

ADDENDUM 001 Request for Bid The Town of Grantwood Village for Improving Grant Road DP/STP/FLAP-5401(719)

Bidders should acknowledge receipt of Addendum 001 (ONE) by signing and including it with the original bid. The due date for receipt of bids **has not** changed by this Addendum; the due date is **September 18, 2018 10:00 AM Central Time.** Accordingly, the following clarifications, and or additional information, are believed to be of general interest to all potential bidders. All other terms and conditions remain unchanged and in full force.

Name and Title of Signer (Print or type)	Name and Title of Authority Michael Brown Project Manager
Contractor/Offeror Signature (Signature of person authorized to sign)	Access Engineering, LLC  (Authorizing Signature)
Date Signed:	Date Signed: 8/30/18

- 1) Section 3 in the Notice to Contractors references the Completion Date as May 31, 2019. The words "**Completion Date**" will be added for clarification.
- 2) JSP A, Paragraph 3.1 will be revised as follow:

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. No daytime lane closures will be permitted before November 1, 2018 or after May 1, 2019 without approval from the engineer.

NOTICE TO CONTRACTORS

Sealed bids, addressed to The Town of Grantwood Village, One Missionary Ridge, Grantwood Village, Missouri 63123-2044 for the proposed work will be received by the Town of Grantwood Village until **2:00 pm** (prevailing local time) on **August 21, 2018**, at the office of the Town of Grantwood Village, One Missionary Ridge, Grantwood Village, Missouri 63123-2044 and at that time will be publicly opened. Bids should be delivered to: One Missionary Ridge, Grantwood Village, Missouri 63123-2044.

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

Lane widening, road resurfacing, lighting, and drainage improvements.

(2) **COMPLIANCE WITH CONTRACT PROVISIONS:** The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the current version of the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction, October 1, 2017" and "Missouri Standard Plans for Highway Construction, October 1, 2017", their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, October 1, 2017 as revised, unless otherwise noted. Drainage and sanitary items under Metropolitan St. Louis Sewer District maintenance shall follow the St. Louis Sewer District Standard Specifications for Sewer and Drainage Facilities, 2009.

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, October 1, 2017

Supplemental Revisions to Missouri Standard Plans
For Highway Construction

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

Please note that within the above-listed documents, the terms "Commission" and "City" shall be replaced with the term, "The Town of Grantwood Village", and the term "Engineer" is a reference to the Engineer of Record from Access Engineering, LLC.

The contracting authority for this contract is the Town of Grantwood Village.

(3) **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:



ADDED

Completion Date
May 31, 2019

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

Liquidated damages per day \$ **1,100**

(5) **BID GUARANTY:** The bidder shall submit a Bid Guaranty meeting the requirements of Section 102 of the Missouri Standard Specifications for Highway Construction. A sample 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

(6) **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.

(7) **ANTIDISCRIMINATION:** The Contracting Authority hereby notifies all bidders that it will affirmatively insure 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.

(8) **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.

(9) **PREVAILING WAGE (FEDERAL AND STATE):** This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations, and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. The applicable state wage rates for this contract are detailed in "Annual Wage Order No. 25 ", that is attached to this bidding document. The applicable federal wage rates for this contract are the effective Davis-Bacon federal wage rates posted the tenth day before the bid opening date and a link has been provided herein.

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

(10) **WORKER ELIGIBILITY REQUIREMENTS:** Execution of the construction contract for this project is dependent upon the awarded bidder providing an Affidavit of Compliance AND E-Verify Memorandum-of-Understanding (MOU) between the bidder and Department of Homeland Security to the Contracting Authority as required by section 285.530 RSMo. The cover page and signature page of the E-Verify MOU and the Affidavit must be submitted prior to award of this contract.

A sample Affidavit of Compliance can be found at the Missouri Attorney General's website at the following link:

http://ago.mo.gov/forms/Affidavit_of_Compliance.pdf

All bidders must also be enrolled in the E-Verify Program, and include their MOU prior to contract execution. Bidders who are not enrolled will need to go to the following website link and select "Enroll in the Program" to get started. After completing the program, they will receive their E-Verify MOU with Department of Homeland Security. This document will need to be printed out and kept on file so that a copy can be attached to the Affidavit of Compliance.

http://www.dhs.gov/files/programs/gc_1185221678150.shtm

This requirement also applies to subcontractors and contract labor, but this contract only requires submittal of the verification documents for the prime contractor. It is the prime contractor's responsibility to verify the worker eligibility of their subcontractors in order to protect their own company from liability as required by section 285.530 RSMo.

(11) OSHA TEN HOUR TRAINING REQUIREMENTS: 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 (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The awarded contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMO, unless they hold documentation on their prior completion of said program. Penalties, for Non-Compliance include contractor forfeiture to the Contracting Authority in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMO.

(12) BUY AMERICA REQUIREMENTS: 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:

<http://www.fhwa.dot.gov/programadmin/contracts/b-amquck.cfm>

(13) 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.

(14) 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.

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.

(15) **TRAINEES**: By submitting this bid, the bidder certifies that the bidder is familiar with the Training Provision in the Missouri Highways and Transportation Commission's "General Provisions and Supplement Specifications" which are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The number of trainee hours provided under this contract will be 0 slots at 1000 hours per slot or 0 hours.

(16) **SUBCONTRACTOR DISCLOSURE**: Requirements contained within Sec 102.7.12 of the Missouri Standard Specification for Highway Construction shall be waived for this contract.

(17) **PROJECT AWARD**: This project will be awarded to the lowest, responsive, responsible bidder.

(18) **MATERIALS INSPECTIONS**: 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.

(19) **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.

(20) **SALES AND USE TAX EXEMPTION:** the Town of Grantwood Village, a tax exempt entity, will furnish a Missouri Project Exemption Certificate as described in Section 144.062 RSMo to the awarded contractor who in turn may use the certificate to purchase materials for a specific project performed for the tax exempt entity. Only the materials and supplies incorporated or consumed during the construction of the project are exempt. The certificate will be issued to the contractor for a specific project for a defined period of time.

