flagmen are in place. Operations will be immediately suspended should traffic restrictions be attempted on the existing roadway without the necessary flagmen being in place and properly

equipped. No further payment will be made on the project until the CONTRACTOR has provided to the County sufficient proof that proper flagging procedures will be followed during any future operations requiring it.

2.1.1.16 In addition to the requirements spelled out under Paragraph 2.4 of this section, the CONTRACTOR is hereby advised that regular (no less than twice weekly) checks of the traffic control devices placed under this contract shall be conducted. The CONTRACTOR shall take immediate action to correct any devices found to be missing, out of place, or in need of repair or cleaning. Failure to correct any deficiency, whether found by the CONTRACTOR or as notified by the County, will result in the removal of any payment for traffic control devices (construction signs and moveable barricades) from the CONTRACTOR'S invoice until such time the corrections are made and the devices are in place according to the original plan, or any approved modification thereof.

2.1.1.17 No traffic switch can be made unless the necessary striping, whether temporary or permanent, is in place. Sufficient notice must be given to the County to allow proper notification to be made regarding the proposed traffic switch.

2.1.2 Erosion Control Monitoring

Regular maintenance of the erosion control measures must be performed to ensure that property off the right-of-way is not impacted by runoff from the project. Failure to properly maintain the erosion control structures may be cause for suspension of work by the County until the necessary corrections are made. In accordance with Standard Specifications Paragraph 105.1.2 "Suspension of Work", any suspension will be considered non-excusable and non-compensable and the calendar day count will continue.

2.1.3 CONTRACTOR Safety Officer

Special attention is directed to Paragraph 107.4.1 of the Standard Specifications regarding the identification of the CONTRACTOR's Safety Officer. In cases of calls from the County Sheriff's Department or other public safety agencies regarding public safety hazards arising from or related to the work performed under this contract, the County will first try to contact the CONTRACTOR's on-site representatives (Superintendent or Project Manager) for correction. When unable to reach the on-site representatives, or in cases where they are non-responsive, the County will contact the Safety Officer. It will be the responsibility of the Superintendent, Project Manager, or Safety Officer to take the actions necessary to immediately correct the public safety concerns identified, regardless of the day or time.

2.1.4 Utility Coordination

2.1.4.1 The CONTRACTOR is hereby notified that utility relocations may be necessary on this project and may, or may not, be in various stages of completion. As a result, the CONTRACTOR acknowledges and should be fully prepared for his operations to be impacted by conflicts of varying degree. As required by Sections 102.5.5 and 105.7 of the Standard Specifications, the CONTRACTOR shall be responsible for contacting utilities and coordinating his work with the ongoing relocations.

2.1.4.2 Should a level of conflict arise whereby the utility relocation work requires a temporary suspension of work due to its impact on the CONTRACTOR'S major operation of work, an adjustment of the contract time for completion of work will be made by utilizing the weighted time table.

2.1.4.3 Suspension of work will only be given where the utility conflicts are such that the CONTRACTOR'S major operation is impacted enough to prevent reasonable progress. Reasonable effort to work around the conflict will have to be shown by the CONTRACTOR before any suspension of work will be considered by the ENGINEER.

2.1.4.4 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:

Ameren UE (Electric) 2100 Bluestone Drive St. Charles, MO 63303 (636) 925-3236	AT&T/SBC (Telephone) 402 North Third Street St. Charles, MO 63301 (636) 949-1315
Charter Communications (Cable) 941 Charter Commons Drive Town & Country, MO 63017 (636) 387-6643	City of St. Charles Sewer & Water 200 North Second Street St. Charles, MO 63301 (636) 949-3237

2.1.4.5 The County does not warrant that the above listing or the depiction of utility lines or facilities on other bidding documents are complete or accurately reflect either all utilities or their precise locations within or adjacent to the project limits or the status of any relocation work.

2.2 **PREVAILING WAGE RATE**

The Federal Government is participating in the cost of construction of this project. This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Federal Wage Rates (Department of Labor and Davis Bacon Rates) or the State Wage Rates, whichever is higher for any given trade.

- 2.3 *CONTRACT TIME FOR COMPLETION OF WORK*
- 2.3.1.1 Completion of this contract shall be in accordance with Section 108.7 and will be administered by a calendar day completion basis. Completion is defined as 100% of the contract items completed including correction of deficiencies.
- 2.3.1.2 Regardless of when the work is begun on this contract, all work shall be completed within 180 Calendar Days from the date of the written Notice to Proceed.
- 2.3.1.3 Should the CONTRACTOR, or in case of default, the surety fail to complete the work within the calendar days specified, a deduction in the amount of \$1,200 will be made for each and every calendar day that the contract remains uncompleted in accordance with the requirements of Section 108.8.
- 2.4 *WORK ZONE TRAFFIC MANAGEMENT PLAN (JSP-02-06B)*
- 2.4.1 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.
- 2.4.2 Traffic Management Schedule
- 2.4.2.1 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.
- 2.4.2.2 The CONTRACTOR shall notify the ENGINEER no less than seven (7) days in advance prior to lane closures or shifting traffic onto detours.
- 2.4.2.3 The ENGINEER shall be notified as soon as practical of any postponement due to weather, material, or other circumstances.
- 2.4.2.4 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.
- 2.4.2.5 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.

- 2.4.3 Work Hour Restrictions
 - 2.4.3.1 There are three major summer holiday periods: Memorial Day, Independence Day, and Labor 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.
 - 2.4.3.2 The CONTRACTOR shall not perform any construction operation on the roadway, including the hauling of material within the project limits, during restricted periods, holiday periods, or other special events specified in the contract documents.
 - 2.4.4 Lane Closures. The County may utilize changeable message sign(s) to assist the CONTRACTOR in notifying motorists of future traffic disruption and possible delays one week prior to lane closures. The changeable message sign(s) shall be installed at a location as approved or directed by the ENGINEER.
 - 2.4.5 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 documents.
- 2.5 SPECIAL DRAINAGE CONSIDERATIONS:

CONTRACTOR will make provisions to alleviate any temporary flooding caused by staging of work. The CONTRACTOR shall provide temporary ditches, temporary covers over storm structures, temporary connections to completed storm sewer systems or pumping as necessary to ensure that, at a minimum, one ten (10) foot wide traffic lane exist at all times in the direction of traffic. Under two-way traffic conditions two ten (10) foot lanes are required. Only one 10-foot lane is required for authorized one way sections. Payment for the maintenance of traffic shall be considered incidental to the work and no direct payment will be made for the installation or removal of any measure necessary to fulfill the intent of this section.

Water covering more than five (5) feet of the travel lane or greater than or equal to three (3) inches in depth on the roadway surface will not be allowed.

The CONTRACTOR should be prepared to provide this maintenance 24 hours a day, 7 days a week, as necessary from the Contract NTP until Final Acceptance.

2.6 REMOVAL OF IMPROVEMENTS

Description. This work shall consist of the removal and disposal of all existing improvements on each parcel, except those designated or permitted to be left in place or to be removed under other items of work, from the right of way and within the limits of any construction easement outside the right of way, in accordance with Section 202 of the Standard Specifications.

Removal of improvements shall include all items listed in Section 202.12.2 as well as uncontaminated storage tanks, signs, fences, and any other miscellaneous items that may interfere with the proposed improvements.

Construction Requirements. Regulated solid waste, including waste tires, must be handled, transported and disposed of in accordance with the Missouri Solid Waste Management Law, 260.200 - 260.345, RSMO., and its regulations. Documentary proof of proper transport and disposal of this waste (e.g., sale tickets, cancelled checks and/or receipts) shall be forwarded to MDNR. Documentary proof and information regarding compliance with the Solid Waste Management Law and regulations may be directed to MDNR's Solid Waste Management Program.

All salvaged material shall become the property of the CONTRACTOR and shall not be stored upon the right of way, nor shall any portion of the right of way be used by the CONTRACTOR as a sales yard. All discarded material or debris shall be disposed of at locations furnished by the CONTRACTOR or at locations on the right of way approved by the ENGINEER.

Pavement, sidewalks, curbs, etc. shall be removed to the nearest joint or clean saw cut, in accordance with the details shown on the plans. Pavement shall be removed only as required for construction of the improvements. Any pavement removed unnecessarily shall be replaced at the CONTRACTOR'S expense.

All above ground concrete and masonry improvements, fences, posts, as well as other structures on the parcel, shall be removed to adjacent surface grades.

All trees, shrubs or other vegetation within the limits of the CONTRACTOR'S backfilling operations shall be removed and disposed of in accordance with Section 201.

Any item left in place for use by the public or an adjoining property OWNER that is damaged due to the CONTRACTOR'S operations, the item shall be repaired or replaced in a manner satisfactory to the ENGINEER and in accordance with Section 107.12.

Only approved materials free of trees, stumps, rubbish and any other deleterious materials shall be used in the construction of backfills. Rock, broken concrete or other solid material shall not be placed in bridge fill slopes or areas.

The CONTRACTOR shall leave in place any walls or structure that retains adjacent property to ensure lateral support to that property. In addition, any wall perpendicular to and connected to said wall or structure shall remain in place and connected to the wall for a distance at least one-half the height of the wall. The slope of the top of the perpendicular wall shall be one-half horizontal to one vertical (1/2:1) (1:1/2), or flatter, sloping downward from the top of the wall or structure.

The CONTRACTOR shall exercise great care during removal operations to avoid damage to these adjacent structures. If damage occurs, the CONTRACTOR shall repair or replace the structures to the specifications above, or to a condition which ensures lateral support to the adjacent property. The repairs or replacements shall be reviewed in advance by the ENGINEER.

In the event the CONTRACTOR encounters what is reasonably suspected to be a hazardous material, the CONTRACTOR shall immediately cease working on the parcel and notify the ENGINEER. The CONTRACTOR may continue working on the parcel only after receiving notification from the ENGINEER that the suspected material is not hazardous or that the hazardous material has been abated.

Basis of Payment. Removal of all improvements, as described above, including flexible and rigid pavement removal required for construction of the storm drainage system, new pavement widening and other improvements, sidewalks, curb and gutter, drive entrances, inlets, inlet stones, mailboxes, etc. in connection with the Work shall be paid for contract unit lump sum price for REMOVAL OF IMPROVEMENTS, and no additional compensation will be allowed.

2.7 FULL DEPTH SAW CUT

Description. This work shall consist of Saw Cutting as required to complete the removals described in Removal of Improvements.

Construction Requirements. All saw cuts for removals shall be full depth.

Basis of Payment. Saw cuts will be paid for at the contract unit price per lineal foot for FULL DEPTH SAW CUT.

2.8 CLEARING AND GRUBBING

Description. This work shall consist of Clearing and Grubbing and shall be in accordance with Section 201 of the Standard Specifications. The CONTRACTOR is advised that Clearing and Grubbing operations shall begin within five (5) days of the Notice to Proceed date given for this project.

Construction Requirements. Where tree removal conflicts with existing underground utilities, the CONTRACTOR shall cut the tree off at the ground line and grind the stump as directed by the ENGINEER.

Method of Measurement. The work provided herein will not be measured for payment, but will be considered a lump sum unit. This work shall include all areas necessary to be cleared and grubbed to complete the project.

Basis of Payment. The accepted clearing and grubbing will be paid for at the contract unit lump sum price for CLEARING AND GRUBBING.

2.9 UNCLASSIFIED EXCAVATION

Description. This work shall consist of excavation, placement, and compaction of materials within the project limits in accordance with Section 203 of the Standard Specifications.

Construction Requirements. Excess excavated materials from initial stages may need to be stockpiled for use in later stages of the project. It is the responsibility of the CONTRACTOR to determine the best location for storage of the excess material and the amount of material that will be needed for each stage of the project. No additional compensation will be allowed for stockpiling excess material for later use.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard for UNCLASSIFIED EXCAVATION.

2.10 REMOVE EXCESS EARTHWORK (HAUL OFF)

Description. This work shall consist of the proper disposal of excess materials within the project limits not needed in the construction in accordance with Section 203 of the Standard Specifications.

Construction Requirements. The CONTRACTOR shall comply with all of the disposal requirements as specified in Section 203 of the Standard Specifications and no additional compensation will be allowed for complying with these requirements for materials that do not meet the "clean fill" definition.

Basis of Payment. This work shall be paid for at the contract unit price per cubic yard for HAUL OFF.

2.11 GRAVEL (A) – DRIVEWAY

Description. This work shall consist of furnishing, placing, and compacting an aggregate surface course for driveways in accordance with Section 310 of the Standard Specifications.

Materials. Aggregate for this work shall be Type 5, per Section 1007.3

Construction Requirements. Shaping and compaction of aggregates shall be in accordance with Section 304.3.5 of the Standard Specifications.

Basis of Payment. This work shall be paid for at the contract unit price per square yard for GRAVEL (A) – DRIVEWAY.

2.12 REMOVALS AND RELOCATIONS

Description. This work shall consist of the removal and satisfactory relocations of items identified to be removed and relocated on the plans.

Construction Requirements. The CONTRACTOR shall verify those items to be removed and relocated with the ENGINEER in the field, before any items are removed.

Existing materials shall be carefully disassembled to prevent damage. All material, which is not satisfactory for re-use, in the opinion of the ENGINEER, shall be replaced and payment will not be made. All material, which is damaged by the CONTRACTOR due to his negligence, shall be replaced by the CONTRACTOR at his expense. Material used for replacement shall be the same kind as, or equal to, the material being replaced. All material not used shall become the property of the CONTRACTOR.

Items that shall be removed and not immediately relocated on the project shall be stored by the CONTRACTOR at no additional cost. The CONTRACTOR shall be responsible for any damage incurred to the removed items during removal, transport, storage, and relocation. Items damaged shall be replaced by the CONTRACTOR at his expense.

Basis of Payment. This work will be paid for at the lump sum contract price for REMOVALS AND RELOCATIONS.

2.13 PERMANENT SIGNS

Description. This work shall consist of furnishing and installing high intensity prismatic (H.I.P.) sheeting street signs on posts at the locations shown on the plans, in accordance with MUTCD standards and Sections 903 and 1042 of the Standard Specifications.

Basis of Payment. This work will be measured and paid for at the contract unit price per square feet for PERMANENT SIGNS, which price shall include furnishing and installing the sign panel, support channels, mounting hardware, and posts and no additional compensation will be allowed.

2.14 GEOSYNTHETIC INTERLAYER SPECIFICATION FOR HIGHWAY APPLICATIONS JSP-04-01

2.14.1 Description. This work shall consist of furnishing and placing a geosynthetic interlayer within the pavement structure as shown on the plans or directed by the ENGINEER. The geosynthetic interlayer shall provide a moisture barrier/stress relieving membrane and shall be placed beneath a hot-mix asphalt (HMA) overlay.

2.14.2 Material.

2.14.2.1 Geosynthetic Interlayer. The geosynthetic interlayer shall consist of geosynthetic material, saturated with asphalt binder.

2.14.2.1.1 Geosynthetic Material. The geosynthetic material shall be of the system specified on the plans and in accordance with Appendix A: Geosynthetic Material.

2.14.2.1.2 Tack Coat. The tack coat material for the geosynthetic material shall be a PG 64-22 asphalt binder, unless the manufacturer of the

- geosynthetic material recommends a higher performance grade asphalt binder. The asphalt binder shall be in accordance with Sec 1015. No emulsions will be allowed.
- 2.14.2.2 Clean Sand. Clean sand shall be sand meeting Sec 1005.2 or a washed sand meeting the approval of the ENGINEER.
- 2.14.3 Equipment. Equipment used to place the asphalt tack on the geosynthetic material, to install the geosynthetic material or to roll the geosynthetic material into the tack coat shall be in accordance with the manufacturer's recommendations.
- 2.14.4 Construction Requirements.
- 2.14.4.1 The geosynthetic material shall be stored as per the manufacturer's recommendations in a dry covered condition free from dust, dirt and moisture.
- 2.14.4.2 The geosynthetic material shall be installed in accordance with the manufacturer's specifications and this specification. Where a conflict exists between the specifications, the more stringent specification will apply. A copy of the manufacturer's specifications shall be provided to the ENGINEER at the pre-construction meeting or no later than five working days prior to installation.
- 2.14.4.3 A manufacturer representative shall be present, at minimum, for the first two days of installation of the geosynthetic interlayer and available thereafter upon request by the ENGINEER.
- 2.14.4.3.1 This requirement may be waived by the ENGINEER under the following conditions:
- (a) The CONTRACTOR has been certified by the manufacturer for installation of the geosynthetic material.
 - (b) A copy of the written certification is provided to the ENGINEER and the CONTRACTOR certification is approved by the ENGINEER prior to installation of any material.
- 2.14.4.3.2 If a manufacturer representative has been waived in accordance with Section 4.3.1, the ENGINEER will still maintain the right to require a representative to be present if the ENGINEER deems it necessary due to poor installation practices by the CONTRACTOR.
- 2.14.4.4 The surface on which the geosynthetic material is to be placed shall be reasonably free of dirt, water, vegetation or other debris. The geosynthetic interlayer shall be placed on a drainable surface, and any rutting or low spots in the pavement shall be removed by milling or by the use of a leveling course as shown on the plans. Cracks exceeding 1/8 inch (3 mm) in width shall be filled with suitable crack filler. Potholes shall be properly repaired as directed by the ENGINEER. Fillers shall be allowed to cure prior to placement of the geosynthetic material.
- 2.14.4.5 Neither the asphalt binder nor the geosynthetic material shall be placed when weather conditions, in the judgement of the

ENGINEER, are not suitable. Air and pavement temperatures shall be sufficient to allow the tack coat to hold the geosynthetic material in place. The air temperature shall be 50 F (10 C) and rising for placement of the asphalt tack coat.