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:

JOB SPECIAL PROVISIONS – TABLE OF CONTENTS

(Job Special Provisions shall prevail over Specification and/or General Provisions whenever in conflict therewith)

- A. Work Zone Traffic Management Plan
- B. Project Contact for Contractor/Bidder Questions
- C. Emergency Provisions and Incident Management
- D. Utilities
- E. Order of Work
- F. Liquidated Damages Specified for Winter Months
- G. Disadvantaged Business Enterprise (DBE) Program Requirements
- H. Utility Adjustments in Paved Areas
- I. Damage to Existing Pavement, Shoulders, Side Roads, Ramps, and Entrances
- J. Fertilizing, Seeding, and Mulching
- K. Remove and Replace Existing Fence
- L. Amended Soils
- M. Entrance Sign
- N. System A Geosynthetic Interlayer
- O. Pavement Repair
- P. SWPPP, Contractor Provided
- Q. Decorative Pole and Luminaire Fixture
- R. Special Combination Pad Mounted Power Supply / Lighting Control Station, 240v
- S. Add Alternates
- T. Optional Pavement
- U. ADA Compliance And Final Acceptance Of Constructed Facilities



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

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

2.0 Traffic Management Schedule.

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

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

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.

2.4.1 Any work that impacts thru-lanes of traffic on Grant Road will not be allowed between:

April 30 and Nov 1

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 5 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.



3.0 Work Hour Restrictions.

DELETED

~~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. No daytime lane closures will be permitted before October 1, 2017 or after May 1, 2017 with approval from the engineer.~~



ADDED

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. No daytime lane closures will be permitted before November 1, 2018 or after May 1, 2019 without approval from the engineer.

4.0 Contractor Permit Required for Work on MoDOT Right of Way.

4.1 Description. The contractor is required to obtain a permit from MoDOT for temporary signing and other activities listed on the MoDOT website.

4.2 Required Process to Acquire Permit.

- The contractor shall submit an initial on-line request to obtain a permit here:

<https://www6.modot.mo.gov/Permitting/PermitRequest.aspx>

- Submit request with 2 full size sets of plans to the appropriate area traffic specialist for review.
- Once plans are approved, a total of 3 full size sets of plans and a pdf will be required.
- A surety deposit will be required for most permits, which is refundable once the work is completed and inspected and accepted by MoDOT.
- The permit will be issued from MoDOT's Main Permit Office located in the

Transportation Management Center (TMC)

14301 South Outer Forty, Chesterfield, MO 63017.

Hours are Monday-Friday 7:30am-11:30am and 12:00pm-3:30pm.

4.4 Process After Permit is Received.

- Call 1-800-344-7483 before you dig to get the location underground facilities.
- Submit the Lane Closure Request Form to MoDOT, two business days prior to any lane closures.
- Set up a pre-construction meeting with the appropriate area traffic specialist (Fred Lagos, MoDOT).
- Keep a copy of permit and the permit approved plans on the job site at all times.
- Contact the area traffic specialist or submit a Permit Completion Report Form when work is complete for a final inspection.
- The area traffic specialist will inspect the work and clear the permit.
- The surety deposit will be refunded three to four weeks after MoDOT has inspected and accepted the work.

B. PROJECT CONTACT FOR CONTRACTOR/BIDDER QUESTIONS

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

Mike Brown, PE
11820 Tesson Ferry Road, Ste 203, St. Louis, MO 63128
(314) 849-8445
mbrown@acceng.com

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

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

Kevin Kelso – Grantwood Village, (314) 842-4409
Mike Brown – Access Engineering, (314) 849-8445

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

St. Louis County Police Department 7900 Forsyth Blvd, Clayton, MO 63105 Emergency Calls: Call 911 Non-Emergency Reporting / General Information: (636) 529-8210
Grantwood Village One Missionary Ridge, Grantwood Village, Missouri 63123-2044 Phone: 314-842-4409 ext. 2
Affton Fire Department 314-631-1803 Ambulance 314-343-4151

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

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

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

D. UTILITIES JSP-93-26F

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

Utility Name	Known Required Adjustment	Type
Dave Aten Ameren-Missouri (Distribution) P.O. Box 66149, Mail Code 667/Aten St. Louis, MO 63166-6149 Phone: (314) 206-0277 Email: daten@ameren.com	Yes	Electric
Jim Lashley AT&T-d 909 Chestnut 9-V-07 St. Louis, MO 63101 Phone: (636) 402-7027 Email: jl4728@att.com	Yes	Communication
Eddie Bolden Missouri American Water Company 727 Craig Road St. Louis, MO 63141 Phone: (314) 996-2220 Email: Eddie.Bolden@amwater.com	Yes	Communication
Matt Adams Ameren-Missouri (Transmission) 1901 Chouteau Avenue St. Louis, MO 63166-6149 Phone: (314) 554-3811 Email: Madams@ameren.com	No	Electric

Daryl Steffen Charter Communications 101 Northwest Plaza Drive St. Ann, MO 63074 Phone: (636) 387-6663 Email: daryl.steffen@charter.com	No	Communication
Brian Langenbacher Spire (Laclede Gas) 4118 Shrewsbury Ave Shrewsbury, MO 63119 Phone (314) 768-7767 Email: Brian.Langenbacher@spireenergy.com	No	Gas
MSD 2350 Market Street St. Louis, MO 63103 Phone: 314-768-6200 P#031040-00	Yes	Storm/Sanitary

1.0 UTILITY RELOCATION WORK:

1.1 Ameren-Missouri (Distribution) has existing overhead 12kv facilities on the north side of Grant Road that are impacted by the road project. Ameren has relocated the OH facilities.

1.2 AT&T-d has buried copper facilities located on the north side of Grand Road that are impacted by the road project. AT&T-d has relocated the UG facilities on the south side of Grant Road.

1.3 Missouri American Water Company has a water main located under the WB lane that is not impacted by the project. MAWC has adjusted several valves in the pavement and a fire hydrant relocated at station 27+89. Missouri American Water will adjust the various valves in plan conjunction with the road contractors asphalt work on existing Grant Road.

2.0 OTHER EXISTING UTILITIES FACILITIES

2.1 Ameren- Missouri has existing 138kv and 34kv transmission facilities in the project limits but there are no known conflicts with these facilities and the roadway project.

2.2 Metropolitan Saint Louis Sewer District- There is manhole adjustment work included in the road contract and referenced as MSD P# 031040-00.

2.3 Charter Communications and Laclede Gas has facilities located just outside the project limits.

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

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

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

E. ORDER OF WORK

1.0 Description. The following shall be the order of work performed by the contractor:

- (a) Install traffic control appurtenances as shown on the plan.
- (b) Construct widening and associated grading and drainage improvements
- (c) Construct all existing pavement repair
- (d) Construct asphalt leveling and surface courses
- (e) Install lighting and signing

F. LIQUIDATED DAMAGES FOR WINTER MONTHS

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

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

G. DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM REQUIREMENTS

1.0 Description: Insert the following additional program provisions in the Disadvantaged Business Enterprise (DBE) Program Requirements of the General Provisions and Supplemental Specifications to 2011 Missouri Standard Specifications for Highway Construction.

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

- (a) Negotiating price.
- (b) Determining quality and quantity.
- (c) Ordering the material.
- (d) Paying for the material itself.

(e) 30% of the work must be performed by the DBE's permanent employees (which does not include owner-operators or leased employees) or those hired by the DBE firm for the project from an independent source other than the prime contractor, such as a union hall. For at least 30% of the work the DBE's owned (not leased) equipment shall be used and the DBE must provide documentation that this owned equipment was used on the project as required by this provision.

(f) For up to 70% of the remaining work the equipment used by the DBE must be by long term lease (at least one year) with another DBE or non-DBE but not the prime contractor. The DBE must have absolute priority over other businesses or entities to use the long term leased equipment and must display the name and identification number of the DBE.

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

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

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

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

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

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

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

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

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

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

H. UTILITY ADJUSTMENTS IN PAVED AREAS

1.0 Description. This work shall consist of adjusting existing and relocated utility surface features to a grade $\frac{1}{4}$ - inch less than proposed pavement surface grade.

2.0 Construction Requirements. The work shall include all materials and labor necessary to adjust all utility surface features that are not scheduled to be adjusted by the respective utility companies and agencies.

3.0 Method of Measurement. No measurement of adjustments as described above shall be made.

5.0 Basis of Payment. No payment will be made for the utility adjustments.

I. DAMAGE TO EXISTING PAVEMENT, SHOULDERS, SIDE ROADS, RAMPS, AND ENTRANCES

1.0 Description. This work shall consist of repairing any damage to existing pavement, shoulders, side roads, ramps, and entrances caused by contractor operations. This shall include, but not be limited to, damage caused by the traffic during contractor operations within the project limits including the work zone signing.

2.0 Construction Requirements. Any cracking, gouging, or other damage to the existing pavement, shoulders, side roads, ramps, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense. Repair of the damaged pavement, shoulders, side roads, ramps, or entrances shall be as determined by the engineer.

3.0 Method of Measurement. No measurement of damaged pavement or shoulder areas or damaged side roads, ramps, or entrances as described above shall be made.

4.0 Basis of Payment. No payment will be made for repairs to existing pavement, shoulders, side roads, ramps, or entrances damaged by contractor operations.

J. FERTILIZING, SEEDING, AND MULCHING

1.0 Construction Requirements. In accordance with Sections 801 and 805, the following shall be applied at the rate specified in the locations specified. Dry seeding application methods will be

required for slopes flatter than 3:1. Bulk Seed can be used provided live seed rates are met. Vegetative mulch will be stabilized with recycled paper overspray in accordance with Section 802.

<u>Seeding Mixture</u>	<u>Pounds Pure Live Seed/Acre</u>
Tall Fescue	96
Annual Ryegrass	12
Perennial Ryegrass	6
White Clover	6
Oat	12
Total Seed	132 lbs / acre
<u>Fertiliz</u>	<u>Application Rate- Pounds/Acre</u>
Nitrogen (N)	40
Phosphoric Acid (P ₂ O ₅)	80
Soluble Potash (K ₂ O)	80
Effective Neutralizing	1000

Cool Season Mixture

2.0 Basis of Payment. Accepted seeding, fertilizing and mulching will be paid for at the unit price bid for Item No. 805-10.00A Cool Season Mixtures (Seeding), per acre. Payment for mulch will be considered incidental to seeding.

K. REMOVE AND RELOCATE EXISTING FENCE

1.0 Description. This work shall consist of removing and relocating existing split rail fence where shown on the plans.

2.0 Construction Requirements. Contractor shall determine the method and means by which the work is complete as to not damage the existing fence. Any material that is deemed damaged by the engineer shall be replaced, in kind and approved by the engineer.

3.0 Method of Measurement.

3.1 Measurement of removing and relocating existing fencing will be made to the nearest Lineal Foot (LF).

4.0 Basis of Payment.

4.1 Payment for removing and relocating existing fencing will be made per linear foot at the fixed unit price for REMOVE AND RELOCATE EXISTING FENCE and will include all materials and labor necessary to properly relocate fencing.

L. AMENDED SOILS

1.0 Description. This work shall consist of furnishing and incorporating compost (Amended Soils) as shown on the plans and as directed by the Engineer.

2.0 Submittals.

The Contractor shall submit signed and sealed Shop Drawings and other items as may be required by MSD and the City prior to any work being performed on this item. The Contractor shall obtain written approval from both MSD and the City. Commencement of this work shall not begin until such time as all paving and final grading have been completed. The Engineer shall approve the construction schedule for this work before work can begin.

3.0 Construction Requirements.

3.1 Materials. Materials shall meet the requirements of the Metropolitan St. Louis Sewer District Standard Construction Specifications for Sewers and Drainage Facilities, 2009. Compost shall be mature, stable, weed free, and produced by aerobic decomposition of organic matter. Compost feedstock may include but is not limited to: agricultural, food or industrial residuals; class A bio solids as defined by the EPA CFR Title 40, Part 503; yard trimmings, or source-separated municipal solid waste. The product must not contain any visible refuse or other physical contaminants, substances toxic to plants, or over 5% sand, silt, clay or rock material by dry weight. The product shall possess no objectionable odors. The product must meet all applicable USEPA CFR, Title 40, Part 503 Standards for Class A bio solids. The moisture level shall be such that no visible water or dust is produced when handling the material.

3.2 Testing. The results of compost analysis shall be provided by the compost supplier. Maturity testing shall be performed on site after the compost is delivered. Before delivery of the compost, the Contractor must provide the following documentation:

- Feedstock percentage in the final compost product.
- A statement that the compost meets federal and state health and safety regulations.
- A statement that the composting process has met time and temperature requirements.
- A copy of the lab analysis, less than four months old, performed by a Seal of Testing Assurance Certified Laboratory verifying that the compost meets the physical requirements as described in Table 1.