- 2.14.4.6 The specified application rate of tack coat shall be sufficient to satisfy the asphalt retention properties of the geosynthetic material and to bond the geosynthetic material and HMA overlay to the existing pavement.
- 2.14.4.7 Application of the tack coat shall be by a calibrated distributor truck spray bar. Hand spraying, squeegee and brush application will only be allowed where the distributor truck does not have room to operate and shall be kept to a minimum. Temperature of the tack coat shall be sufficiently high enough to permit uniform spray pattern and shall be at minimum 290 F (145 C). To avoid damage to the geosynthetic material, distributor tank temperatures shall not exceed 325 F (163 C).
- 2.14.4.8 The target width of the tack coat application shall be the geosynthetic material width plus 6 inches (150 mm). Tack coat application shall be wide enough to cover the entire width of geosynthetic material overlaps. The tack coat shall be applied only as far in advance of the geosynthetic material installation as is appropriate to ensure a tacky surface at the time of the geosynthetic material placement. Traffic shall not be allowed on the tack coat.
- 2.14.4.9 The geosynthetic material shall be placed onto the tack coat with minimum folds or wrinkles and before the tack coat has cooled and lost tackiness. As directed by the ENGINEER, wrinkles or folds in excess of 1 inch (25 mm) shall be slit and laid flat or pulled out and replaced. In these repaired areas, additional tack coat shall be applied as needed to achieve a sound bond to the substrate. Damaged geosynthetic material shall be removed and replaced, per the manufacturer's recommendations, at the CONTRACTOR's expense with the same type of material.
- 2.14.4.10 Overlap of geosynthetic material joints shall be sufficient to ensure full closure of the joint, but shall not exceed 6 inches (150 mm). Transverse joints shall be lapped in the direction of paving to prevent edge pickup by the paver. A second application of tack coat shall be placed beneath the overlapping geosynthetic material to ensure proper bonding of the double material layer.
- 2.14.4.11 Brooming, squeegee or pneumatic rolling shall be used to remove any air bubbles and to maximize geosynthetic material contact with the pavement surface and shall be done in accordance with the manufacturer's specifications and to the satisfaction of the ENGINEER.
- 2.14.4.12 *Excess tack coat that bleeds through the geosynthetic material shall be removed by broadcasting clean sand or other material approved by the ENGINEER on the geosynthetic interlayer. Broadcasting of*

clean sand may also be used to facilitate movement of equipment during construction, to prevent tearing or delamination of the geosynthetic material or to prevent pickup by the paving machine. If sand or other approved material is applied, any excess material shall be removed from the interlayer prior to placing the HMA overlay. Scattering loose HMA mix out in front of the paver tires will also be permissible. No other material, such as asphalt release agents or diesel, shall be used for this purpose.

- 2.14.4.13 No traffic, except necessary construction traffic or emergency vehicles, shall be driven on the geosynthetic interlayer, unless approved by the ENGINEER. If traffic on the interlayer is approved by the ENGINEER, clean sand shall be lightly broadcasted over the geosynthetic interlayer, and any loose sand shall be removed prior to paving.
- 2.14.4.14 Placement of the first lift of the HMA overlay shall closely follow placement of the geosynthetic interlayer. All areas in which the geosynthetic interlayer has been placed shall be paved during the same day, unless approved otherwise by the ENGINEER. In the event of rainfall on the geosynthetic interlayer prior to the placement of the first HMA overlay lift, the geosynthetic interlayer shall be allowed to dry before the HMA is placed. The compacted thickness of the first lift of the HMA overlay on the geosynthetic interlayer shall not be less than 1.5 inches (38 mm), and the temperature of the mix at placement shall not exceed the geosynthetic material melting point temperature, unless approved otherwise by the ENGINEER. Approval by the ENGINEER may be based upon a test strip or evaluation of the material when taking QC/QA cores. Where the total HMA overlay thickness is less than 1.5 inches (38 mm), geosynthetic material shall not be placed.
- 2.14.5.0 Method of Measurement. Measurement for furnishing and installing the geosynthetic interlayer will be made to the nearest square yard of pavement specified to be covered.
- 2.14.6.0 Basis of Payment. The accepted quantities of geosynthetic interlayer will be paid for at the unit price for each of the pay items included in the contract.

403-99-05	1.0	SQUARE YARDS	SYSTEM A GEOSYNTHETIC INTERLAYER (NON-WOVEN PAVING FABRIC OR PAVING MAT)
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Geosynthetic Material

- 2.14.7 Scope. This specification covers geosynthetic material, which is to be saturated with asphalt binder to form a geosynthetic interlayer, for use as a moisture barrier and a stress relieving membrane within the pavement structure.
- 2.14.8 Acceptance. Acceptance of the material will be based on the manufacturer's certification and upon the results of such tests as may be performed by the ENGINEER.

2.14.9 Material.

2.14.9.1 System A Geosynthetic Material. System A shall be a non-woven paving fabric composed of 85 percent or more polyolefin, polyester or polypropylene fibers. The paving fabric shall meet the following requirements:

Property	Test Method	Requirements ^a
Grab Strength	ASTM D 4632	100 lbs. (450 N)
Ultimate Elongation	ASTM D 4632	≥50 %
Weight (Mass) per Unit Area	ASTM D 5261	4.0 oz./s.y. (135 g/m ²)
Asphalt Retention ^{b, c} , Min.	ASTM D 6140	0.20 gal./s.y. (0.9 l/m ²)
Melting Point, Min.	ASTM D 276	300 F (150 C)

- ^a All numeric values shall represent Minimum Average Roll Values (MARV) in the weaker principle direction.
- ^b The asphalt binder retention value shall be the amount required to saturate the paving fabric only. Asphalt retention shall be provided in the manufacturer's certification. Numerical value does not indicate the asphalt application rate required for construction.
- ^c Product asphalt retention property shall meet the specified MARV value.

2.14.10 Prequalification. Prior to approval and use of this material, the manufacturer shall submit to Construction and Materials a certified test report showing specific test results from an independent laboratory in accordance with all requirements of these specifications. The certified test report shall contain the manufacturer's name, brand name of material, lot tested and date of manufacture. In addition, the manufacturer shall submit a one square yard sample for laboratory testing accompanied by a technical data sheet and an MSDS. New certified test results and samples shall be submitted any time the manufacturing process or the material formulation is changed and may be required when random sampling and testing of material offered for use indicates nonconformity with any of the requirements specified. Those products that have been prequalified can be found in Field Section 1011 Table 2 and may be used on projects upon acceptance of the material in accordance with Section 5.0.

2.14.11 Certification. The CONTRACTOR shall furnish a manufacturer's certification to the ENGINEER for each lot of material furnished stating the name of the manufacturer, the chemical composition of the filaments or yarns and certifying that the material supplied is in accordance with this specification. The certification shall include or have attached typical results of tests from specific lots for all specified requirements.

- 2.14.11.1 The manufacturer shall be responsible for establishing and maintaining a QC program to assure compliance with the requirements of this specification. Documentation describing the QC program shall be made available to the ENGINEER upon request.
- 2.14.11.2 The manufacturer's certificate shall state that the furnished material meets MARV requirements as evaluated under the manufacturer's QC program. A person having legal authority to bind the manufacturer shall attest to the certificate.
- 2.15 SAFETY EDGE
- 2.15.1 Description. This work shall consist of furnishing and placing a Safety Edge to the dimensions shown and at locations designated on the contract documents. The finished shape of the Safety Edge shall conform to the typical sections. The Safety Edge shall be constructed monolithically with the pavement.
- 2.15.2 Equipment. Utilize an approved longitudinal Safety Edge system to create a sloped edge profile onto the roadway shoulder. Utilize an approved Safety Edge system that compacts the asphalt and provides a sloped wedge per the detail measured from the pavement surface cross slope extended. The use of a single plate strike off is not allowed.
- Utilize an approved Safety Edge system that is adjustable to accommodate varying paving thicknesses.
- All Safety Edge systems to be used for the purpose of creating a Safety Edge must meet the approval of the ENGINEER. The ENGINEER may require proof that the system has been used on previous projects with acceptable results or may require a test section constructed prior to the beginning of work to demonstrate the edge shape and compaction to the satisfaction of the ENGINEER.
- 2.15.3 Placement. Prior to placing asphalt or concrete pavement, prepare the shoulder material where the Safety Edge will be placed to provide a foundation that will support the placement of the Safety Edge in accordance with the owner agency's standard practice.
- For asphaltic pavements and overlays, the percent compaction of the asphalt adjacent to the Safety Edge shall be in accordance with the Standard Specifications unconfined longitudinal edge specification.
- Furnish, place and compact shoulder backing material to the top of the Safety Edge as shown in the details and in accordance with the Standard Specifications.
- Attain approval in advance from the ENGINEER for short sections of handwork such as transitions at driveways, intersections, interchanges, and bridges.
- 2.15.4 Measurement. Safety Edge will not be measured for payment.

2.15.5 Basis of Payment. No separate payment will be made for the construction of the Safety Edge. All work associated in the Safety Edge construction shall be integral to the pavement work and shall be included in the contract pricing for those pay items.

3. MODIFICATIONS TO MEASUREMENT AND PAYMENT

3.1 GENERAL

The total Contract Price shall cover all Work required by the Contract Documents. All costs in connection with the proper and successful completion of the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and lump sum prices bid. All Work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of CONTRACTOR and all costs in connection therewith shall be included in the prices bid.

3.2 *ESTIMATED QUANTITIES*

All estimated quantities stipulated in the Bid Form or other Contract Documents are approximate and are to be used only (a) as a basis for estimating the probable cost of the Work and (b) for the purpose of comparing the bids submitted for the Work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and material furnished. CONTRACTOR agrees that it will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and material actually furnished and the estimated amounts.

3.3 *PRICE ADJUSTMENT FOR ASPHALT MATERIAL
SUPPLEMENTAL REVISIONS JSP-09-01D*

Insert 109.15, subsequent section renumbered accordingly:

MEASUREMENT AND PAYMENT

109.15 Asphalt Cement Price Index. Adjustments will be made to the payments due the CONTRACTOR for any plant mix bituminous base, plant mix bituminous pavement, plant mix bituminous surface leveling, asphaltic concrete pavement and ultrathin bonded asphalt wearing surface that contains PG64-22, PG70-22 or PG76-22 when it has been determined that the monthly average price for the midpoint of the published prices of PG64-22 for St. Louis, Missouri area and Kansas City area has fluctuated from the monthly average price of the month the project was bid. The St. Louis, Missouri area and Kansas City area prices will be obtained from the Asphalt Weekly Monitor® published by Poten & Partners Inc. The monthly base price will be the price from the last published Asphalt Weekly Monitor® prior to MoDOT's monthly bid opening. The monthly base

price, established prior to the monthly bid opening, shall apply to payment estimates for the following month.

109.15.1 The adjusted contract unit price will be applied to the actual amount of asphalt binder used by the CONTRACTOR for all asphalt items. The adjustment will be applied to projects that have a quantity of asphalt wet ton mix pay items or converted square yard quantity over 1000 tons. For projects that are paid for with square yard pay items, the adjustments will be made for applicable tons calculated based upon the plan square yard quantity and thickness converted to tons excluding the 1:1 wedge. The percentage of virgin asphalt as shown in the job mix formula, in accordance with Sec 401, Sec 403 and Sec 413, will be the basis for adjustments for any asphalt mix type placed on the project during the monthly index period. The effective asphalt obtained from the use of Recycled Asphalt Pavement (RAP) and/or Recycled Asphalt Shingles (RAS) will not be eligible for adjustment. The base price index for PG64-22 will be applied to the asphalt mix for mixes using PG64-22, PG70-22 or PG76-22.

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

$$A = (B \times C) \times (D - E)$$

Where A = Adjustment for mix placed during monthly average index period

B = Tons of Mix Placed during the monthly average index period

C = % of virgin asphalt binder as listed in the job mix formula in use

D = monthly average price at time mix placement

E = monthly average price at time of bid

109.15.3. The ENGINEER will make adjustment payments, as defined above, for the applicable work completed during each month except for projects on which the CONTRACTOR is being charged liquidated damages, due to working beyond the project completion date, in accordance with Sec 108. In this case, the "D" value used for the price adjustment will be either the last "D" value prior to the date that liquidated damage assessment began or the current monthly "D" value, whichever is lower. If the CONTRACTOR is being charged liquidated damages due to the contract being beyond the project completion date and the current months "D" value results in a deduction, then the current monthly "D" value will be used.

109.15.4. 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. Failure by the bidder to execute the acceptance form will be interpreted to mean election to not participate in the Asphalt Cement Price Index. If the Asphalt Cement Price Index is accepted, asphalt binder for the project will not be eligible for a material allowance as described in Sec 109.

3.4

RELOCATION OF EXISTING UNDERGROUND UTILITY MAINS, EXCEPT WATER LINES AND SERVICE LINES

As specified, the CONTRACTOR shall locate all existing underground utility installations in advance of excavating. Where it is determined that any existing utility main may fall within the physical limits of new structures, the CONTRACTOR shall excavate at as many points as are required to determine their size, alignment, and grade. Where it is confirmed by such excavation that utility mains fall within the outside concrete line of the walls or top of structures, or within the subgrade of the bottom of structures, such mains will be relocated by the OWNER thereof, without cost to the CONTRACTOR. Such relocation of utility mains shall be made to the extent that conflict with the work of the CONTRACTOR during excavating and concrete formwork will be minimized.

Where it is found that existing utility mains are located in close proximity to, but not within, outside concrete lines or subgrade lines, such mains will not be relocated. The CONTRACTOR shall protect all such existing utilities as specified. If the CONTRACTOR determines that such utilities should be removed or relocated to expedite or simplify the work, or to allow certain construction procedures, such removal or relocation shall be paid for by the CONTRACTOR. The need for all utility main relocations shall be determined by actually exposing the affected utility conduit or line. The cost of all such relocations shall be included in the various unit prices in the Bid Form.

The CONTRACTOR shall be responsible for giving adequate notice to the owners of utilities that are to be relocated and for the coordination of any and all activities associated with the relocation of said utilities.

The acceptance of the ENGINEER shall be obtained before the CONTRACTOR requests relocation of any utility main, except those for which the CONTRACTOR agrees to pay all costs.

4. LOCAL PROGRAMS PERMIT FOR WORK ON MODOT RIGHT OF WAY

4.1 Description. This project includes work on MoDOT right-of-way, therefore a MoDOT permit must be issued prior to the Contractor starting any work on MoDOT right-of-way. The contractor performing the work will be issued the permit and shall comply with all requirements of the permit. There is no cost to obtain the MoDOT permit and no additional surety deposit or bond is required. The Permit Request form shall be submitted to the MoDOT Local Programs Construction Contact.

4.2 The contractor shall notify MoDOT prior to any temporary or long-term lane closure, shoulder closure, sidewalk closure or other work that impacts MoDOT's roadway. Notification shall be made using MoDOT's online "Lane Closure Request" form at

www.modot.org/form/lane-closure-request-form. Notification is required a minimum of 2 business days prior to any lane and/or shoulder closures. Failure to properly notify MoDOT prior to any closure may result in suspension or revocation of the permit.