3.3 Construct Amended Soils as shown on the plans. Do not stockpile construction materials on the pavement or in the facility area. Compost (Amended Soils) shall be uniformly applied over the entire area to a depth of two (2) inches, and incorporated into the soil to a minimum depth of six (6) inches. Rototill to a depth of six (6) inches. If the soil is too dense for a rototiller, the soil should first be broken up into large aggregates using a soil ripper. Clear surface of obstructions. The soil surface shall be reasonably free of large clods, roots, stones greater than 2 inches, and other material which will interfere with planting and subsequent site maintenance. Distribute the compost evenly to a depth of two inches over soil surface. For small areas, compost may be spread by hand with a shovel and raked evenly over the soil. For large areas, use a tractor-mounted spreader or other similar device. Spread lime and nutrients as indicated by soil testing. Re-rototill several times in perpendicular directions to incorporate compost and other soil amendments. Water thoroughly. Allow soil to settle for one week. If compost is immature, extend settling period to two to five weeks, or as directed by the Engineer. Fine grade and roll soil prior to placing sod.

Parameter	Range	Testing Method
pH	5.0-8.5	TMECC 4.11A
Soluble Salt Concentration	< 10dS/m	TMECC 4.10-A
Moisture	30-60% wet weight basis	SMEWW 2540B
Organic Matter	30-65% dry weight basis	TMECC 5.07-A
Total Nitrogen (N)	>1.00% dry weight basis	TMECC 04.02-D
Phosphate (P ₂ O ₅)	>0.50% dry weight basis	TMECC 04.03-A
Potash (K ₂ O)	>0.10% dry weight basis	TMECC 04.04-A
Particle Size	95% pass through 5/8" screen or smaller	TMECC 2.02-B
Stability (Carbon Dioxide evolution rate)	>80% relative to positive control	TMECC 5.08-B
Maturity (Seed emergence and seedling vigor)	>80% relative to positive control	TMECC 5.05-A
Physical contaminants (man made inerts)	<1% dry weight basis	TMECC 3.08-A
Chemical contaminants	Meet or exceed US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3 levels:	
Arsenic	< 41 ppm	TMECC 4.06-AS
Cadmium	< 39 ppm	TMECC 4.06-CD
Copper	< 1,500 ppm	TMECC 4.05-CU
Lead	< 300 ppm	TMECC 4.06-PB
Mercury	< 17 ppm	TMECC 4.06-HG
Molybdenum	< 75 ppm	TMECC 4.05-MO
Nickel	< 420 ppm	TMECC 4.06-NI
Selenium	< 100 ppm	TMECC 4.06-SE
Zinc	< 2,800 ppm	TMECC 4.06-ZN
Biological contaminants (pathogens)	Meet or exceed US EPA Class A standard, 40 CFR § 503.32(a) levels:	
Fecal coliform	< 1,000 MPN per gram, dry weight basis	TMECC 7.01

Table 1

4.0 Maintenance.

4.1 The Amended Soils shall be free of all damages. All debris and sediments shall be removed prior to a final inspection. A final inspection will be completed by both MSD and the City prior to acceptance.

5.0 Method of Measurement.

5.1 Measurement of installing amended soils will be made to the nearest Square Foot (SF).

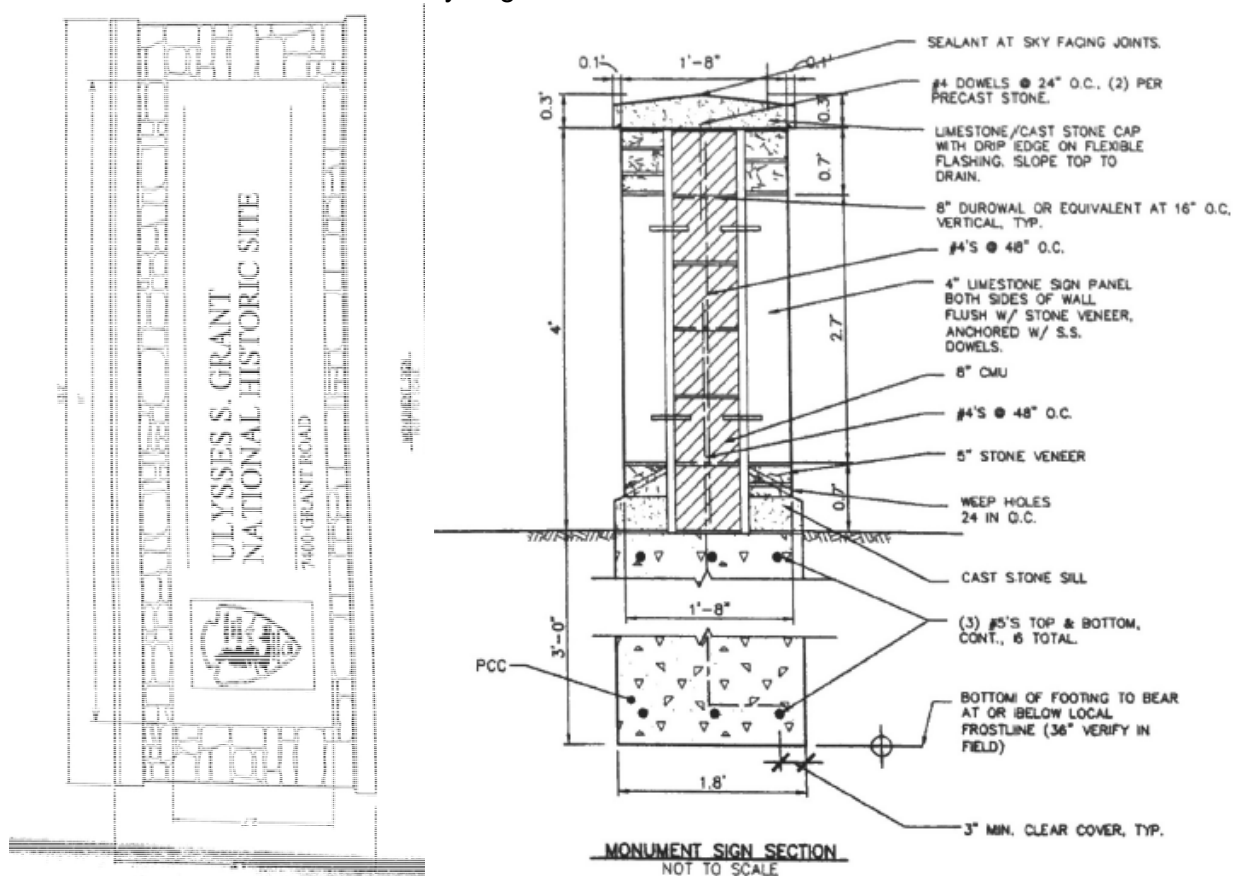
6.0 Basis of Payment.