4.3 The following documents are included at the end of these special provisions:

- a. MoDOT Local Programs Permit Information (How to obtain a Local Programs Permit)
- b. MoDOT Local Programs Permit Request form
- c. Sample Permit
- d. Personal Protective Equipment requirements for work on MoDOT right-of-way
- e. Sample "Lane Closure Request" form (www.modot.org/form/lane-closure-request-form)
- f. Permit Completion Report

4.4 Basis of Payment. All work necessary for compliance with this provision will be considered incidental to the project. No direct payment will be made for compliance with this provision.



MoDOT – St. Louis District Traffic Local Programs Permit Information

A Permit for Work on Right of Way is Required for:

- Construction of new entrances
- Reconstruction of existing entrances (change in width, grade, location, etc)
- Grading
- Landscaping
- Irrigation installation
- Utility installation
- Signal installation or modifications
- Traffic control

How to Obtain a Local Programs Permit for Work on Right of Way:

- LPA and/or LPA's Contractor to submit Permit Request Form to Local Programs Construction Contact and Jill Steiger (jill.steiger@modot.mo.gov) to type new permit for the Local Programs Project.
- Copy of permit will be emailed to LPA and LPA's Contractor for signatures.
- LPA and LPA's Contractor will need to sign permit and return by email for the permit to be issued.
- Issued Permit will be emailed to LPA, LPA's Contractor and Local Programs Construction Contact.

Once Local Programs Permit is Issued:

- Contractor to call before digging 1-800-344-7483 for location of underground facilities.
- Contractor to submit the "Lane Closure Request" form to MoDOT 2 business days prior to any lane closures. Submittals can be done online at www.modot.org/form/lane-closure-request-form or via email to SLPermitWorkzones@modot.mo.gov.
- Permit Staff to enter lane closure information into TMS and notify Contractor, Local Programs Construction Contact and Area Permit Inspector of approved lane closure with Workzone Verification email.
- Local Programs Contact to submit Permit Completion Report Form when work is complete and accepted by Local Programs Department so permit can be released.

Revised on 07/18/19



Missouri Department of Transportation Local Programs Permit Request

This form is to show intent to perform work in state right of way and does not give the applicant or their representatives authorization to work in state right of way. Authorization to work in state right of way will come in the way of a permit issued from MoDOT Permits department. All information on this form unless otherwise marked is required, if any required information is left out your request will not be processed. This form is electronically fillable.

Local Programs Project # _____ Local Programs Contact _____

Sponsor Information

Contact Name _____ City/County _____

Address _____

Phone No. _____ Email _____

Contractor Information (only response to efficient design applicant)

Contact Name _____ Company _____

Address _____

Phone No. _____ Email _____

Location Information

Route _____ County _____ City _____

Location of work on State right of way along the _____ side, _____
Direction Distance Feet / Miles

_____ from _____
Direction Nearest cross street or intersection

Description of work:

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION PERMIT TO WORK ON RIGHT OF WAY LOCAL GOVERNMENT PROJECTS

District _____ Permit No. _____
 _____ Route _____ County _____
 _____ (Type of Work) City _____
 Inspector _____ Issued _____ Log Points _____
 Phone _____ Expires _____ GPS Begins N _____ W _____
 RMS _____ Released: _____ GPS Ends N _____ W _____
 Speed Limit _____ mph
Intersection/Stopping Sight Distance
 Northbound/Eastbound NB EB _____ ISD ft. _____ SSD ft. _____
 Southbound/Westbound SB WB _____ ISD ft. _____ SSD ft. _____
Location of work on State Highway right of way along the _____ Side. _____
 from _____

 (State highway, County Road, City Street or County Line)

Description of work:

By signing this form, the applicant agrees to all provisions of this form, including the General Provisions attached hereto and incorporated by reference.

_____ (Signature) _____ (Date) _____ (Print or Type Name) _____ (Applicant) _____ (Address) _____ MO _____ (City State Zip-code) (Telephone Number) _____ (Email Address) _____	_____ (Signature) _____ (Date) _____ (Print or Type Name) _____ (Applicant's Contractor) _____ (Address) _____ MO _____ (City State Zip-code) (Telephone Number) _____ (Email Address) _____
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Surety deposit required. None , bond # _____, check # _____ Amount _____
 Transmittal Number _____ Make check payable to: **Director of Revenue Credit Road Fund**

For Office use only	Date: _____	By: _____
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GENERAL PROVISIONS

Section 1. The signing of this form binds the applicant to the terms of this permit. If signed by Applicant's contractor or that contractor's authorized representative, the contractor and any subcontractors will be held jointly responsible for all of the requirements of this permit until it is released by the District Engineer or the District Engineer's representative. Applicant agrees to keep a copy of the permit and an approved plan on the job site.

Section 2. Construction material and equipment may be on the right of way only during the period of actual construction providing it is not on the roadway shoulders, in the ditch or blocking sight distance. Roadway ditches, culverts and other such devices used to carry surface run-off will be kept open, free and clear at all times.

Section 3. Applicant agrees that construction inspection will be provided by Applicant to assure compliance with the permit.

Section 4. Applicant shall provide adequate preliminary engineering including planning, and coordination with all concerned parties to:

- (a) Confirm their contractor knows the rules and limitations for installations on highway right of way.
- (b) Provide preinstallation meetings to all parties on major installations.
- (c) Designate a point of contact who shall be available 24 hours per day, 7 days per week while the permittee is present on state highway rights of way and shall be capable of correcting any deficiencies in accordance with Missouri Standard Specifications for Highway Construction including, but not limited to Section 616.
- (d) Include the name and telephone numbers of the design engineer and construction manager, as well as the dimension of the facility from the right of way line on the permit.

Section 5. Prior to beginning work, the applicant will request from the established Missouri One-Call System, the location of all utilities on the right of way.

Section 6. Applicant will contact MoDOT 48 hrs prior to any lane closure or 14 calendar days prior to the imposition of height, width, and weight restrictions. Lane closure dates may be rescheduled and/or lane closure times may be shifted to off-peak and/or nighttime hours to minimize traffic backups. Schedule multiple tasks in a single work zone if possible.

Section 7. All work covered under this permit is to be in accordance with the Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, and The Manual on Uniform Traffic Control Devices (MUTCD current edition) where applicable. All utility facilities will be installed and located and all other work performed in accordance with the with Code of State Regulations, Title 7, Division 10, Chapter 3, *Utility and Private Line Location and Relocation* and other policies of the Missouri Department of Transportation.

Section 8. No advertising signs or display material of an advertising nature is to be placed on or to extend over onto the right of way as covered in Section 227.220 R.S.Mo.

Section 9. To the extent allowed or imposed by law, the Applicant agrees to hold harmless the Commission, its officers and employees from all liability, judgments, costs, expenses and claims growing out of damages of any nature whatsoever, to any person or property arising out of performance or non-performance of said work, or extension of said improvements. The Applicant shall carry commercial general liability insurance and commercial automobile liability insurance from a company authorized to issue insurance in Missouri, and to name the Commission, and MoDOT and its employees, as additional named insured in amounts sufficient to cover the sovereign immunity limits for Missouri public entities as calculated by the Missouri Department of Insurance, Financial Institutions and Professional Registration, and published annually in the Missouri Register pursuant to Section 537.610 R.S. Mo

Section 10. All costs incurred due to the issuance of this permit shall be borne by the Applicant, the Applicant's successors, and assigns.

Section 11. It is understood that in granting this permit the Commission waives none of its power or rights to direct the removal, relocation, and/or proper maintenance in the future of anything within the right of way of the state highway at no cost to the Commission.

Section 12. The Applicant's deposit or bond may be held until the work has been completed and has been approved by the District Engineer or the District Engineer's representative. The Applicant agrees that the Commission may, after the expiration date of this permit or extension thereof, use as much of the deposit as may be necessary to restore, correct, or complete any and all work started or done by the Applicant by whatever means the Commission deems necessary. The Commission may use the deposit to correct any hazard which the Applicant/contractor does not correct upon notification.

Section 13. The obtaining of this permit does not relieve the Applicant of the responsibility for obtaining other permits required by this or any other agency having jurisdiction.

Section 14. For any land disturbance activity, the Applicant shall install erosion and sediment control measures as necessary to prevent pollution of streams, lakes, ponds and wetlands and to prevent silt from leaving MoDOT right of way. The Applicant agrees to restore vegetation with seed and mulch, sodding, or other approved methods, prior to removal of sediment control devices. The Commission is under a federal order, under Case No. 15-4069, U.S. District Court of the Western District of Missouri, and all projects including applicant's projects that include land disturbance activities of greater than one (1) acre on Commission right of way are subject to this order. See www.modot.org/business/contractor_resources/LandDisturbanceItems.htm for full requirements.

Section 15. No driveway or improvement constructed on the highway right of way shall be altered or relocated without permission of the District Engineer or the District Engineer's representative.

LOCAL PROGRAMS PROJECT STP-0000(000)

Description of work: xxxxx

1. All materials & procedures must conform to current MoDOT Standards, this sheet and approved final plans for the Federal Project STP-0000 (000).
 2. Applicable sections of a separate agreement between the Applicant and the Commission are included by reference.
 3. Applicant and/or Contractor must possess a copy of this permit and final approved plans on the site at all times.
 4. Keep roadway and shoulders clear of dirt, mud, debris, equipment and materials at all times.
 5. Roadway ditches, culverts and other such devices used to carry surface run-off will be kept open, free and clear at all times.
 6. Dress all disturbed earth areas; seed and mulch with straw and/or sod.
 7. Backfill behind curb flush to the top of back of curb.
 8. No Slopes on MoDOT right of way greater than 3:1.
 9. EDGE TREATMENT: A wedge of material (with a 3:1 or flatter slope) must be placed along the pavement edge during non-working hours when there is over a 2-inch drop off.
 10. Contact, _____, Signal engineer, at (314) 565 - ____ , 2 business days prior to signal turn on.
 11. The Test Period for the installation of this signal will be governed by section 902.5.9, and 902.5.9.1 of the current MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 12. ALL traffic signal equipment that the contractor uses or installs on the project, whether furnished by the Commission or the contractor, either on a temporary or permanent basis, shall, upon installation or upon initial use by the contractor, be operated, and maintained by the contractor until the project is completed and accepted.
 13. UTILITY LOCATES – CONTACT MO ONE-CALL 1-800-344-7483 FOR LOCATION OF UNDERGROUND FACILITIES.
 14. Damage to MoDOT facilities within the area of work caused by the contractor will be deemed by MoDOT as either “non-emergency” or “emergency” upon notification of the damages. Repair to damages will be performed as follows:
 - Non-Emergency: The contractor will have 4 hours to propose a repair plan to MoDOT for a complete repair within 3 business days.
 - Emergency: Upon notification of the damage, the contractor must immediately submit a repair plan which will take no more than 4 hours to respond on-site and complete repairs within 48 hours of notification of damage.
- In either case, if the proposed plan is unacceptable for any reason to MoDOT, repairs will be made by MoDOT with all costs billed to the contractor. The applicant’s permit deposit or bond will be held until all costs are reimbursed to MoDOT per Section 12 of the Permit For Work on Right of Way General Provisions.
15. All workers within highway right of way shall wear approved ANSI/SEA 107 Performance Class 2 or 3 safety apparel, including safety glasses and safety footwear. See [EPG 616.4.3 Worker Safety Considerations](#) for worker apparel and [EPG 616.5.2](#)

[High-Visibility Safety Apparel](#) for flagger apparel.

http://www.modot.org/business/documents/Safety_Requirements_Apparel_Placemat_FINAL1.pdf

16. ALL LANE OR SHOULDER CLOSURES MUST BE APPROVED BY MODOT. THE ATTACHED FORM WILL NEED TO BE SUBMITTED TO MoDOT 2 BUSINESS DAYS PRIOR TO ANY LANE CLOSURES VIA FAX (573-522-6491) OR EMAIL (SLPERMITWORKZONES@MODOT.MO.GOV) OR ONLINE AT WWW.MODOT.ORG/FORM/LANE-CLOSURE-REQUEST-FORM.

17. Contact Beth Bittick, (314) 877-8770 Local Programs Department, 2 business days prior to starting work.

17. Contact Brandon Barke, (314) 453-xxxx Local Programs Department, 2 business days prior to starting work.

17. Contact Cindy Simmons, (314) 453-1833 Local Programs Department, 2 business days prior to starting work.

17. Contact Russ Klein, (314) 453-5093 Local Programs Department, 2 business days prior to starting work.

17. Contact Jill Steiger, (314) 453-5061 Local Programs Department, 2 business days prior to starting work.

17. Contact John Brendel, (314) 453-1836 Local Programs Department, 2 business days prior to starting work.

Choose One
-hard hats may be any color or design

OR

Choose One
-prescription

Choose One

Class 3 Vest	Class 3 Shirt	Class 3 Jacket
Class 2 Vest	Class 2 Shirt	Class 2 Jacket

OR

Choose One
Safety Footwear – metatarsal support needed for some operations

Daytime Worker PPE

For daytime activity, workers shall wear a hard hat, safety glasses; a Performance Class 3 top OR a Performance Class 2 top; and safety footwear.

- PPE = Personal Protective Equipment
- PPE is not required in fully enclosed
- PPE examples reflect minimum requirements

updated April 2015

Choose One
-hard hats must be high visibility

OR

Choose One
-prescription

Choose One

Class 3 Vest	Class 3 Shirt	Class 3 Jacket
Class 2 Vest	Class 2 Shirt	Class 2 Jacket

OR

Choose One
Safety Footwear

Daytime Flagger PPE

For daytime activity, flaggers shall wear a high visibility hard hat, safety glasses; a Performance Class 3 top OR a Performance Class 2 top; and safety footwear.

- PPE = Personal Protective Equipment
- PPE is not required in fully enclosed
- PPE examples reflect minimum requirements

updated April 2015

Choose One
-hard hats may be any color or design

OR

Choose One
-prescription

Choose One

Class 3 Vest	Class 3 Shirt	Class 3 Jacket
Class 2 Vest	Class 2 Shirt	Class 2 Jacket
Plus	Class E Pants	Class E Coverall

OR

Choose One
Safety Footwear – metatarsal support needed for some operations

Nighttime Worker PPE

For nighttime activity, workers shall wear a hard hat, safety glasses; a Performance Class 3 top OR a Performance Class 2 top and a Class E bottom; and safety footwear.

- PPE = Personal Protective Equipment
- PPE is not required in fully enclosed
- PPE examples reflect minimum requirements

updated April 2015

Choose One
-hard hats must be high visibility and reflective

OR

Choose One
-prescription

Choose One

Class 3 Vest	Class 3 Shirt	Class 3 Jacket
Class 2 Vest	Class 2 Shirt	Class 2 Jacket
Choose One	Class E Pants	Class E Coverall

OR

Choose One
Safety Footwear

Nighttime Flagger PPE

For nighttime activity, flaggers shall wear a high visibility/reflective hard hat, safety glasses; a Performance Class 3 top and a Class E bottom OR a Performance Class 2 top and a Class E bottom; and safety footwear.

- PPE = Personal Protective Equipment
- PPE is not required in fully enclosed
- PPE examples reflect minimum requirements

updated April 2015

Lane Closure Request Form

You have received this form because it is possible that you may have to close a lane and/or shoulder on a Missouri State Highway.

Prepare a temporary traffic control plan and communicate it to all responsible parties prior to commencement of work. Traffic Control for Field Operations link can be found on permits general information website at <https://www.modot.org/permits>.

There are 3 methods to request a lane and/or shoulder closure on MoDOT right of way:

- 1) **Preferred** – Online submittal at <https://www.modot.org/form/lane-closure-request-form>
- 2) **Email** - the attached form to SLPermitWorkzones@modot.mo.gov
- 3) **Fax** - the attached form to (573) 522-6491

* ALL LANE AND/OR SHOULDER CLOSURES MUST BE APPROVED BY MODOT.

* The attached form will need to be submitted to MoDOT a minimum of 2 business days and a maximum of 10 business days prior to any lane and/or shoulder closures.

* The form must be filled out to its entirety or it will be returned to you by email for corrections.

* After MoDOT receives the request for a lane and/or shoulder closure, the Point of Contact will be notified by email and given a MoDOT WorkZone Verification Number.

* It is your responsibility to make sure MoDOT has received and approved the request. You may call the MoDOT permit inspector on the permit for verification.

***To maintain motorist and worker safety, no lane closures will be allowed during wet pavement conditions. All approvals will automatically be postponed to the following day given that conditions are dry.**

LANE CLOSURES THAT HAVE NOT BEEN APPROVED WILL NOT BE ALLOWED AND WILL BE SHUT DOWN.

**Additional permit information is available on our web page.
<https://www.modot.org/permits>**



Lane Closure Request Form

This section completed by MoDOT Permit Staff

MoDOT WZ Verification # _____

Date recd. _____ Time recd. _____

Method of Notification: E-mail _____ Fax _____ Phone _____

TMS ID #: _____

Notified By: _____

New request Extension of existing request - prior MoDOT WZ Verification # _____

Point of Contact Information

Lane Closures Require a 24/7 Point of Contact while work is being conducted.

Company Name _____

Telephone _____

Contact Name _____

Cell number _____

Email address _____

Fax _____

ALL FIELDS ARE REQUIRED - INCOMPLETE FORMS WILL BE REJECTED

In effort to maintain safety to motorists and workers no lane closures will be allowed during wet pavement conditions. All approvals will automatically be postponed to the following day given the conditions are dry.

MoDOT Permit Number _____

Permit Inspector _____

Route _____ Direction _____
(North, South, East, West)

Town / County _____

Location Start at _____ feet/miles _____
(North, South, East, West)

from _____
(Nearest cross street or intersection)

Location End at _____ feet/miles _____
(North, South, East, West)

from _____
(Nearest cross street or intersection)

Type of Work _____

Work Zone Length _____ feet/miles

Lane Type _____
(Thru, Left Turn, Right Turn, Shoulder)

Lanes Closed _____

Closure Location _____
(Left Lane, Center Lane, Right Lane)

Emergency Work _____
(Yes or No)

Day or Night _____
(Day, Night, 24 hour)

Weekend Work _____
(None, Saturday, Sunday, Both)

Closures shall not last longer than 7 days per request and weekday daytime lane closures should not start earlier than 9:00 a.m. or end later than 3:30 p.m. If this is not followed your closure will be denied.

Start Date _____

Start Time _____

End Date _____

End Time _____

Additional Comments (moving operation, short term, etc.) _____

Note: Type or Print Legibly



Local Programs Permit Completion Report

This form must be completed & returned when all permit work on state right of way is completed and accepted by Local Roads Department.

MoDOT PERMIT # : _____ LOCAL PROGRAMS PROJECT # : _____

LOCAL PROGRAMS CONTACT: _____

ROUTE: _____ COUNTY: _____ CITY: _____

SPONSOR NAME: _____

The work on the above mentioned permit was completed on _____ ,
DATE

and the right of way has been completely restored. This permit is ready to be released.

REMARKS:

Once completed you can email this form to SLcompletedpermits@modot.mo.gov

Submit by Email

FHWA FORM 1273

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STATE WAGE RATES

All projects solicited or advertised for bid on or after June 26, 2019 should use Annual Wage Order 26, which went into effect June 26, 2019.

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



MICHAEL L. PARSON, Governor

Annual Wage Order No. 26

Section 092

ST. CHARLES COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

Taylor Burks, Director
Division of Labor Standards

Filed With Secretary of State: _____ **March 8, 2019**

Last Date Objections May Be Filed: **April 8, 2019**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	** Date of Increase	Basic Hourly Rates
Asbestos Worker		\$58.41
Boilermaker		\$26.34*
Bricklayer		\$57.67
Carpenter		\$55.56
Lather		
Linoleum Layer		
Millwright		
Pile Driver		
Cement Mason		\$51.36
Plasterer		
Communications Technician		\$55.57
Electrician (Inside Wireman)		\$64.59
Electrician Outside Lineman		\$63.98
Lineman Operator		
Lineman - Tree Trimmer		
Groundman		
Groundman - Tree Trimmer		
Elevator Constructor		\$26.34*
Glazier		\$60.07
Ironworker		\$60.81
Laborer		\$46.68
General Laborer		
First Semi-Skilled		
Second Semi-Skilled		
Mason		\$50.01
Marble Mason		
Marble Finisher		
Terrazzo Worker		
Terrazzo Finisher		
Tile Setter		
Tile Finisher		
Operating Engineer		\$60.71
Group I		
Group II		
Group III		
Group III-A		
Group IV		
Group V		
Painter		\$47.83
Plumber		\$67.90
Pipe Fitter		
Roofer		\$50.81
Sheet Metal Worker		\$66.11
Sprinkler Fitter		\$67.39
Truck Driver		\$26.34*
Truck Control Service Driver		
Group I		
Group II		
Group III		
Group IV		

*The Division of Labor Standards received less than 1,000 reportable hours as required by RSMo 290.257.4(b). Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center, in accordance with RSMo 290.257.2.

**Annual Incremental Increase

ANNUAL WAGE ORDER NO. 26

3/29/19

Heavy Construction Rates for
ST. CHARLES County

Section 092

OCCUPATIONAL TITLE	** Date of Increase	Basic Hourly Rates
Carpenter		\$56.31
Millwright		
Pile Driver		
Electrician (Outside Lineman)		\$63.98
Lineman Operator		
Lineman - Tree Trimmer		
Groundman		
Groundman - Tree Trimmer		
Laborer		\$47.45
General Laborer		
Skilled Laborer		
Operating Engineer		\$60.91
Group I		
Group II		
Group III		
Group IV		
Truck Driver		
Truck Control Service Driver		\$39.47
Group I		
Group II		
Group III		
Group IV		

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received less than 1,000 reportable hours as required by RSMo 290.257.4(b). Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center, in accordance with RSMo 290.257.2.

**Annual Incremental Increase

ANNUAL WAGE ORDER NO. 26

3/19

OVERTIME and HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, "overtime work" shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

FEDERAL WAGE RATE

"General Decision Number: MO20190001 11/08/2019

Superseded General Decision Number: MO20180001

State: Missouri

Construction Types: Heavy and Highway

Counties: Missouri Statewide.

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

1/47

Modification Number	Publication Date
0	01/04/2019
1	02/15/2019
2	03/08/2019
3	03/22/2019
4	04/12/2019
5	05/10/2019
6	05/24/2019
7	06/07/2019
8	06/21/2019
9	07/05/2019
10	07/19/2019
11	09/20/2019
12	09/27/2019
13	10/04/2019
14	10/25/2019
15	11/01/2019
16	11/08/2019

CARP0002-002 05/01/2019

ST. LOUIS COUNTY AND CITY

	Rates	Fringes
Carpenters.....	\$ 38.02	17.77

CARP0005-006 05/03/2015

CASS (Richards-Gebauer AFB ONLY), CLAY, JACKSON, PLATTE AND RAY
COUNTIES

	Rates	Fringes
Carpenters:		
CARPENTERS & LATHERS.....	\$ 36.34	15.55
MILLWRIGHTS & PILEDRIVERS...	\$ 36.34	15.55

CARP0011-001 05/01/2019

	Rates	Fringes
Carpenter and Piledriver		
ADAIR, AUDRAIN (West of Hwy 19), BOONE, CALLAWAY, CHARITON, COLE, COOPER, HOWARD, KNOX, LINN, MACON, MILLER, MONITEAU, MONROE, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SHELBY AND SULLIVAN COUNTIES.....	\$ 32.28	17.77
ATCHISON, ANDREW, BATES, CALDWELL, CARROLL, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, LIVINGSTON, MERCER, NODAWAY, ST. CLAIR, SALINE AND WORTH COUNTIES.....	\$ 30.76	17.77
AUDRAIN (East of Hwy.19), RALLS, MARION, LEWIS, CLARK AND SCOTLAND COUNTIES..	\$ 32.29	17.77
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES..	\$ 30.36	17.77
BENTON, MORGAN AND PETTIS... BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY, STE. GENEVIEVE, SCOTT, STODDARD AND WAYNE COUNTIES.....	\$ 32.14	17.77
BUCHANAN, CLINTON, JOHNSON AND LAFAYETTE COUNTIES.....	\$ 31.49	17.77
CARTER, HOWELL, OREGON AND		

12/10/2019

beta.SAM.gov

RIPLEY COUNTIES.....	\$ 31.09	17.77
CRAWFORD, DENT, GASCONADE, IRON, MADISON, MARIES, MONTGOMERY, PHELPS, PULASKI, REYNOLDS, SHANNON AND TEXAS COUNTIES.....	\$ 32.13	17.77
FRANKLIN COUNTY.....	\$ 35.56	17.77
JEFFERSON AND ST. CHARLES COUNTIES.....	\$ 38.02	17.77
LINCOLN COUNTY.....	\$ 34.00	17.77
PIKE, ST. FRANCOIS AND WASHINGTON COUNTIES.....	\$ 32.92	17.77
WARREN COUNTY.....	\$ 34.44	17.77

ELEC001-002 06/03/2018

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, FRANKLIN,
IRON, JEFFERSON, LINCOLN, MADISON, MISSISSIPPI, NEW MADRID,
PEMISCOT, PERRY, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,
ST. LOUIS (City and County), STE. GENEVIEVE, SCOTT, STODDARD,
WARREN, WASHINGTON AND WAYNE COUNTIES

	Rates	Fringes
Electricians.....	\$ 38.12	15.60

ELEC002-001 09/01/2018

ADAIR, AUDRAIN, BOONE, CALLAWAY, CAMDEN, CARTER, CHARITON,
CLARK, COLE, COOPER, CRAWFORD, DENT, FRANKLIN, GASCONADE,
HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCON, LINN,
MACON, MARIES, MARION, MILLER, MONITEAU, MONROE, MONTGOMERY,
MORGAN, OREGON, OSAGE, PERRY, PHELPS, PIKE, PULASKI, PUTNAM,
RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,
ST. LOUIS (City and County), STE. GENEVIEVE, SCHUYLER,
SCOTLAND, SHANNON, SHELBY, SULLIVAN, TEXAS, WARREN AND
WASHINGTON COUNTIES

	Rates	Fringes
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<https://beta.sam.gov/wage-determination/MO20190001/16/document>

4/47

Line Construction:

Equipment Operator.....	\$ 39.50	19.96
Groundman & Truck Driver....	\$ 30.36	16.67
Lineman & Cable Splicer.....	\$ 45.90	22.27

ELEC0053-004 09/02/2018

Rates	Fringes
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Line Construction: (ANDREW,
 ATCHINSON, BARRY, BARTON,
 BUCHANAN, CALDWELL, CEDAR,
 CHRISTIAN, CLINTON, DADE,
 DALLAS, DAVIES,, DEKALB,
 DOUGLAS, GENTRY, GREENE,
 GRUNDY, HARRISON, HICKORY,
 HOLT, JASPER, LACLEDE,
 LAWRENCE, LIVINGSTON,
 MCDONALD, MERCER, NEWTON,
 NODAWAY, OZARK, POLK, ST.
 CLAIR, STONE, TANEY, VERNON,
 WEBSTER, WORTH AND WRIGHT
 COUNTIES)

Groundman Powderman.....	\$ 31.56	14.90
Groundman.....	\$ 29.46	14.29
Lineman Operator.....	\$ 42.24	18.00
Lineman.....	\$ 45.70	19.00

Line Construction; (BATES,
 BENTON, CARROLL, CASS, CLAY,
 HENRY, JACKSON, JOHNSON,
 LAFAYETTE, PETTIS, PLATTE,
 RAY AND SALINE COUNTIES)

Groundman Powderman.....	\$ 31.56	14.90
Groundman.....	\$ 29.46	14.29
Lineman Operator.....	\$ 42.24	18.00
Lineman.....	\$ 45.70	19.00

ELEC0095-001 06/01/2017

BARRY, BARTON, CEDAR, DADE, JASPER, LAWRENCE, MCDONALD, NEWTON,

ST CLAIR, AND VERNON COUNTIES

	Rates	Fringes
Electricians:		
Cable Splicers.....	\$ 25.40	12.19
Electricians.....	\$ 26.79	13.86

ELEC0124-007 08/26/2019

BATES, BENTON, CARROLL, CASS, CLAY, COOPER, HENRY, JACKSON,
JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY AND SALINE
COUNTIES:

	Rates	Fringes
Electricians.....	\$ 40.79	22.92

ELEC0257-003 03/01/2019

AUDRAIN (Except Cuivre Township), BOONE, CALLAWAY, CAMDEN,
CHARITON, COLE, CRAWFORD, DENT, GASCONADE, HOWARD, MARIES,
MILLER, MONITEAU, OSAGE, PHELPS AND RANDOLPH COUNTIES

	Rates	Fringes
Electricians:		
Cable Splicers.....	\$ 30.42	16.085
Electricians.....	\$ 33.25	18.18

ELEC0350-002 12/01/2018

ADAIR, AUDRAIN (East of Highway 19), CLARK, KNOX, LEWIS, LINN,
MACON, MARION, MONROE, MONTGOMERY, PIKE, PUTNAM, RALLS,
SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES

Rates Fringes

Electricians.....\$ 31.50 17.20

ELEC0453-001 09/01/2019

Rates Fringes

Electricians:

CHRISITAN, DALLAS,
DOUGLAS, GREENE, HICKORY,
HOWELL, LACLEDE, OREGON,
OZARK, POLK, SHANNON,
WEBSTER and WRIGHT COUNTIES.\$ 27.88 14.99
PULASKI and TEXAS COUNTIES..\$ 32.53 15.46
STONE and TANEY COUNTIES...\$ 23.67 14.17

ELEC0545-003 06/01/2019

ANDREW, BUCHANAN, CLINTON, DEKALB, ATCHISON, HOLT, MERCER,
GENTRY, HARRISON, DAVIESS, GRUNDY, WORTH, LIVINGSTON, NODAWAY,
AND CALDWELL COUNTIES

Rates Fringes

Electricians:.....\$ 32.00 17.30

ELEC0702-004 01/01/2019

BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MADISON,
MISSISSIPPI, NEW MADRID, PEMISCOT, SCOTT, STODDARD AND WAYNE
COUNTIES

Rates Fringes

Line Construction:

Groundman - Class A.....\$ 29.48 14.55
Groundman-Equipment
Operator Class II (all
other equipment).....\$ 37.35 16.83

Heavy-Equipment Operator		
Class I (all crawler type		
equipment D-4 and larger)...	\$ 42.59	18.35
Lineman.....	\$ 51.88	21.04

ENGI0101-001 05/01/2016

ANDREW, ATCHISON, BATES, BENTON, BUCHANAN, CALDWELL, CARROLL,
CHARITON, CLINTON, COOPER, DAVIESS, DEKALB, GENTRY, GRUNDY,
HARRISON, HENRY, HOLT, HOWARD, JOHNSON, LAFAYETTE, LINN,
LIVINGSTON, MERCER, NODAWAY, PETTIS, SALINE, SULLIVAN AND WORTH
COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 33.38	15.92
GROUP 2.....	\$ 32.98	15.92
GROUP 3.....	\$ 30.98	15.92

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers - 2; booster pump on dredge; bulldozer operator; boring machine (truck or crane mounted); clamshell operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drill cat with compressor mounted (self-contained) or similar type self-propelled rotary drill (not air tract); drilling or boring machine (rotary-self-propelled); finishing machine operator; greaser; high loader-fork lift-skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); mechanics and welders (field and plants); mucking machine operator; pile drive operator; pitman crane or boom truck (all types); push cat; quad track; scraper operators (all types); shovel operator; sideboom cats; side

discharge spreader; skimmer scoop operators; slip form paver operator (CMI, Rex, Gomeco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; wood and log chippers (all types).

GROUP 2: A-frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; compressor; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grade operator; hoisting engine (one drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); paymill operator; power shield; pumps; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; siphons and jets; straw blower; stump cutting machine; siphons and jets; tank car heater operator (combination boiler and booster); welding machine; vibrating machine operator (not hand held); welding machine.

- GROUP 3: (a) Oiler; (b) Oiler driver (c) Mechanic.

HOURLY PREMIUMS:

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.25) ABOVE GROUP 1 RATE: Dragline operator - 3 yds. & over; shovel 3 yds. & over; clamshell 3 yds. & over; Crane, rigs or piledrivers, 100' of boom or over (incl. jib.), hoist - each additional active drum over 2 drums

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.50) ABOVE GROUP 1 RATE: Tandem scoop operator; crane, rigs or piledrivers 150' to 200' of boom (incl. jib.)

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$.75) ABOVE GROUP 1 RATE: Crane rigs, or piledrivers 200 ft. of boom or over (including jib.)