6.1 Payment for installing amended soils will be made per square foot at the fixed unit price for AMENDED SOILS and will include all materials and labor necessary to properly install.

M. ENTRANCE SIGN

1.0 Description

1.1 This work shall consist of furnishing and installing an entrance sign as shown below. Size, materials and construction shall be similar to that located at Ulysses S. Grant National Historic Site. Exact location to be determined by engineer in the field.



1.2 Dimensions.

- Overall Dimensions: 13'-2" Long x 4'-4" Tall
- Sign Panel Dimensions: 11' Long x 2'-8" Tall
- Letter Height: 7"

2.0 Construction Requirements.

2.1 Sign shall be similar in nature to size and materials to that located at Ulysses S. Grant National Historic Site.

2.2 Sign foundation and structure shall be designed and sealed by a licensed engineer.

2.3 All products must be made in the USA and meet all Buy America requirements.

2.4 Verbiage and logo to display on the sign panel shall be provided by the City.

2.5 Exact location and orientation of the sign shall be provided by the City.

3.0 Submittal Requirements

3.1 Contractor shall submit drawings showing all key dimensions and materials, specific to the installation of the sign.

3.2 Contractor is required to submit materials to the engineer for approval.

3.3 Contractor shall submit final sign face design for Grantwood Village to the engineer for approval. The submittal shall describe fonts, colors, materials and exact sign wording and graphics.

4.0 Method of Measurement.

4.1 No measurement will be made.

5.0 Basis of Payment.

5.1 Payment for constructing ENTRANCE SIGN shall be made at the unit price, Lump Sum, and will include all materials and labor necessary to properly construct the entrance sign.

N. GEOSYNTHETIC INTERLAYER SPECIFICATION FOR HIGHWAY APPLICATIONS JSP-04-01

1.0 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.

2.0 Material.

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

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.

2.1.2 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.

2.2 Clean Sand. Clean sand shall be sand meeting Sec 1005.2 or a washed sand meeting the approval of the engineer.

3.0 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.

4.0 Construction Requirements.

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.

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.

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.

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.

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.

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.

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.

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.

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).

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.

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.

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.

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.

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.

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.

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.

5.0 Method of Measurement. Measurement for furnishing and installing the geosynthetic interlayer will be made to the nearest square yard (m²) of pavement specified to be covered. No measurement shall be made for this item where it occurs in OPTIONAL PAVEMENT.

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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No separate payment shall be made for this item where shown as part of OPTIONAL PAVEMENT.

Appendix A: Geosynthetic Material

1.0 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.

2.0 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.

3.0 Material.

3.1 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.

4.0 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 (m²) 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.

5.0 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.

5.1 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.

5.2 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.

O. PAVEMENT REPAIR

1.0 Description. This work shall consist of sawcutting, removing existing pavement and placing bituminous base material (PG64-22), as directed by the engineer. Total quantity has been estimated. Exact limits will be identified after asphalt milling operations is complete.

2.0 Construction Requirements. Contractor shall shall sawcut, remove existing pavement structure, place 6 inches of Type 5 Aggregate base, and place 8 inches of bituminous base. The surface grade of the bituminous base material, after compaction, shall be flush with existing milled surface prior to any surface leveling and overlay courses.

3.0 Method of Measurement.

3.1 Measurement of removing and PAVEMENT REPAIR will be made to the nearest Square Yard (SY).

4.0 Basis of Payment.

5.1 Payment for removing and constructing pavement will be made per square yard at the fixed unit price for PAVEMENT REPAIR and will include all materials and labor necessary to properly construct pavement.

P. SWPPP, CONTRACTOR PROVIDED

1.0 Description. This work shall consist of providing a Storm Water Pollution Prevention Plan.

2.0 Construction Requirements. Contractor shall determine the method and means by which the work is complete, consistent with the erosion control plan. Contractor shall provide a SWPPP consistent with the erosion control plan. Any best practices utilized by the contractor shall be located within the disturbance limits shown on the plans.

3.0 Method of Measurement.

3.1 No measurement will be made.

4.0 Basis of Payment.

4.1 Payment for providing SWPPP, CONTRACTOR PROVIDED shall be made as a Lump Sum, and will include all materials and labor necessary to provide the SWPPP.

Q. DECORATIVE POLE AND LUMINAIRE FIXTURE

1 Description.

1.1 This work shall consist of furnishing and installing decorative poles and luminaires as shown in the plans and in accordance with applicable portions of Division 901 and 1091 of the Standard Specifications, and specifically as follows.

- 1.2 All products must be made in the USA and meet all Buy America requirements. Luminaire and Pole shall be made by the same company to ensure quality and compatibility. Manufacturer shall also have its NVLAP Certificate of Accreditation to ISO/IEC 17025:2005 with the scope of Energy Efficient Lighting Products. Luminaire must be tested by a NVLAP certified testing facility with the ability to be recognized as a third-party lab. The manufacturer must also be ISO 9001:2008 certified.

All poles shall be direct embedded prestressed concrete poles and shall come with a Lifetime Warranty. All qualifying manufacturers shall have a minimum 20 years experience in the manufacture of prestressed concrete poles. All manufacturers must have CSA plant certification. All products must be made in the USA and meet all Buy America requirements.

- 1.3 The 12' prestressed concrete pole shall match the appearance that is shown on the plans. The pole shall be 12' above grade and shall have a round tapered 10 fluted shaft extending to the top of the pole which shall have a 5 1/2" diameter top size. The base shall be round and shall measure 18" diameter. The embedded portion of the pole shall be no less than 10" diameter and extend a minimum of 4'6" into the ground. The pole shall be designed to support a single post top acorn luminaire.
- 1.4 Poles shall be prestressed and the concrete placed by the centrifugal spinning process. The centrifugal spinning is to insure both a minimum 28-day compressive strength of 8,000 psi and a minimum of 3/4 inch cover over the prestressing strand.
- 1.5 All cable entry holes shall be in accordance with the location and sizes as required by the buyer and shall be free from sharp edges for passages of electrical wiring.
- 1.6 Two 2.5" x 5" conduit entrance openings centered 18" below grade are required.
- 1.7 A Handhole frame with cover centered 12" above grade is required.
- 1.8 All poles shall be provided with a fish wire to facilitate cable installation.
- 1.9 The wire raceway from the apertures to the Handhole shall be 3" PVC conduit for ease of installation.
- 1.10 An aluminum nameplate cast into the wall of the pole approximately 6" above the ground line for identification is required.
- 1.11 Manufacturer shall warrant the pole to be free of defect in materials and workmanship for the intended lifetime of the product.
- 1.12 Pole color shall be confirmed and approved by the Engineer.
- 1.13 Banner Arms are required as shown on the plans.