ENGI0101-005 04/01/2018

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 36.22	17.99
GROUP 2.....	\$ 35.18	17.99
GROUP 3.....	\$ 30.71	17.99
GROUP 4.....	\$ 34.06	17.99

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers-2; booster pump on dredge; boring machine (truck or crane mounted); bulldozer operator; clamshell operator; concrete cleaning decontamination machine operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract); drilling or boring machine (rotary - self-propelled); finishing machine operator; greaser; heavy equipment robotics operator/mechanic; horizontal directional drill operator; horizontal directional drill locator; loader-forklift - skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); master environmental maintenance mechanic; mechanics and welders (field and plants); mucking machine operator; piledrive operator; pitman crane or boom truck (all types); push cat; quad-track; scraper operators (all types); shovel operator; side discharge spreader; sideboom cats; skimmer scoop operator; slip-form paver (CMI, REX, Gomaco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; ultra high perssure waterjet cutting tool system operator/mechanic;

vacuum blasting machine operator/mechanic; wood and log chippers (all types)

GROUP 2: ""A"" Frame truck operator; back filler operator; boilers (1); chip spreader; churn drill operator; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grader operator; hoisting engine (1 drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra- hammer (or similar type); power shield; paymill operator; pumps; siphons and jets; stump cutting machine; tank car heater operator (combination boiler and booster); compressor; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; straw blower; tank car heater operator (combination boiler and booster); vibrating machine operator (not hand held)

GROUP 3: Oilers

GROUP 4: Oiler Driver (All Types)

FOOTNOTE:

HOURLY PREMIUMS FOLLOWING CLASSIFICATIONS SHALL RECEIVE

(\$1.00) ABOVE GROUP 1 RATE:

Clamshells - 3 yd. capacity or over; Cranes or rigs, 80 ft. of boom or over (including jib); Draglines, 3 yd. capacity or over;

Piledrivers 80 ft. of boom or over (including jib);

Shovels & backhoes, 3 yd. capacity or over.

ENGI0101-022 05/01/2016

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES and CITY OF SPRINGFIELD

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 30.82	13.30
GROUP 2.....	\$ 29.88	13.30
GROUP 3.....	\$ 30.27	13.30
GROUP 4.....	\$ 28.22	13.30

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader; asphalt plant console operator; autograder; automatic slipform paver; backhoe; blade operator - all types; boat operator - tow; boilers-2; central mix concrete plant operator; clamshell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine - 2 active drums; launch hammer wheel; locomotive operator; - standard guage; mechanic and welders; mucking machine; off-road trucks; piledriver operator; pitman crane operator; push cat operator; quad trac; scoop operator - all types; shovel operator; sideboom cats; skimmer scoop operators; trenching machine operator; truck crane.

GROUP 2: A-frame; asphalt hot-mix silo; asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant man; asphalt plant mixer operator; asphalt roller operator; backfiller operator; barber-greene loader; boat operator (bridges and dams); chip spreader; concrete mixer operator - skip loader; concrete plant operator; concrete pump operator; crusher operator; dredge oiler; elevating grader operator; fork lift; greaser-fleet; hoisting engine - 1; locomotive operator - narrow gauge; multiple compactor; pavement breaker; powerbroom - self-propelled; power shield; rooter; side discharge concrete spreader; slip form finishing machine; stumpcutter machine; throttle man; tractor operator (over 50 h.p.); winch truck.

GROUP 3: Boilers - 1; chip spreader (front man); churn drill operator; clef plane operator; concrete saw operator (self-propelled); curb finishing machine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; roller operator, other than high type asphalt; screening & washing plant operator; siphons & jets; sub-grading machine operator; spreader box operator, self-propelled (not asphalt); tank car heater operator (combination boiler & booster); tractor operator (50 h.p. or less); Ulmac, Ulric or similar spreader; vibrating machine operator, not hand;

GROUP 4: Grade checker; Oiler; Oiler-Driver

HOURLY PREMIUMS:

The following classifications shall receive \$.25 above GROUP 1 rate:

Clamshells - 3 yds. or over; Cranes - Rigs or Piledrivers, 100 ft. of boom or over (including jib); Draglines - 3 yds. or over; Hoists - each additional active drum over 2 drums; Shovels - 3 yds. or over;

The following classifications shall receive \$.50 above GROUP 1 rate:

Tandem scoop operator; Cranes - Rigs or Piledrivers, 150 ft. to 200 ft. of boom (including jib); Tandem scoop.

The following classifications shall receive \$.75 above GROUP 1 rate:

Cranes - Rigs or Piledrivers, 200 ft. of boom or over (including jib.).

 ENGI0513-004 05/06/2019

FRANKLIN, JEFFERSON, LINCOLN, ST CHARLES, AND WARREN COUNTIES

Rates Fringes

Power equipment operators:

GROUP 1.....	\$ 34.36	27.36
GROUP 2.....	\$ 34.36	27.36
GROUP 3.....	\$ 33.06	27.36
GROUP 4.....	\$ 32.61	27.36

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, Cable; Backhoe, Hydraulic (2 cu yds bucket and under regardless of attachment, one oiler for 2 or 3, two oilers for 4 through 6); Backhoe, Hydraulic over 2 cu yds; Cableway; Crane, Crawler or Truck; Crane, Hydraulic - Truck or Cruiser mounted, 16 tons and over; Crane, Locomotive; crane with boom including jib over 100 ft from pin to pin; Crane using rock socket tool; Derrick, Steam; Derrick Car and Derrick Boat; Dragline, 7 cu yds and over; Dredge; Gradall, Crawler or tire mounted; Locomotive, Gas, Steam & other powers; Pile Driver, Land or Floating; Scoop, Skimmer; Shovel, Power (Electric, Gas, Steam or other powers); Shovel, Power (7 cu yds and over); Switch Boat; Whirley; Air Tugger with air compressor; Anchor Placing Barge; Asphalt Spreader; Athey Force Feeder Loader, self-propelled; Backfilling Machine; Boat Operator - Push Boat or Tow Boat (job site); Boiler, High Pressure Breaking in Period; Boom Truck, Placing or Erecting; Boring Machine, Footing Foundation; Bullfloat; Cherry Picker; Combination Concrete Hoist and Mixer (such as Mixermobile); Compressor, Two 125 CFM and under; Compressor, Two through Four over 125 CFM; Compressor when operator runs throttle; Concrete Breaker (Truck or Tractor mounted); Concrete Pump (such as Pumpcrete machine); Concrete Saw (self-propelled); Concrete Spreader; Conveyor, Large (not selfpropelled) hoisting or moving brick and concrete into, or into and on floor level, one or both; Crane, Climbing (such as Linden); Crane, Hydraulic - Rough Terrain, self-propelled; Crane, Hydraulic - Truck or Cruiser mounted - under 16 tons; Drilling machine - Self-powered, used for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other souces including concrete breakers, jackhammers and Barco equipmnet no engineer required); Elevating Grader; Engine Man, Dredge; Excavator or Powerbelt Machine;

12/10/2019

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Finishing Machine, self- propelled oscillating screed;
Forklift; Generators, Two through Six 30 KW or over;
Grader, Road with power blade; Greaser; Highlift; Hoist,
Concrete and Brick (Brick cages or concrete skips operating
or on tower, Towermobile, or similar equipment); Hoist,
Three or more drums in use; Hoist, Stack; Hydro-Hammer;
Lad-A-Vator, hoisting brick or concrete; Loading Machine
such as Barber-Greene; Mechanic on job site

GROUP 2: Air Tugger with plant air; Boiler (for power or
heating shell of building or temporary enclosures in
connection with construction work); Boiler, Temporary;
Compressor, One over 125 CFM; Compressor, truck mounted;
Conveyor, Large (not self- propelled); Conveyor, Large (not
self- propelled) moving brick and concrete (distributing)
on floor level; Curb Finishing Machine; Ditch Paving
Machine; Elevator (outside); Endless Chain Hoist; Fireman
(as required); Form Grader; Hoist, One Drum regardless of
size (except brick or concrete); Lad-A-Vator, other
hoisting; Manlift; Mixer, Asphalt, over 8 cu ft capacity;
Mixer, one bag capacity or less; Mixer, without side
loader, two bag capacity or more; Mixer, with side loader,
regardless of size, not Paver; Mud Jack (where mud jack is
used in conjunction with an air compressor, operator shall
be paid \$.55 per hour in addition to his basic hourly rate
for covering both operations); Pug Mill operator; Pump,
Sump - self powered, automatic controlled over 2"; Scissor
Lift (used for hoisting); Skid Steer Loader; Sweeper,
Street; Tractor, small wheel type 50 HP and under with
grader blade and similar equipment; Welding Machine, One
over 400 amp; Winch, operating from truck

GROUP 3: Boat operator - outboard motor, job site; Conveyors
(such as Con-Vay-It) regardless of how used; Elevator
(inside); Heater operator, 2 through 6; Sweeper, Floor

GROUP 4: Crane type

HOURLY PREMIUMS:

Backhoe, Hydraulic 2 cu yds or less without oiler - \$2.00;

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

15/47

Crane, climbing (such as Linden) - \$.50;
 Crane, Pile Driving and Extracting - \$.50
 Crane with boom (including job) over
 100 ft from pin to pin - add \$.01 per foot
 to maximum of \$4.00);
 Crane, using rock socket tool - \$.50;
 Derrick, diesel, gas or electric hoisting material
 and erecting steel (150 ft or more above ground) - \$.50;
 Dragline, 7 cu yds and over - \$.50;
 Hoist, Three or more drums in use - \$.50;
 Scoop, Tandem - \$.50;
 Shovel, Power - 7 cu yds and over - \$.50;
 Tractor, Tandem Crawler - \$.50;
 Tunnel, man assigned to work in tunnel or
 tunnel shaft - \$.50;
 Wrecking, when machines are working on
 second floor or higher - \$.50

 ENGI0513-006 05/01/2019

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 29.69	27.16
GROUP 2.....	\$ 29.34	27.16
GROUP 3.....	\$ 29.14	27.16
GROUP 4.....	\$ 25.49	27.16

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening
 spreader, asphalt plant console operator; autograder;
 automatic slipform paver; back hoe; blade operator - all
 types; boat operator tow; boiler two; central mix concrete
 plant operator; clam shell operator; concrete mixer paver;
 crane operator; derrick or derrick trucks; ditching
 machine; dozer operator; dragline operator; dredge booster
 pump; dredge engineman; dredge operator; drill cat with
 compressor mounted on cat; drilling or boring machine
 rotary self-propelled; highloader; hoisting engine 2 active

12/10/2019

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drums; launchhammer wheel; locomotive operator standrad
guage; mechanics and welders; mucking machine; piledriver
operator; pitman crane operator; push cat operator;
guad-trac; scoop operator; sideboom cats; skimmer scoop
operator; trenching machine operator; truck crane, shovel
operator.

GROUP 2: A-Frame; asphalt hot-mix silo; asphalt roller
operator asphalt plant fireman (drum or boiler); asphalt
plant man; asphalt plant mixer operator; backfiller
operator; barber-greene loader; boat operator (bridge &
dams); chip spreader; concrete mixer operator skip loader;
concrete plant operator; concrete pump operator; dredge
oiler; elevating graded operator; fork lift; grease fleet;
hoisting engine one; locomotive operator narrow guage;
multiple compactor; pavement breaker; powerbroom
self-propelled; power shield; rooter; slip-form finishing
machine; stumpcutter machine; side discharge concrete
spreader; throttleman; tractor operator (over 50 hp); winch
truck; asphalt roller operator; crusher operator.

GROUP 3: Spreader box operator, self-propelled not asphalt;
tractor operator (50 h.p. or less); boilers one; chip
spreader (front man); churn drill operator; compressor over
105 CFM 2-3 pumps 4" & over; 2-3 light plant 7.5 KWA or any
combination thereof; clef plane operator; compressor
maintenance operator 2 or 3; concrete saw operator
(self-propelled); curb finishing mancine; distributor
operator; finishing machine operator; flex plane operator;
float operator; form grader operator; pugmill operator;
riller operator other than high type asphalt; screening &
washing plant operator; siphons & jets; subgrading machine
operator; tank car heater (combination boiler & booster);
ulmac, ulric or similar spreader; vibrating machine
operator; hydrobroom.

GROUP 4: Oiler; grout machine; oiler driver; compressor over
105 CFM one; conveyor operator one; maintenance operator;
pump 4" & over one.

FOOTNOTE: HOURLY PREMIUMS

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

17/47

Backhoe hydraulic, 2 cu. yds. or under without oiler - \$2.00
 Certified Crane Operator - \$1.50;
 Certified Hazardous Material Operator \$1.50;
 Crane, climbing (such as Linden) - \$0.50;
 Crane, pile driving and extracting - \$0.50;
 Crane, with boom (including jib) over 100' from pin to pin
 add \$0.01 per foot to maximum of \$4.00;
 Crane, using rock socket tool - \$0.50;
 Derrick, diesel, gas or electric, hoisting material and
 erecting steel (150' or more above the ground) - \$0.50;
 Dragline, 7 cu. yds, and over - \$0.50;
 Hoist, three or more drums in use - \$0.50; Scoop, Tandem -
 \$0.50;
 Shovel, power - 7 cu. yds. or more - \$0.50;
 Tractor, tandem crawler - \$0.50;
 Tunnel, man assigned to work in tunnel or tunnel shaft -
 \$0.50;
 Wrecking, when machine is working on second floor or higher -
 \$0.50;

 ENGI0513-007 05/06/2019

ST. LOUIS CITY AND COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 34.36	27.36
GROUP 2.....	\$ 34.36	27.36
GROUP 3.....	\$ 33.06	27.36
GROUP 4.....	\$ 32.61	27.36

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, cable or hydraulic; cableway; crane
 crawler or truck; crane, hydraulic-truck or cruiser mounted
 16 tons & over; crane locomotive; derrick, steam; derrick
 car & derrick boat; dragline; dredge; gradall, crawler or
 tire mounted; locomotive, gas, steam & other powers; pile

driver, land or floating; scoop, skimmer; shovel, power (steam, gas, electric or other powers); switch boat; whirley.

GROUP 2: Air tugger w/air compressor; anchor-placing barge; asphalt spreader; atehy force feeder loader (self-propelled); backfilling machine; backhoe-loader; boat operator-push boat or tow boat (job site); boiler, high pressure breaking in period; boom truck, placing or erecting; boring machine, footing foundation; bull- float; cherry picker; combination concrete hoist & mixer (such as mixer mobile); compressor (when operator runs throttle); concrete breaker (truck or tractor mounted); concrete pump, such as pump-crete machine; concrete saw (self-propelled), concrete spreader; conveyor, large (not self-propelled), hoisting or moving brick and concrete into, or into and on floor level, one or both; crane, hydraulic-rough terrain, self-propelled; crane hydraulic-truck or cruiser mounted-under 16 tons; drilling machines, self-powered use for earth or rock drilling or boring (wagon drills nd any hand drills obtaining power from other sources including concrete breakers, jackhammers and barco equipment-no engineer required); elevating grader; engineman, dredge; excavator or powerbelt machine; finishing machine, self-propelled oscillating screed; forklift; grader, road with power blade; highlift. greaser; hoist, stack, hydro-hammer; loading machine (such as barber-greene); machanic, on job site; mixer, pipe wrapping machines; plant asphalt; plant, concrete producing or ready-mix job site; plant heating-job site; plant mixing-job site; plant power, generating-job site; pumps, two through six self-powered over 2"; pumps, electric submersible, two through six, over 4"; quad-track; roller, asphalt, top or sub-grade; scoop, tractor drawn; spreader box; sub-grader; tie tamper; tractor-crawler, or wheel type with or without power unit, power take-offs and attachments regardless of size; trenching machine; tunnel boring machine; vibrating machine automatic, automatic propelled; welding machines (gasoline or diesel) two through six; well drilling machine

GROUP 3: Conveyor, large (not self-propelled); conveyor,

large (not self-propelled) moving brick and concrete distributing) on floor level; mixer two or more mixers of one bag capacity or less; air tugger w/plant air; boiler, for power or heating on construction projects; boiler, temporary; compressor (mounted on truck; curb finishing machine; ditch paving machine; elevator; endless chain hoist; form grader; hoist, one drum regardless of size; lad-a-vator; manlift; mixer, asphalt, over 8 cu. ft. capacity, without side loader, 2 bag capacity or more; mixer, with side loader, regardless of size; pug mill operator; pump, sump-self-powered, automatic controlled over 2" during use in connection with construction work; sweeper, street; welding machine, one over 400 amp.; winch operating from truck; scissor lift (used for hoisting); tractor, small wheel type 50 h.p. & under with grader blade & similar equipment; Oiler on dredge and on truck crane.

GROUP 4: Boat operator-outboard motor (job site); conveyer (such as con-vay-it) regardless of how used; sweeper, floor

HOURLY PREMIUMS:

Backhoe, hydraulic	
2 cu. yds. or under without oiler	\$2.00
Certified Crane Operator	1.50
Certified Hazardous Material Operator	1.50
Crane, climbing (such as Linden)	.50
Crane, pile driving and extracting	.50
Crane, with boom (including jib) over 100' (from pin to pin) add \$.01 per foot to maximum of	4.00
Crane, using rock socket tool	.50
Derrick, diesel, gas or electric, hoisting material and erecting steel (150' or more above ground)	.50
Dragline, 7 cu. yds. and over	.50
Hoist, three (3) or more drums in use	.50
Scoop, Tandem	.50
Shovel, power - 7 cu. yds. or more	.50
Tractor, tandem crawler	.50
Tunnel, man assigned to work in tunnel or tunnel shaft	.50

12/10/2019

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Wrecking, when machine is working on
second floor or higher .50

IRON0010-012 04/01/2019

Rates Fringes

Ironworkers:

ANDREW, BARTON, BENTON,
 CAMDEN, CEDAR, CHARITON,
 CHRISTIAN, COOPER, DADE,
 DALLAS, DAVIESS, DE KALB,
 GENTRY, GREENE, GRUNDY,
 HARRISON, HICKORY, HOLT,
 HOWARD, LACLEDE, LINN,
 LIVINGSTON, MERCER,
 MONITEAU, MORGAN, NODAWAY,
 PETTIS, POLK, PUTNAM,
 RANDLOPH, ST. CLAIR,
 SULLIVAN, TANEY, VERNON,
 WEBSTER, WRIGHT and WORTH
 Counties and portions of
 ADAIR, BOONE, MACON,
 MILLER and RANDOLPH
 Counties.....\$ 30.55 30.44

ATCHISON, BATES, BUCHANAN,
 CALDWELL, CARROLL, CASS,
 CLAY, CLINTON, HENRY,
 JACKSON, JOHNSON,
 LAFAYETTE, PETTIS, PLATTE,
 SALINE, AND RAY COUNTIES....\$ 33.55 30.44

IRON0321-002 09/01/2019

DOUGLAS, HOWELL and OZARK COUNTIES

Rates Fringes

Ironworker.....\$ 21.10 19.01

12/10/2019

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IRON0396-004 08/07/2019

ST. LOUIS (City and County), ST. CHARLES, JEFFERSON, IRON, FRANKLIN, LINCOLN, WARREN, WASHINGTON, ST. FRANCOIS, STE. GENEVIEVE, and REYNOLDS Counties; and portions of MADISON, PERRY, BOLLINGER, WAYNE, and CARTER Counties

	Rates	Fringes
Ironworker.....	\$ 34.91	27.36

IRON0396-009 08/07/2019

AUDRAIN, CALLAWAY, COLE, CRAWFORD, DENT, GASCONADE, MARIES, MONTGOMERY, OSAGE, PHELPS, PIKE, PULASKI, TEXAS and WRIGHT Counties; and portions of BOONE, CAMDEN, DOUGLAS, HOWELL, LACLEDE, MILLER, MONROE, OREGON, SHANNON and RALLS Counties

	Rates	Fringes
Ironworker.....	\$ 30.44	27.36

IRON0577-005 06/01/2019

ADAIR, CLARK, KNOX, LEWIS, MACON, MARION, MONROE, RALLS, SCHUYLER, SCOTLAND, AND SHELBY COUNTIES

	Rates	Fringes
Ironworker.....	\$ 26.60	24.00

IRON0584-004 06/01/2019

BARRY, JASPER, LAWRENCE, MCDONALD, NEWTON AND STONE Counties

	Rates	Fringes
Ironworkers:.....	\$ 26.00	15.35

IRON0782-003 05/01/2019

CAPE GIRARDEAU, MISSISSIPPI, NEW MADRID, SCOTT, & STODDARD
Counties; and portions of BOLLINGER, BUTLER, CARTER, DUNKLIN,
MADISON, PEMISCOT, PERRY, RIPLEY, and WAYNE Counties

	Rates	Fringes
Ironworkers:		
Locks, Dams, Bridges and other major work on the Mississippi and Ohio River only.....	\$ 31.63	24.27
All Other Work.....	\$ 27.38	23.29

LAB00042-003 03/06/2019

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Plumber Laborer.....	\$ 33.22	15.67

LAB00042-005 03/06/2019

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Dynamiter, Powderman.....	\$ 33.22	15.67
Laborers, Flaggers.....	\$ 33.22	15.67
Wrecking.....	\$ 33.22	15.67

LAB00424-002 05/01/2016

Rates Fringes

LABORER

ADAIR, AUDRAIN, BOONE,
 CALLAWAY, CHARITON, CLARK,
 COLE, COOPER, HOWARD,
 IRON, KNOX, LEWIS, LINN,
 MACON, MADISON, MARION,
 MILLER, MONITEAU, MONROE,
 PERRY, PIKE, PUTNAM,
 RALLS, RANDOLPH, REYNOLDS,
 ST. FRANCOIS, STE.
 GENEVIEVE, SCHUYLER,
 SCOTLAND, SHELBY AND
 SULLIVAN COUNTIES

GROUP 1.....	\$ 27.96	13.17
GROUP 2.....	\$ 27.96	13.17

BOLLINGER, BUTLER, CAPE
 GIRARDEAU, CARTER,
 CRAWFORD, DENT, DUNKLIN,
 GASCONADE, HOWELL, MARIES,
 MISSISSIPPI, NEW MADRID,
 OREGON, OSAGE, PEMISCOT,
 PHELPS, PULASKI, RIPLEY,
 SCOTT, SHANNON, STODDARD,
 TEXAS, WASHINGTON AND
 WAYNE COUNTIES

GROUP 1.....	\$ 27.96	13.17
GROUP 2.....	\$ 27.96	13.17

FRANKLIN COUNTY

GROUP 1.....	\$ 29.71	13.17
GROUP 2.....	\$ 30.31	13.17

JEFFERSON COUNTY

GROUP 1.....	\$ 29.76	13.17
GROUP 2.....	\$ 30.36	13.17

LINCOLN, MONTGOMERY AND

WARREN COUNTIES

GROUP 1.....	\$ 31.18	13.32
GROUP 2.....	\$ 31.18	13.32

ST.CHARLES COUNTY

GROUP 1.....	\$ 3.18	13.32
GROUP 2.....	\$ 31.18	13.32

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutement and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men on brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar

type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

LAB00579-005 05/01/2019

	Rates	Fringes
LABORER (ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HOLT, LIVINGSTON, MERCER, NODAWAY and WORTH COUNTIES.)		
GROUP 1.....	\$ 26.66	14.97
GROUP 2.....	\$ 27.01	14.97
LABORER (BARRY, BARTON, BATES, BENTON, CAMDEN, CARROLL, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HENRY. HICKORY, JASPER, JOHNSON, LACLEDE, LAWRENCE, MCDONALD, MORGAN, NEWTON, OZARK, PETTIS, POLK, ST.CLAIR, SALINE, STONE, TANEY, VERNON, WEBSTER and WRIGHT COUNTIES)		
GROUP 1.....	\$ 25.66	14.17
GROUP 2.....	\$ 26.21	14.17
LABORER (LAFAYETTE COUNTY)		
GROUP 1.....	\$ 27.21	0.0014.42
GROUP 2.....	\$ 27.56	0.0014.42

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers - Carpenter tenders; salamander tenders; loading trucks under bins; hoppers & conveyors;

track men & all other general laborers; air tool operator; cement handler-bulk or sack; dump man on earth fill; georgie buggy man; material batch hopper man; material mixer man (except on manholes); coffer dams; riprap pavers - rock, block or brick; signal man; scaffolds over ten feet not self-supported from ground up; skipman on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator, all work in connection with hydraulic or general dredging operations; puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material or materials (where special protection is required); rubbing concrete; topper of standing trees; batter board man on pipe and ditch work; feeder man on wood pulverizers; board and willow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 feet where compressed air is not used; abutment and pier hole men working six (6) feet or more below ground; men working in coffer dams for bridge piers and footings in the river; ditchliners; pressure groutmen; caulker; chain or concrete saw; cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground; mortarmen on brick or block manholes; toxic and hazardous waste work.

GROUP 2: Skilled Laborers - Head pipe layer on sewer work; laser beam man; Jackson or any other similar tamp; cutting torch man; form setters; liners and stringline men on concrete paving, curb, gutters; hot mastic kettleman; hot tar applicator; sandblasting and gunite nozzle men; air tool operator in tunnels; screed man on asphalt machine; asphalt raker; barco tamper; churn drills; air track drills and all similar drills; vibrator man; stringline man for electronic grade control; manhole builders-brick or block; dynamite and powder men; grade checker.

LAB00663-002 04/01/2019

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 30.73	15.98
GROUP 2.....	\$ 31.94	15.98

LABORERS CLASSIFICATIONS

GROUP 1: General laborers, Carpenter tenders, salamander tenders, loading trucks under bins, hoppers and conveyors, track men and all other general laborers, air tool operator, cement handler (bulk or sack), chain or concrete saw, deck hands, dump man on earth fill, Georgie Buggies man, material batch hopper man, scale man, material mixer man (except on manholes), coffer dams, abutments and pier hole men working below ground, riprap pavers rock, black or brick, signal man, scaffolds over ten feet not self-supported from ground up, skipman on concrete paving, wire mesh setters on concrete paving, all work in connection with sewer,water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipelines, power tool operator, all work in connection with hydraulic or general dredging operations, straw blower nozzleman,asphalt plant platform man, chuck tender, crusher feeder, men handling creosote ties on creosote materials, men working with and handling epoxy material or materials (where special protection is required), topper of standing trees, batter board man on pipe and ditch work, feeder man on wood pulverizers, board and willow mat weavers and cable tiers on river work, deck hands, pile dike and revetment work, all laborers working on underground tunnels less than 25 feet where compressed air is not used, abutment and pier hole men working six (6) feet or more below ground, men working in coffer dams for bridge piers and footings in the river, ditchliners, pressure groutmen, caulker and chain or concrete saw, cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet

12/10/2019

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above ground, mortarmen on brick or block manholes, signal man.

GROUP 2: Skilled Laborer - spreader or screed man on asphalt machine, asphalt raker, grade checker, vibrator man, concrete saw over 5 hp., laser beam man, barco tamper, jackson or any other similar tamp, wagon driller, churn drills, air track drills and other similar drills, cutting torch man, form setters, liners and stringline men on concrete paving, curb, gutters and etc., hot mastic kettleman, hot tar applicator, hand blade operators, mortar men on brick or block manholes, sand blasting and gunnite nozzle men, rubbing concrete, air tool operator in tunnels, head pipe layer on sewer work, manhole builder (brick or block), dynamite and powder men.

PAIN002-002 09/01/2007

CLARK, FRANKLIN, JEFFERSON, LEWIS, LINCOLN, MARION, PIKE, RALLS, ST. CHARLES, ST. LOUIS (CITY & COUNTY), AND WARREN COUNTIES

Rates Fringes

Painters:

Brush and Roller; Taper.....	\$ 28.61	10.24
High work over 60 feet.....	\$ 29.11	10.24
Lead Abatement.....	\$ 29.36	10.24
Pressure Roller; High work under 60 ft.....	\$ 28.86	10.24
Spray & Abrasive Blasting; Water Blasting (Over 5000 PSI).....	\$ 30.61	10.24
Taper (Ames Tools & Bazooka).....	\$ 30.21	10.24

PAIN002-006 04/01/2018

ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, COLE, GASCONADE,

12/10/2019

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HOWARD, KNOX, LINN, MACON, MONROE, MONTGOMERY, OSAGE, PUTNAM,
RANDOLPH, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES and
the City of Booneville.

	Rates	Fringes
Painters:		
Bridges, Dams, Locks or Powerhouses.....	\$ 25.93	12.79
Brush and Roll; Taping, Paperhanging.....	\$ 23.93	12.79
Epoxy or Any Two Part Coating; Sandblasting; Stage or other Aerial Work - Platforms over 50 feet high; Lead Abatement.....	\$ 24.93	12.79
Spray; Structural Steel (over 50 feet).....	\$ 24.93	12.79
Tapers using Ames or Comparable Tools.....	\$ 24.68	12.79

PAIN0003-004 04/01/2017

CASS, CLAY, CLINTON, JACKSON, JOHNSON, LAFAYETTE, PLATTE & RAY
COUNTIES

	Rates	Fringes
Painters:		
Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks.....	\$ 31.96	16.96
Brush & Roller.....	\$ 29.34	16.96
Drywall.....	\$ 30.34	16.96
Paper Hanger.....	\$ 29.84	16.96
Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping...\$	30.96	16.96

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

30/47

12/10/2019

beta.SAM.gov

Steeplejack.....\$ 35.53 16.96

PAIN0003-011 04/01/2011

BATES, BENTON, CALDWELL, CARROLL, COOPER, DAVIESS, GRUNDY,
HARRISON, HENRY, LIVINGSTON, MERCER, MONITEAU, MORGAN, PETTIS &
SALINE COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement;
Sandblast; Storage Bin &
Tanks.....\$ 24.06 14.04
Brush & Roller.....\$ 22.67 14.04
Drywall.....\$ 22.84 14.04
Paper Hanger.....\$ 23.07 14.04
Stageman; Beltman;
Steelman; Elevator Shaft;
Bazooka, Boxes and Power
Sander; Sprayman; Dipping...\$ 23.56 14.04
Steeplejack.....\$ 26.82 14.04

PAIN0203-001 04/01/2012

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, HOWELL, JASPER, LAWRENCE, MCDONALD, NEWTON, OZARK,
POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, and WRIGHT
COUNTIES

Rates Fringes

Painters:

Finisher.....\$ 20.18 11.33
Painter.....\$ 19.75 11.76
Sandblaster, High Man,
Spray Man, Vinyl Hanger,
Tool Operator.....\$ 21.18 11.33

12/10/2019

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PAIN1265-003 07/01/2013

CAMDEN, CRAWFORD, DENT, LACLEDE, MARIES, MILLER, PHELPS,
PULASKI AND TEXAS COUNTIES

	Rates	Fringes
Painters:		
Brush and Roller.....	\$ 25.64	13.27
Floor Work.....	\$ 26.14	13.27
Lead Abatement.....	\$ 27.89	13.27
Spray.....	\$ 27.14	13.27
Structural Steel, Sandblasting and All Tank Work.....	\$ 26.89	13.27
Taping, Paperhanging.....	\$ 26.64	13.27

PAIN1292-002 09/01/2016

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN,
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, REYNOLDS,
RIPLEY, SCOTT, SHANNON, STODDARD and WAYNE COUNTIES

	Rates	Fringes
Painters:		
Bridges, Stacks & Tanks.....	\$ 30.85	11.64
Brush & Roller.....	\$ 25.35	11.64
Spray & Abrasive Blasting; Waterblasting (over 5000 PSI).....	\$ 28.95	11.64

Height Rates (All Areas):
Over 60 ft. \$0.50 per hour.
Under 60 ft. \$0.25 per hour.

PAIN1292-003 09/01/2017

12/10/2019

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IRON, MADISON, ST. FRANCOIS, STE. GENEVIEVE and WASHINGTON
COUNTIES

	Rates	Fringes
Painters:		
Bridges, Stacks & Tanks.....\$	31.05	12.74
Brush & Roller.....\$	25.70	12.74
Spray & Abrasive Blasting; Waterblasting (Over 5000 PSI).....\$	28.70	12.74

Height Rates (All Areas):
Over 60 ft. \$0.50 per hour
Under 60 ft. \$0.25 per hour.