2 Design.

- 2.1 Poles shall be designed considering application of wind load and dead load per AASHTO LTS-6-2013
- 2.2 The moment at any point along the length of the pole is the sum of the moments resulting from dead loads and forces from wind loads. The wind force is equal to the wind pressure multiplied by the effective projected area (EPA) of the object that it is blowing against
- 2.3 Stress in the concrete due to prestressing shall be within the following limits:

fpc _ 8000 psi (55 mpa). Concrete strengths to be tested daily by a certified concrete testing technician. All low strength occurrences shall be investigated and documented for future reference.
- 2.4 Destructive testing of structures per ASTM and CSA guidelines is to be completed annually on similar sized structures as verification of actual strength versus theoretical design strength. Testing to be witnessed and verified by an independent consultant. All testing data to be made available to the owner upon request.
- 2.5 The P4 light engine shall include an array of Cree X-Series high power LEDs (light emitting diodes). The emitters shall be mounted to a metal core circuit board using SMT technology. The LEDs and circuit boards shall then be mounted to a high-performance heat sink.
- 2.6 External light control shall consist of high precision refractive lenses mounted above the LED emitter arrays in such a way to achieve optimum up light control. The lenses shall also control horizontal light distribution so that a Type III, IESNA distribution pattern is achieved.
- 2.7 All LED light sources must be part of a "dark sky" system facing downward and no "screw-in" style lamps or 3rd party LED systems that are not manufactured by the same company as the Luminaire will be accepted.
- 2.8 Color Temperature shall be 3000K CCT, and light properly controlled for the environment and safety.

3 Material.

- 3.1 Concrete- The concrete shall achieve a minimum 28 day compressive strength of 8,000 psi. Cement shall conform to the latest requirements of Type I/II Portland Cement in accordance with ASTM-C150. Maximum size aggregate may be $\frac{3}{4}$ inch (19mm) or $\frac{3}{4}$ of the clear spacing between reinforcing steel and surface of pole. Any water reducers, retarders, or accelerating admixtures shall conform to ASTM-C494. Water shall be free from foreign materials in amounts harmful to concrete and embedded steel.
- 3.2 Reinforcing Steel- Deformed steel reinforcement shall conform to requirements of ASTM-A615 for Grade 60 Rebar. All steel must be milled in USA.
- 3.3 Prestressing Steel- Prestressing steel reinforcement shall conform to uncoated 7-wire, stress

relieved strand; ASTM-A416. All steel must be milled in USA.

- 3.4** Spiral Reinforcement- Steel spiral reinforcement shall conform to the requirements of ASTM-A82 and shall not be less than .080" inch diameter. The pitch of the spiral steel shall not be greater than 3.2 inch or the radius of the pole whichever is less.
- 3.5** Hardware- All structural steel shall conform to ASTM-B36 and zinc alloy AC41A shall conform to ASTM-B240
- 3.6** Electrical Ground- All poles will be supplied with a #6 stranded copper ground wire that is located within a handhole opening located 1' - 3' above grade level. The handhole box and coverplate shall be cast aluminum.
- 3.7** All pigments used shall be non-fade iron or chromium oxides. Course aggregate shall be washed well graded limestone, granite or marble.
- 3.8** All poles to be finished with a coat of non gloss silane sealer. Any deviation from these material requirements and finishing process must sub-mitted in detail to the owner for consideration.
- 3.9** Luminaire Assembly: All cast components (including optional ring and struts) shall consist of a heavy grade A319 cast aluminum. The main body, or capital, acts as an enclosure for the ballast assembly and is of adequate thickness to give sufficient structural rigidity. The capital shall have an opening at the base tenon body to allow the luminaire to be mounted to a tenon of 3-1/2" maximum diameter. The luminaire shall be locked in place by means of heavy duty, stainless-steel set-screws. The fixture EPA shall not exceed 1.80 sq. ft. and the weight of the fixture shall not exceed 40 lbs.
- 3.10** Luminaire Globe Assembly: The protective globe shall be molded of either; rippled polycarbonate Miles Makrolon GP/OP Thermo- Plastic Polymer, or equivalent, or rippled acrylic Acrylite Plus Acrylic Polymer, or equivalent, having a minimum thickness of 0.125". The globe assembly is a self-contained unit consisting of the globe, rugged cast locking ring, and the LED light engine and optical control. The LED light engine is of a modular design, and can be quickly removed from the globe assembly. The globe assembly is secured to the main housing by means of a spring-tensioned, twist-locking Rotolock™ unit to allow tool-less removal of the globe, while maintaining a secure seal between the globe assembly and the main body of the luminaire, making the luminaire suitable for an outdoor environment. High performance protection against water or dust particle ingress is available by means of a non-porous, closed-cell silicon rubber o-ring gasket which is highly efficient in sealing against particle ingress over a wide temperature range (-40°F to 310°F).
- 3.11** Luminaire Driver: The LED universal dimmable driver will be class 2 and capable of 120 - 277V or 347 - 480V input voltage, greater than 0.9 power factor, less than 20% total harmonic distortion and feature ambient temperature range of -35°C up to 65°C. Each LED system comes with a standard surge protection designed to with-stand up to 20KA/10Kv of transient line surge as per IEEE C62.41.2 C High. The driver assembly will be mounted on a heavy duty fabricated

galvanized steel bracket to allow complete tool-less maintenance.