* PAIN2012-001 04/01/2019

ANDREW, ATCHISON, BUCHANAN, DE KALB, GENTRY, HOLT, NODAWAY &
WORTH COUNTIES

	Rates	Fringes
Painters:		
Brush & Roller.....\$	31.26	17.26
Sandblaster.....\$	32.76	17.26
Steeplejack.....\$	36.33	17.26

PLAS0518-006 03/01/2019

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK,
POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, AND WRIGHT
COUNTIES

Rates Fringes

12/10/2019

beta.SAM.gov

CEMENT MASON/CONCRETE FINISHER...\$ 24.30 11.61

PLAS0518-007 04/01/2019

CASS (Richards-Gebaur AFB only), CLAY, JACKSON, PLATTE AND RAY
COUNTIES

Rates Fringes

Cement Masons:.....\$ 32.32 17.89

PLAS0518-011 04/01/2019

ANDREW, ATCHISON, BATES, BUCHANNAN, CLINTON, DEKALB, GENTRY,
HENRY, HOLT, JOHNSON, LAFAYETTE, NODAWAY & WORTH COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 32.00 20.13

PLAS0527-001 04/01/2018

Rates Fringes

CEMENT MASON

FRANKLIN, LINCOLN AND

WARREN COUNTIES.....\$ 30.74 18.07

JEFFERSON, ST. CHARLES

COUNTIES AND ST. LOUIS

(City and County).....\$ 32.66 18.62

PLAS0527-004 06/01/2017

CRAWFORD, DENT, IRON, MADISON, MARION, PHELPS, PIKE, PULASKI,
RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SHANNON, TEXAS,
WASHINGTON COUNTIES

Rates Fringes

CEMENT MASON.....\$ 28.10 18.07

PLAS0908-001 05/01/2017

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, HOWELL,
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, RIPLEY,
SCOTT, STODDARD, AND WAYNE COUNTIES

Rates Fringes

CEMENT MASON.....\$ 27.60 15.73

PLAS0908-005 05/01/2017

BENTON, CALDWELL, CALLAWAY, CAMDEN, CARROLL, COLE, DAVIESS,
GASCONADE, GRUNDY, HARRISON, LIVINGSTON, MACON, MARIES, MERCER,
MILLER, MONTGOMERY, MORGAN, OSAGE, PETTIS & SALINE COUNTIES

Rates Fringes

CEMENT MASON.....\$ 27.60 15.73

PLUM0008-003 06/01/2018

CASS, CLAY, JACKSON, JOHNSON, AND PLATTE COUNTIES

Rates Fringes

Plumbers.....\$ 45.34 21.39

PLUM0008-017 06/01/2018

BATES, BENTON, CARROLL, HENRY, LAFAYETTE, MORGAN, PETTIS, RAY,
ST. CLAIR, SALINE AND VERNON COUNTIES

Rates Fringes

12/10/2019

beta.SAM.gov

Plumbers.....\$ 45.34 21.39

PLUM0045-003 08/01/2019

ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB,
GENTRY, HARRISON, HOLT, NODAWAY AND WORTH COUNTIES

Rates Fringes

Plumbers and Pipefitters.....\$ 37.75 23.65

PLUM0178-003 11/01/2018

BARRY, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,
HICKORY, LACLEDE, LAWRENCE, POLK, STONE, TANEY, WEBSTER AND
WRIGHT COUNTIES

Rates Fringes

Plumbers and Pipefitters.....\$ 30.90 15.35

PLUM0178-006 11/01/2018

BARTON, JASPER, MCDONALD AND NEWTON COUNTIES

Rates Fringes

Plumbers and Pipefitters

Projects \$750,000 & under...\$ 27.93 15.35

Projects over \$750,000.....\$ 30.90 15.35

PLUM0533-004 06/01/2019

BATES, BENTON, CARROLL, CASS, CLAY, HENRY, HICKORY, JACKSON,
JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY, SALINE, ST.
CLAIR AND VERNON COUNTIES

Rates Fringes

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

36/47

Pipefitters.....\$ 46.68 22.55

PLUM0562-004 07/01/2019

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY,CAMDEN, CAPE GIRARDEAU,CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD, DENT, DUNKLIN, FRANKLIN, GASCONADE, GRUNDY, HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCOLN, LINN, LIVINGSTON, MACON, MADISON, MARIES, MARION, MERCER, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, NEW MADRID, OREGON, OSAGE, PEMISCOTT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST.FRANCOIS, STE. GENEVIEVE, ST. LOUIS, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, SULLIVAN, TEXAS, WARREN, WASHINGTON,AND WAYNE COUNTIES.

Rates Fringes

Plumbers and Pipefitters

Mechanical Contracts

including all piping and temperature control work

\$7.0 million & under.....\$ 40.41 21.49

Mechanical Contracts

including all piping and temperature control work

over \$7.0 million.....\$ 41.85 27.85

PLUM0562-016 07/01/2019

CAMDEN, COLE, CRAWFORD, FRANKLIN, JEFFERSON, MARIES, MILLER, MONITEAU, OSAGE, PHELPS, PULASKI, ST. CHARLES, ST. LOUIS (City and County), WARREN and WASHINGTON COUNTIES

Rates Fringes

Plumbers

Mechanical Contracts

including all piping and

12/10/2019

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temperature control work		
\$7.0 million & under.....	\$ 40.41	21.49
Mechanical Contracts		
including all piping and		
temperature control work		
over \$7.0 million.....	\$ 41.85	27.85

TEAM0013-001 05/01/2019

	Rates	Fringes
Truck drivers (ADAIR, BUTLER, CLARK, DUNKIN, HOWELL, KNOX, LEWIS, OREGON, PUTNAM, RIPLEY, SCHUYLER AND SCOTLAND COUNTIES)		
GROUP 1.....	\$ 30.34	13.75
GROUP 2.....	\$ 30.49	13.75
GROUP 3.....	\$ 30.61	13.75
GROUP 4.....	\$ 30.50	13.75
Truck drivers (AUDRAIN, BOLLINGER, BOONE, CALLAWAY, CAPE GIRARDEAU, CARTER, COLE, CRAWFORD, DENT, GASCONADE, IRON, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONROE, MONTGOMERY, NEW MADRID, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON AND WAYNE COUNTIES)		
GROUP 1.....	\$ 31.07	13.75
GROUP 2.....	\$ 31.22	13.75
GROUP 3.....	\$ 31.34	13.75
GROUP 4.....	\$ 31.23	13.75
Truck drivers (FRANKLIN, JEFFERSON and ST. CHARLES COUNTIES)		

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

38/47

12/10/2019

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GROUP 1.....	\$ 33.43	13.75
GROUP 2.....	\$ 33.58	13.75
GROUP 3.....	\$ 33.65	13.75
GROUP 4.....	\$ 33.54	13.75
Truck drivers (LINCOLN and WARREN COUNTIES)		
GROUP 1.....	\$ 32.08	13.75
GROUP 2.....	\$ 33.23	13.75
GROUP 3.....	\$ 32.30	13.75
GROUP 4.....	\$ 32.19	13.75

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Trucks, Single Axle; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon, Single Axle

GROUP 2: Agitator and Transit Mix Trucks

GROUP 3: Flat Bed Trucks, Tandem Axle; Articulated Dump Trucks; Material Trucks, Tandem Axle; Tank Wagon, Tandem Axle

GROUP 4: Semi and/or Pole Trailers; Winch, Fork & Steel Trucks; Distributor Drivers and Operators; Tank Wagon, Semi-Trailer; Insley Wagons, Dumpsters, Half-Tracks, Speedace, Euclids and other similar equipment; A-Frame and Derrick Trucks; Float or Low Boy

TEAM0056-001 05/01/2019

Rates Fringes

Truck drivers (ANDREW,
BARTON, BATES, BENTON,
CALDWELL, CAMDEN, CARROLL,
CEDAR, CHARITON, CHRISTIAN,
CLINTON, COOPER, DADE,
DALLAS, DAVIESS, DEKALB,
DOUGLAS, GREENE, HENRY,

HICKORY, HOWARD, JASPER,
LACLEDE, LAWRENCE, LINN,
LIVINGSTON, MONITEAU, MORGAN,
NEWTON, PETTIS, POLK,
RANDOLPH, ST. CLAIR, SALINE,
VERNON, WEBSTER AND WRIGHT

COUNTIES)

GROUP 1.....	\$ 30.77	13.75
GROUP 2.....	\$ 30.92	13.75
GROUP 3.....	\$ 31.04	13.75
GROUP 4.....	\$ 30.93	13.75

Truck drivers: (ATCHISON,
BARRY, GENTRY, GRUNDY,
HARRISON, HOLT, MCDONALD,
MERCER, NODAWAY, OZARK,
STONE, SULLIVAN, TANEY AND

WORTH COUNTIES)

GROUP 1.....	\$ 30.04	13.75
GROUP 2.....	\$ 30.19	13.75
GROUP 3.....	\$ 30.31	13.75
GROUP 4.....	\$ 30.20	13.75

Truck drivers; (BUCHANAN,
JOHNSON AND LAFAYETTE

COUNTIES)

GROUP 1.....	\$ 31.98	13.75
GROUP 2.....	\$ 32.13	13.75
GROUP 3.....	\$ 32.20	13.75
GROUP 4.....	\$ 32.09	13.75

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Flat bed trucks single axle; station wagons; pickup
trucks; material trucks single axle; tank wagons single
axle.

GROUP 2: Agitator and transit mix-trucks.

GROUP 3: Flat bed trucks tandem axle; articulated dump
trucks; material trucks tandem axle; tank wagons tandem
axle.

12/10/2019

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GROUP 4: Semi and/or pole trailers; winch, fork & steel trucks; distributor drivers & operators; tank wagons semi-trailer; insley wagons, dumpsters, half-tracks, speedace, euclids & other similar equipment; A-frames and derrick trucks; float or low boy.

TEAM0245-001 03/26/2012

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DALLAS, DENT, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD, MILLER, NEWTON, OZARK, PHELPS, POLK, PULASKI, SHANNON, STONE, TANEY, TEXAS, VERNON, WEBSTER AND WRIGHT COUNTIES

Rates Fringes

Truck drivers:

Traffic Control Service

Driver.....\$ 20.45 0.00

PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, employee's birthday and 2 personal days.

TEAM0541-001 04/01/2019

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

Rates Fringes

Truck drivers:

GROUP 1.....\$ 33.01 15.75

GROUP 2.....\$ 32.44 15.75

GROUP 3.....\$ 31.92 15.75

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Mechanics and welders, Field; A-Frame Low Boy-Boomer Driver.

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

41/47

GROUP 2: Articulated Dump Truck; Insley Wagons: Dump Trucks, Excavating, 5 cu yds and over; Dumpsters; Half-Tracks: Speedace: Euclids & similar excavating equipment Material trucks, Tandem Two teams; Semi-Trailers; Winch trucks-Fork trucks; Distributor Drivers and Operators; Agitator and Transit Mix; Tank Wagon Drivers, Tandem or Semi; One Team; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon Drivers, Single Axle

GROUP 3: Oilers and Greasers - Field

TEAM0682-002 05/01/2017

ST LOUIS CITY AND COUNTY

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 33.30	13.79+a+b+c+d
GROUP 2.....	\$ 33.50	13.79+a+b+c+d
GROUP 3.....	\$ 33.60	13.79+a+b+c+d

a. PENSION: 5/1/2012 - \$182.20 per week.

b. HAZMAT PREMIUM: If Hazmat certification on a job site is required by a state or federal agency or requested by project owner or by the employer, employees on that job site shall receive \$1.50 premium pay.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Pick-up trucks; forklift, single axle; flatbed trucks; job site ambulance, and trucks or trailers of a water level capacity of 11.99 cu. yds. or less

GROUP 2 - Trucks or trailers of a water level capacity of 12.0 cu yds. up to 22.0 cu yds. including euclids, speedace and similar equipment of same capacity and compressors

12/10/2019

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GROUP 3 - Trucks or trailers of a water level capacity of 22.0 cu. yds & over including euclids, speedace & all floats, flatbed trailers, boom trucks, winch trucks, including small trailers, farm wagons tilt-top trailers, field offices, tool trailers, concrete pumps, concrete conveyors & gasoline tank trailers and truck mounted mobile concrete mixers

FOOTNOTE FOR TRUCK DRIVERS:

c. PAID HOLIDAYS: Christmas Day, Independence Day, Labor Day, Memorial Day, Veterans Day, New Years Day, Thanksgiving Day

d. PAID VACATION: 3 days paid vacation for 600 hours of service in any one contract year; 4 days paid vacation for 800 hours of service in any one contract year; 5 days paid vacation for 1,000 hours of service in any one contract year. When such an employee has completed 3 years of continuous employment with the same employer and then works the above required number of hours, he shall receive double the number of days of vacation specified above. When such an employee has completed 10 years of continuous employment with the same employer and then works the above required number of hours, he shall receive triple the number of days of vacation specified above. When such an employee has completed 15 years of continuous employment with the same employer and then works the above required number of hours, he shall receive 4 times the number of days of vacation specified above.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

43/47

solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this

12/10/2019

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classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage

<https://beta.sam.gov/wage-determination/MO20190001/16/document>

45/47

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
 Wage and Hour Division
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

12/10/2019

beta.SAM.gov

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

ENVIRONMENTAL & CULTURAL PERMITS AND CLEARANCES

This RER has been completed, only administrators may edit this document now, they will contact you if any information changes.

Date Completed: 06/07/2019
 Completed By: Matthew Burcham

Request for Environmental Review

Form#:2019-01-00139

Project Information

Prefix:	CMAQ	Project Number:	5414632	Bridge Number:	
District:	St. Louis	County:	St. Charles	Sponsor:	St. Charles County
TIP Number:	6761-17	Rte/Street:	GATEWAY GREEN LIGHT PH 4 null		
MoDOT Job Number:		TIGER Grant Funds:		Is this project on or adjacent to MoDOT Right of Way:	No
Location/Stream Crossing:	ST CHARELS CO				
TMS Project Description - termini (no stations):	GATEWAY GREEN LIGHT PHASE 4 - VARIOUS RDS IN ST CHARLES CO - TRAVEL TIME DETECTORS/COUNT STNS/PIZ CAMERAS/DYNAMIC MSG SIGNS/FIBEROPTIC				
Describe RER project improvements in full detail:	Proposed ITS equipment and CMAQ signal communications within multiple cities in St. Charles County. The proposed ITS improvements will provide the tools to better manage travel during day to day operations and provide motorists real-time information about travel conditions on the interstate, state routes and local arterials. The enhanced fiber and detection systems will provide more accurate and better information to improve response times for incident management. Such improvements shall include the following: 1 each - DMS sign located on S. Preimer Pkwy, 15 each - CCTV cameras, 10 each - Blue Tooth Travel Time Detectors, 7 each - Video detection/Count Stations, 40,415 L.F. - Fiber Optic Cable, 19,385 L.F. - Fiber Conduit System. The Fiber Optic links will serve two functions: 1. Work to complete the network infrastructure architecture 2. Work to build a countywide ITS reroute communication system thus reducing the possibility of area wide communication failure due to cable cuts or power outages. There are four (4) Areas were fiber cable will be installed: 1. Elm St/New Town/Betham Road - 19,590 L.F (6,740 L.F. of new conduit) 2. Duchesne/Droste - 8,440 L.F. (4,615 L.F. of new conduit) 3. Motherhead/Route N/Mid Rivers MALL Dr. - 10,850 L.F. (7,350 L.F. of new conduit) 4. Luetkenhaus Blvd. - 1,185 L.F (660 L.F. of new conduit)				
District Liason:	Cynthia Simmons - 314-453-1833	Contact:	None selected		
Contact:	None selected	Contact:	None selected		
Date Desired:	02/14/2019	Submit Date:	01/15/2019		
Desired A-Date:					
Responsible Individual:	Amanda Brauer - (1/11/2019 10:47:31 AM) - 636-949-7490	Submitted By:	Amanda Brauer - (1/15/2019 12:00:00 AM) - 636-949-7490		
Existing Condition					
ADT:	NA	Speed Limit:	NA		
Number of Travel Lanes:	NA	Lane Width:	NA		
Shoulder Width:	NA	Curb and Gutter:	No		
Bridge width, measured from gutterline to gutterline:	NA	Sidewalks:	None		
Proposed Design Improvement					
ADT:	NA	Speed Limit:	NA	Design Speed:	NA
Number of Travel Lanes:	NA	Lane Width:	NA		

Shoulder Width: NA
 Bridge width, measured from gutterline to gutterline: NA
 Bridge Length: NA
 Railroad Crossing: Yes
 Curb and Gutter: No
 Sidewalks: None
 Roadway length: NA
 Drainage District (if Applicable): None
 Right of Way: N/A

Program Year:
 Preliminary Engineering: 2018
 Construction: 2019

Has the district documented that the project has: 1. Independent utility, 2. Logical termini, and 3. Does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements?: Yes No

Project breakout from previous or larger project? *If checked explain:*

Acres - From all sources (e.g. donated from public or private entities):

Additional R/W: 0 Temp Easement: 0 Permanent Easement: 0

ROW may be needed, but, not yet determined? Not Specified

Is ANY Federally-owned land impacted by the project? Yes No

Land Disturbance:

Will project involve 1 acre but less than 5 acres of land disturbance: No
 Will project involve 5 acres or more of land disturbance: No
 Acres of Tree Clearing: 0 acres

Number of Displacements(do not include partial takes that do not displace):

Residential: Yes No
 Commercial: Yes No

No. of People: Residences: No. of Employees: Businesses:

Public Hearing/Meeting Information:

Average Daily Traffic:

ADT Construction Year: NA ADT Design Year: NA

Traffic Impacts:

Road Closure Planned: Yes No
 Bridge Closure Planned: Yes No

Detour Info: Days/Months Closed:

Bicycle / Pedestrian Consideration

Pedestrian facilities considered: No

Bicycle facilities considered: No

National Flood Insurance Program (NFIP) and Hydraulic Design Data:

Project is in a FEMA-identified zone "subject to 100-year flooding": *If so, what zone?:*

Project is in a FEMA-defined "floodway": No

Project involves land purchased through FEMA Hazard Mitigation Grant Program (Flood buyout property)

If checked, give details:

Is ANY construction taking place on MoDOT owned property under this project?

r Yes No

Is highway improvement located within 4 miles of an existing airport?