- 3.12 Luminaire Performance:** The P4 LED engine shall be 75 nominal watts with a minimum delivered luminous flux of 7225. This equates to an efficacy of 99 lms/ watt while utilizing the Cree XPL series of diode. The BUG Rating shall be B2-U3-G2.
- 3.13 Lumen Maintenance:** Reported (TM21) and Calculated (L70) reports are available upon request with a minimum calculated value of 100,000 hrs.
- 3.14 Thermals:** Fixtures tested by a DOE sanctioned test facility to determine the maximum in-situ solder-point or junction-point temperatures of the LED emitters. This report shall be available upon request.
- 3.15 Luminaire Wiring:** All internal wiring and connections shall be completed so that it will be necessary only to attach the in-coming supply connectors to Mate-N-Lok connectors or to a terminal block. Mate-N-Lok shall be certified for 600V operation. Internal wire connectors shall be crimp connector only and rated at 1000V and 150°C. All wiring to be CSA certified and/or UL listed, type SFF-2, SEWF-2, or SEW-2 No. 14 gauge, 150°C, 600V, and color coded for the required voltage.
- 3.16 Luminaire Finish:** Housing is finished in Natural Etched Aluminum color.
- 3.17 Luminaire Warranty:** The complete LED system and Luminaire shall come with a minimum 7 year warranty.

4.0 Manufacturing

- 4.1** All manufacturing tolerance, details of reinforcement, and finishes shall be in accordance with the Guide Specification for Prestressed Concrete Poles.
- 4.2** A concrete cylinder test shall be performed for each 100 cubic yards of concrete poured. A final quality control check shall be carried out on each pole after manufacturing is complete. All quality control procedures shall be mandated in a written manual and be available for inspection. The process as defined in ASTM C1088-89 and CSA A14-00 shall be followed to ensure long term product durability.

5.0 Handling and Erection

- 5.1** Prestressed concrete poles shall be lifted and supported during manufacturing, stockpiling, transporting and erection operations only at the points shown on the shop drawings.
- 5.2** Transportation, site handling, and erection shall be performed with acceptable equipment and methods, and by qualified personnel.

6.0 Submittal Requirements

- 6.1** Contractor shall submit shop drawings showing all key dimensions and materials, specific to the

installation on this project.

7.0 Method of Measurement.

- 7.1** Measurement of decorative pole and luminaire fixtures, including all required equipment, labor, material, hardware, internal wiring and connections, and other incidental work necessary for the fabrications and installation for a fully functional street light, will be made per each as a complete item.

8.0 Basis of Payment.

- 8.1** This work will be paid for at the contract unit price for **Decorative Pole and Luminaire Fixtures**, per each, which price shall be payment in full for satisfactory installation at the locations shown on the plans. No direct payment will be made for any incidental items necessary to complete the work unless specifically provided as a pay item in the contract.

R. SPECIAL COMBINATION PAD MOUNTED POWER SUPPLY / LIGHTING CONTROL STATION, 240V

2 Description.

- 3.1** This work shall consist of furnishing and installing a special combination pad mounted power supply / lighting control station as shown in the plans and in accordance with applicable portions of Division 901 and 1091 of the Standard Specifications, and specifically as follows. In addition to the power supply and control station, a cellular street lighting monitoring system shall also be installed and configured for operation in the cabinet.

- 3.2** The power supply and control panel assembly shall consist of all equipment mounted in a single cabinet as shown on the plans. The configuration and installation of the equipment mounted on the assembly shall meet the safety requirements and approval of the utility company furnishing power for operation. All contractor provided meter boxes and disconnect boxes shall be constructed of galvanized steel, aluminum or stainless steel. All hinges, catches and other hardware shall be non-ferrous metal or stainless steel.

- 4 Standards.** The control station and power supply shall be of Type 3R rainproof construction and shall be UL Listed as "Enclosed Industrial Control Equipment" (UL 508A).

5 Material.

- 8.2** Cabinet exterior shall be manufactured from galvanized and powder coated steel.

- 3.1.1** Powder coat shall be polyurethane industrial grade powder paint with dry film thickness of 1.7 mil minimum.

- 3.1.2** Color shall be selected by the Owner.

- 3.2** All fasteners including piano hinges shall be stainless steel. Fasteners shall only be removable

from the inside of the unit.

- 3.3 A cellular street light monitoring system shall be installed inside the cabinet as shown on the plans. This device shall act as the communication and control of the system and shall meet the following requirements:
 - 3.3.1 Web based interface for scheduling, override, and monitoring.
 - 3.3.2 Monitoring shall include provisions for detection of energized or de-energized circuits, failed lights, damage or theft to load wiring.
 - 3.3.3 Cellular data service for remote access from any PC or smart phone/device.
 - 3.3.4 Photocell input.
 - 3.3.5 Internal time clock that can be remotely scheduled.
 - 3.3.6 System to operate in temperatures -40 degrees C to +85 degrees C.
 - 3.3.7 System to have an internal battery backup.
 - 3.3.8 System able to send text and/or email alerts when parameters are out of range.
 - 3.3.9 An antenna may be required to be mounted on the cabinet, if specified by the manufacturer (no direct payment will be made for the antenna, if it is required).
- 4 **Construction.** Unit shall be supplied with the following features:
 - 4.1 Completely wired at the factory using 600 volt wire sized to NEC and UL requirements.
 - 4.2 Separate utility termination and metering compartment.
 - 4.3 Isolated customer power distribution and control compartment.
 - 4.4 Each compartment shall have a pad lockable hasp. The utility compartments shall have the required Ameren Missouri sealing provisions.
 - 4.5 Unit shall be anchored to a concrete footing with use of embedded mounting base and anchor bolts. Anchoring hardware shall only be accessed from inside unit with no outside exposure.
 - 4.6 Main circuit breaker minimum interrupting 10kA AIC rated 120/240 volt 1 phase
 - 4.7 Branch circuit breakers 10kA AIC series rated with main circuit breaker.
 - 4.8 Copper 2 circuit load center
 - 4.9 A photoelectric cell shall be provided in accordance with Sec 1091. The photoelectric cell shall be mounted on the control station such that all lanterns within the system operate simultaneously and shall illuminate only during hours of darkness or low visibility. Photo control shall look out a break resistant window on the right side of the unit. The window shall be protected with a light shield.
 - 4.10 Hand – Off – Auto (HOA) test switch for light control and testing
 - 4.11 Copper Ground and neutral bus bar

5 Utility Compartments.

- 5.1 Termination compartment shall be enclosed. Landing lugs shall be located behind a lift off cover with a fixed handle. The utility landing lugs shall accommodate #6-350 kcmil conductors, copper or aluminum.
- 5.2 The meter compartment shall hold a meter socket that meets Ameren Missouri specifications. It shall be located behind a hinged hood with a meter viewing window. A fixed handle shall be provided to open the hood. The entire meter shall be exposed when the hood is in the open position. The front of the hood shall be supplied with a name plate containing UL and manufacturer's product information.

6 Customer Compartment

- 6.1 Exterior door shall be supplied with stainless steel piano hinges allowing the door to swing open 130 degrees. There shall be an open door keeper and a stainless steel door latch/ hasp for pad locking the door closed. The inside of the door shall have a print pocket for 8" x 11" circuit directories and project plans.
 - 6.2 Control equipment shall be installed behind a dead front door that is hinged on the same side as the exterior door. Door closure shall be by a ¼ turn latch. All parts that can be seen when this door is in the closed position shall have engraved or permanent labels.
 - 6.3 All parts and equipment shall be mounted on a back panel.
- 7 **Controller Base.** Concrete base for controller shall be constructed as shown on the plans. The apron will be considered part of the controller base. A minimum of four anchor bolts shall be used. The size of anchor bolts for controller cabinets shall be as specified by the cabinet manufacturer. A ground rod shall be placed into the ground with a minimum of 10 feet of earth contact as shown on the plans. Conduit shall extend above controller base no more than one inch. All conduit openings in the controller cabinet shall be sealed with a pliable duct sealant in accordance with Sec 901.15 after wiring is completed.

8 Method of Measurement.

- 8.1 Measurement of special combination pad mounted power supply / lighting control station, including all required equipment, cellular street light monitoring system, concrete base and apron, steel conduit from power supply to utility service, labor, material, hardware, internal wiring and connections, ground rod, and other incidental work necessary for the fabrications and installation of the power and control assembly will be made per each as a complete item.

9 Basis of Payment.

- 9.1 This work will be paid for at the contract price unit price for **Special Combination Pad Mounted Power Supply / Lighting Control Station, 240V**, which price shall be payment in full for satisfactory installation at the location shown on the plans. No direct payment will be made for any incidental items necessary to complete the work unless specifically provided as a pay item in the contract.

9.2 No direct payment will be made for warranties.

9.3 There will be no direct payment for the following requirements:

9.3.1 Contractor shall set up the operation of the cellular street light monitoring system. This includes setting up the web based monthly service for the City (actual monthly fee to be paid for by the City).

9.3.2 Contractor shall assist on installation of at least two smart phone/device and/or PC set-ups for City.

9.3.3 Contractor shall give a full demonstration on site to the City of the cellular street light monitoring system. This includes showing how to operate the system remotely on a smart phone/device or PC and showing how to operate the physical system on site.

9.3.4 The Contractor shall be required to coordinate with Ameren for connection to their pole for service to the new power supply.

S. **ADD ALTERNATES**

1.0 Description. This contract requires bidders to bid on additional contract work that will be considered for award. The award of this project does not guarantee work for all add alternate sections.

Routes	Proposal Section Description
Grant Road – Widening, grading, overlay, drainage, signage, and lighting	Base
Grant Road - Lighting	Add Alternate 1
Grant Road - Lighting	Add Alternate 2

Note: See plans for a breakdown of all quantities for each add alternate section.

2.0 Consideration of Bids. The contractor shall submit a bid for each add alternate section. The City reserves the right to award, to the lowest responsible bidder, the combination of base plus add alternate sections that will allow the most work to be completed within the City's budget of \$891,000. If the City chooses to exercise this right, the award of add alternate sections will be selected in accordance with the following priorities:

1. Base + Add Alt 1 + Add Alt 2
2. Base + Add Alt 1
3. Base

2.1 The City reserves the right to award the combination of highest priority add alternate sections over the City's budget as long as the low bidder does not change and the award of the combination

of highest priority alternate sections does not exceed more than ten percent or \$250,000 of the City's budget, whichever is less.

2.2 The City's budget is the basis for award of add alternates but not the basis for award of the base section. The base section of the contract will be awarded or rejected in accordance with Sec 100.

2.3 The awarded bidder will be notified, on MoDOT's website, of the City's selection of the combination of add alternate sections to be awarded the day of the City meeting.

3.0 Bid Bond Requirements. The contractor shall be required to obtain a bid bond for 5% of the total bid amount for the base bid and all add alternates. This bid bond will be considered applicable to the proposed work for any option.

4.0 DBE Goal. The DBE contract goal percentage specified in the Request for Bid applies to work completed for the base bid and all add alternates. The DBE contract goal percentage will be considered applicable to the proposed work for any add alternate section that is awarded.

4.1 The bidder shall submit the completed "DBE Identification Submittal" information in accordance with the bid documents for the total DBE participation percentage for the base bid and all add alternates.

4.2 If the contract is awarded for less than the maximum total of all add alternates, the awarded bidder shall submit a modified "DBE Identification Submittal" form for the proportionately reduced work with the executed contract documents after award. The modified "DBE Identification Submittal" form shall specify the DBE firm(s) to be used to meet the DBE participation percentage identified in the bid submittal for the proportionately reduced work of the awarded add alternates.

4.2.1 With submittal of the modified "DBE Identification Submittal" form, the awarded bidder is not allowed to eliminate any DBE firm(s) previously identified to complete items of work for the awarded add alternates. The awarded bidder is only allowed to proportionately reduce the participation of previously identified DBE firm(s) on awarded add alternates or eliminate previously identified DBE firms for add alternates that were not awarded.

4.2.2 The failure of the awarded bidder to submit the modified "DBE Identification Submittal", listing actual, committed DBE participation percentage equal to or greater than the DBE participation percentage specified in the bid for all add alternates, may result in the bid being declared non responsive and may result in forfeiture of the bid surety bond or bid guaranty from the bidder.

T. OPTIONAL PAVEMENTS JSP 06-06G

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

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

2.1 No additional payment will be made for asphaltic concrete mix quantities to construct the required 1:1 slope along the edge of the pavement, or for tack applied between lifts of asphalt.

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

2.3 The grading shown on the plans was designed for the thinner pavement option. For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional pavements. The concrete option shall include the use of System A Geosynthetic Interlayer along the joint between concrete and existing asphalt pavement. No additional payment will be made for System A Geosynthetic Interlayer.

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

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

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

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 401-99.05, Optional Pavement, per square yard.

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

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

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

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

2.1 The ADA Checklist is intended to be a helpful tool for the contractor to use during the construction of the pedestrian facilities and a basis for the City's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's

Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

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

3.0 Coordination of Construction.

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

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

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

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

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

5.0 Basis of Payment. The contractor will receive full pay of the contract unit cost for all sidewalk, ramp, curb ramp, median, island, approach work, cross walk striping, APS buttons, pedestrian heads, detectable warning systems and temporary traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

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