Known Concerns: Provide information you have about these resources that you have observed in the area.

Parkland:

Wetland/404 Permit:

Stormwater/Water Quality:

Farmland:

Threatened & Endangered Species:

Migratory Birds: Are there birds nesting on the structure? Unknown,

Hazardous Waste:

Cultural Resources:

LPA Comments:

Project Attachments:

****NOTE: If making updates to an attachment, please use a different filename than the original.**

****The combined size of attachments in one upload must be less than 100MB**

- Attachments:
- ✘067SC19 1969.pdf
 - ✘ Brauer_StCharles_Uilities_NHR.PDF
 - ✘Fish&Wildlife.pdf
 - ✘Natural Heritage Review.pdf
 - ✘GGL Phase 4 Preliminary Plans 1-4-19.pdf

Required Information to be attached for each RER stage:

- **Loc/Concp.:** Location map (county map) & topographic map or aerial photo showing project limits – pre-plan sheets or other preliminary maps showing alternatives, if available
- **Prel. Plan:** Prel. Plan sheets
- **R/W:** R/W Plan sheets
- **Final Design:** Final Plans [Location map (county map) & topographic map or aerial photo showing project limits if this is first RER submittal]

RER Environmental Screenings

Farmland Impact

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: The project is located in a designated urbanized area as indicated on the U.S. Census Bureau Urban Area Reference Map. Therefore, the project is not subject to the Farmland Protection Policy Act.

LPA Action: None

Attachments:

- ✓ Farmland Impact Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 1/17/2019 10:50:37 AM

Floodplain/Regulatory Floodway

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: The project is not subject to floodplain permitting requirements.

LPA Action: None

Attachments:

- ✓ Floodplain/Regulatory Floodway Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 1/17/2019 11:09:20 AM

Stormwater/Water Quality

Status Information: N/A Possible Issues Noted Clearance Date:

Environmental Response: If the project is in a regulated MS4 area, adhere to the MS4 requirements as defined in the MS4 permit specific to that municipality. Stormwater routed into MoDOT's drainage system (e.g., ditches and stormwater conveyance systems) must be treated for water quality and/or quantity before entering the system. Any project with land disturbance of 1 acre or more requires a DNR National Pollutant Discharge Elimination System (NPDES) land disturbance permit.

LPA Action: If the project will disturb 1 acre or more of land, obtain a DNR NPDES land disturbance permit. The LPA must also implement best management practices in accordance with that permit and the Clean Water Act.

Attachments:

- ✓ Stormwater/Water Quality Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 1/17/2019 11:10:09 AM

FEMA/SEMA Buyout

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: According to the TMS FEMA buyout layer, there are no FEMA/SEMA buyout sites in or near the project area.

LPA Action: None

Attachments:

- ✓ FEMA/SEMA Buyout Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 1/17/2019 11:10:39 AM

Socioeconomic Impact

Status Information: N/A Possible Issues Noted Clearance Date:

Environmental Response: There will be no significant socioeconomic impacts associated with this project. The project will not have an Adverse Impact and normal procedures for informing the public will mitigate temporary impacts.

LPA Action: If needed Ensure a traffic management control plan is implemented by the contractor during construction which should include how the public will be notified of travel disruptions.

Attachments:

- ✓ Socioeconomic Impact Submitted - Mark submitted when this review is ready to be sent to district staff.
Last Updated: Matthew Burcham - 1/17/2019 11:13:36 AM

Threatened & Endangered Species

Status Information: No Effect Pending Cleared Clearance Date: 06/07/2019

Environmental Response: Consultation code: 03E14000-2019-SL-1430 Species listed: gray bat, Indiana bat, northern long-eared bat, decurrent false aster I have reviewed the T&E information submitted for this ITS project in St. Charles County. The sponsor provided USFWS IPaC official species list, project area mapping, aerial imagery, and plans. There are no federally designated critical habitats near the project area. There are no existing bridge, box culvert, or low water crossing structures to be modified and no concerns with the Migratory Bird Treaty Act. Gray bats are cave obligate species which congregate in maternity or bachelor colonies in the summer utilizing dome cave and mine habitat, and mixed colonies during winter hibernation in vertical or pit-type caves and mines, utilizing mainly stream corridors for foraging spring through fall. There are no riparian areas or caves in the project limits and MoDOT has verified there are no known caves within 5.0 miles. There are no records of gray bats within 30 miles of the project. Indiana and northern long-eared bats winter in caves and spend summer in forested areas of the state where they may utilize suitable summer roost trees with exfoliating bark or bark that forms a shingle-like structure under which bats may roost. Summer habitat for the threatened northern long-eared bat overlaps greatly with Indiana bat habitat and includes additional habitat use of trees with splits, crevices, hollow sections, and other damage. Removal of these trees at any time of the year may affect both species. There will be no tree removal with this project. Decurrent false aster is a wetland plant of wet prairies, marshes, lake shores, riverbanks, old fields, roadsides, and mudflats, and in Missouri natural populations have only been found north of St. Louis. Though there are records for this plant in St. Charles Co, these records are several miles from the project and there is no suitable habitat in the project limits. As the designated non-federal representative of FHWA for USFWS Section 7 Endangered Species Act requirements, MoDOT has determined this project will have No Effect on any federally listed species. There is no requirement for tree clearing restrictions for this project. All T&E requirements have been satisfied for this project.

LPA Action: No further action is require.

Attachments:

- ✓ Threatened & Endangered Species Submitted - Mark submitted when this review is ready to be sent to district staff.
Last Updated: Matthew Burcham - 6/7/2019 11:16:26 AM

Migratory Birds

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: No bridge improvements, no impacts.

LPA Action: None

Attachments:

- ✓ Migratory Birds Submitted - Mark submitted when this review is ready to be sent to district staff.
Last Updated: Matthew Burcham - 1/17/2019 11:14:01 AM

Hazardous Waste Impact

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: Based on the project description and observation, there should be no hazardous waste site concerns. The potential to encounter wastes from sites unknown to the LPA and MoDOT should always be a consideration.

LPA Action: Any unknown sites that are found during project construction will be addressed by the LPA in accordance with Federal and State Laws and Regulations. If any hazardous waste concerns arise, notify MoDOT's environmental specialist as soon as possible.

Attachments:

- ✓ Hazardous Waste Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*
Last Updated: Matthew Burcham - 1/17/2019 11:16:00 AM

Wetland Impact (Section 404/401)

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: According to the USFWS National Wetlands Inventory Mapper, there are no wetlands, blue line streams, lakes, ponds, or other waters of the U.S. in or around the project area. A review of Google Earth also did not reveal the presence of any water bodies in the project area. The project will have no impact on wetlands or waters of the U.S.

LPA Action: None

Wetland Permit Information:	404 Permit Number	Permit Submitted	Permit Received
	Permit Expiration	Compliance Certification Sent	Compliance Certification Received

Attachments:

- ✓ Wetland Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*
Last Updated: Matthew Burcham - 1/17/2019 11:17:14 AM

Noise Impact

Status Information: N/A Pending Cleared Clearance Date:

Environmental Response: This is a Type III project and a noise analysis is not required. Project does not meet Type I criteria.

LPA Action: None

Attachments:

- ✓ Noise Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*
Last Updated: Matthew Burcham - 1/17/2019 11:17:40 AM

Cultural Resources Impact (Section 106)

Status Information: Pending Cleared Clearance Date: 06/03/2019

Environmental Response: No historic properties affected. 067-SC-19

LPA Action: No further action is required.

Attachments:

- ✓ Cultural Resources Impact Submitted - *Mark submitted when this review is ready to be sent to district staff.*
Last Updated: Matthew Burcham - 6/7/2019 1:20:10 PM

Public Land Impact (Section 4f/6f)

Status Information: Clearance Date:

- N/A Pending Cleared

Environmental Response: According to Google Earth and ArcMap, there are no Section 4(f) or Section 6(f) protected resources in or in the vicinity of the project area. The project will have no impact on Section 4(f) or 6(f) protected resources.

LPA Action: None

Attachments:

✓ Based on the review of the project location and description noted above, there are no identified 4(f) or 6(f) resources affected that would preclude the setting of an A-date.

Checked by: Matt Burcham on 01/17/2019

✓ Public Land Impact Submitted - Mark submitted when this review is ready to be sent to district staff.

Last Updated: Matthew Burcham - 1/17/2019 11:21:01 AM

NEPA Classification

NEPA Right-Of-Way Permission: Not Applicable as determined or approved by: MATTHEW.BURCHAM@MODOT.MO.GOV

NEPA Approval/Proceed to A-date Request: 06/07/2019

NEPA Classification: PCE

This project qualifies for the programmatic categorical exclusion under Item#: 21 All Environmental Issues Cleared: 06/07/2019

Comments To District: FINAL Environmental Review Completed Please note that if there are any changes in the scope of the project, the Environmental Section should review those changes. The sponsor is ultimately responsible for complying with all applicable state and federal laws. The environmental review is now complete.

Attachments:

Last Submitted: 06/07/2019 by Matthew Burcham

APPROVED PUBLIC INTEREST FINDINGS



TRANSPORTATION

Amanda Brauer
Manager, Roads & Traffic

DATE: July 18, 2019

TO: **Cynthia R Simmons, PE**
Local Programs Construction Engineer
Missouri Department of Transportation
1590 Woodlake Dr.
Chesterfield, Mo. 63017

I do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), this patented or proprietary item is essential for synchronization with existing highway facilities.

Travis Koestner
cn=Travis Koestner, o=MoDOT,
ou=Design,
email=Travis.Koestner@modot.mo.gov,
c=US
2019.08.07 10:06:55 -05'00'
2015.006.30498

State Design Engineer

FROM: Steve Helmholt
201 N. Second St – Suite 560
St Charles County, MO

SUBJECT: Design
Route: Various – St Charles County
Gateway Green Light Project
Job No. CMAQ 5414(632)
Public Interest Finding

With reference to the above mentioned project, we request approval of a finding in the public interest to use BlueTOAD Bluetooth Travel Time Detection system and accessories for the Gateway Green Light (GGL) project.

The Missouri Department of Transportation (MoDOT) and the GGL program both use these specific types of detection devices as part of existing Intelligent Transportation Systems (ITS) currently deployed in the St Louis District. The Gateway Green Light Phase 4 project will closely integrate both device and communication protocols with existing MoDOT and GGL systems. It is therefore desirable that the product synchronize with their existing criteria for such a device, and function with the existing BlueTOAD travel time servers located at the MoDOT TMC building.

Past field performance has demonstrated that this product is relatively inexpensive, durable, and easy to operate. It will not differ from existing MoDOT and GGL inventories, nor will it necessitate additional training of personnel.



TRANSPORTATION

Amanda Brauer
Manager, Roads & Traffic

DATE: July 17, 2019

TO: **Cynthia R Simmons, PE**
Local Programs Construction Engineer
Missouri Department of Transportation
1590 Woodlake Dr.
Chesterfield, Mo. 63017

I do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), this patented or proprietary item is essential for synchronization with existing highway facilities.

Travis Koestner
cn=Travis Koestner, o=MoDOT, ou=Design,
email=Travis.Koestner@modot.mo.gov,
c=US
2019.08.07 10:07:15 -05'00'
2015.006.30498

State Design Engineer

FROM: Steve Helmholt
201 N. Second St – Suite 560
St Charles County, MO

SUBJECT: Design
Route: Various – St Charles County
Gateway Green Light Project
Job No. CMAQ 5414(632)
Public Interest Finding

With reference to the above mentioned project, we request approval of a finding in the public interest to use Cisco WS-C3750 series network switches and accessories, Cisco WS-C3850 series network switches and accessories, Cisco IE 3000 series network switches and accessories, Cisco IE-4000 series network switches and accessories, and Cisco ASA 5500 series firewall devices and accessories for the Gateway Green Light (GGL) project.

The Missouri Department of Transportation (MoDOT) and the GGL program both use these specific types of devices as part of existing Intelligent Transportation Systems (ITS) currently deployed in the St Louis District. The Gateway Green Light Phase 3 project will closely integrate both device and communication protocols with existing MoDOT and GGL systems. It is therefore desirable that the product synchronize with their existing criteria for such a device.

Past field performance has demonstrated that this product is relatively inexpensive, durable, and easy to operate. It will not differ from existing MoDOT and GGL inventories, nor will it necessitate additional training of personnel.

ADDITIONAL RAILROAD INFORMATION



AECOM
1700 Market Street
Suite 1600
Philadelphia, PA 19103
www.aecom.com

215 735 0832 tel
215 735 0883 fax

July 12, 2019

Kelly McGrath, Administrative Assistant
St. Charles County Government – Roads & Traffic
201 N. 2nd Street
Suite 560
St. Charles, MO 63301

Subject: Wentzville, Saint Charles County, Missouri
Milepost S-44.08, St Louis-Moberly Line, Illinois Division

Norfolk Southern Activity No. 1268406

Proposed installation of an underground crossing of a 2-inch HDPE conduit to contain a 48-strand fiber-optic cable wholly within the confines of Luetkenhaus Blvd (AAR/DOT# 483523M) under a Railroad bridge

Subject: St. Charles, St. Charles County, Missouri
Milepost S-25.96, St. Louis-Moberly Line, Illinois Division

Norfolk Southern Activity No. 1268402

Proposed installation of an underground crossing of a 2-inch HDPE conduit to contain a 72-strand fiber-optic cable

Dear Ms. McGrath:

AECOM, as consultant for Norfolk Southern Railway Company, has reviewed the occupancy permit application for Saint Charles County, Missouri regarding the proposed installation of an underground conduit, submitted on February 4, 2019.

To date the following items have been submitted and satisfied the Railway's requirements:

- The fully executed Public Street Acknowledgement Form and Railway License Agreement
- The submission of the applicable fees

Currently, the only outstanding item is the insurance form in the following format:

- The Certificate of Commercial General Liability Insurance as required in the agreement
 - The Description of Operations must state: "NORFOLK SOUTHERN RAILWAY COMPANY is included as additional insured - Activity Numbers 1268402 and 1268406"
 - Certificate Holder must be in the name of:
NORFOLK SOUTHERN RAILWAY COMPANY
Attn: Director Risk Management
Three Commercial Place
Norfolk, VA 23510

After receipt of all of the above items in this office, you should anticipate approximately two weeks for receipt of authorization to proceed with construction. **Please do not schedule your construction until you are in receipt of a fully executed agreement.** No work on Norfolk Southern property is authorized until you are in receipt of a fully executed Acknowledgment Form and instructions are obtained from Railway's designated construction representative. The contact information for Railway's construction representative(s) will be provided upon return of the fully executed counterpart.

Very truly yours,

Alicia Plummer
Senior Contract Administrator
215-789-2138
Alicia.Plummer@aecom.com