

ARKANSAS STATE HIGHWAY COMMISSION

PROPOSAL DOCUMENTS

FOR THE CONSTRUCTION OF

STATE JOB NO. 061922

FEDERAL AID PROJECT VRU-9210(58) & HSIP-9210(58)

HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

STATE HIGHWAY 7 & 70B SECTION 9 & 9B

IN GARLAND COUNTY

Bound herein are the Supplemental Specifications, Special Provisions, Proposal Documents and Schedule of Items applicable to this proposed construction contract.

Applicable to this proposed construction contract, but not bound herein, are the Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 2014, and the Construction Plans.



CAUTION TO BIDDERS

Please review Section 102 of the Standard Specifications, 2014 Edition for Bidding Requirements and Conditions. Mistakes or omissions can be costly. Important items for you to check are included in, but not limited to, those listed below. This checklist is furnished only to assist you in submitting a proper bid. Check as you read.

- ☐ Have you contacted ARDOT (pmd@ardot.gov or 501-569-2261) to become an eligible bidder? This is required to submit a bid in the letting and must occur by 4:30pm the day prior to the letting.
- ☐ Have you acknowledged all Addenda by email or fax?
- ☐ Is the unit price entered appropriate for the item?
- ☐ Have you entered a unit price for each bid item except in the case of authorized alternate pay items? (A zero bid (\$0.00) is a valid price and will be considered.)
- ☐ Have you checked the Schedule of Items for various pay items that may have a minimum or maximum unit bid price? (Refer to the Standard Specifications for further information concerning these items)
 - ✓ Asphalt Binder
 - ✓ Relocating Precast Concrete Barrier
 - ✓ Water
 - ✓ Mobilization
- ☐ Have you limited your bid for Mobilization to five percent (5%) of the subtotal?
- ☐ For Federal-aid projects, did you complete the Certification for Federal aid Contracts?
- ☐ Prior to submitting your bid, did you check for error messages, and are all the folders "green"?
- ☐ If submitting a paper copy of the Proposal Guaranty (Bid Bond) is it signed by an officer of your company **AND** the Surety Agent?
- ☐ Did you ensure your Proposal Guaranty (if you are submitting a paper bond) will arrive prior to the time and date stated on Page 2 of the Proposal Documents?

1-17-08
Revised: 6-1-09
Revised: 2-15-12
Revised: 1-15-15
Revised: 5-26-16
Revised: 11-17-17
Revised: 7-5-23
Revised: 8-4-25
Revised: 12-18-25
Revised: 9-24-26

Arkansas Department of Transportation

Notice of Nondiscrimination

The Arkansas Department of Transportation (ARDOT) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, ARDOT does not discriminate on the basis of race, sex, color, age, national origin, religion (not applicable as a protected group under the FMCSA Title VI Program), or disability in the admission, access to and treatment in ARDOT's programs and activities, as well as ARDOT's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding ARDOT's nondiscrimination policies may be directed to the Civil Rights Division at P.O. Box 2261, Little Rock, AR 72203, (501) 569-2298, (Voice/TTY 711); or Civil.Rights@ardot.gov.

Free language assistance may be available upon request.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape, and in Braille.

TITLE VI CONTRACT PROVISIONS

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

(1) Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- (a) Withholding of payments to the contractor under the contract until the contractor complies, and/or
- (b) Cancelling, terminating or suspending a contract, in whole or in part.

(6) Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

TITLE VI CONTRACT PROVISIONS

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC§ 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681et seq).

Arkansas Department of Transportation
Supplemental Specifications and Special Provisions Listing
State Job Number 061922

The following supplemental specifications and special provisions for this project supplement the standard specifications, edition of 2014. In case of conflict, the supplemental specifications and special provisions shall govern.

ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
JOB SP	CARGO PREFERENCE ACT REQUIREMENTS
JOB SP	PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB SP	BUY AMERICA - CONSTRUCTION MATERIALS
JOB SP	VENDOR REGISTRATION REQUIREMENT
JOB SP	DOCUMENTATION OF PAYMENTS MADE – PROMPT PAYMENT (SIGNET)
JOB SP	BIDDING REQUIREMENTS AND CONDITIONS
JOB SP	MANDATORY ELECTRONIC CONTRACT
JOB SP	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB SP	ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC
JOB SP	LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB SP	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
JOB SP	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB SP	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB SP	PRICE ADJUSTMENT FOR FUEL
JOB SP	ASPHALT MIXTURES WITH PG 76-22 BINDER
JOB SP	WARM MIX ASPHALT
JOB SP	COLD MILLING - COUNTY PROPERTY
JOB SP	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB SP	MAINTENANCE OF TRAFFIC
JOB SP	SURFACE-APPLIED DETECTABLE WARNING PANELS
JOB SP	ACTUATED CONTROLLER
JOB SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB SP	CABINET DRAWER ASSEMBLY
JOB SP	PASSIVE PEDESTRIAN DETECTION SYSTEM
JOB SP	IN-ROAD WARNING LIGHT SYSTEM
JOB SP	RECTANGULAR RAPID FLASHING BEACON (RRFB)
JOB SP	RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

Arkansas Department of Transportation
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JOB SP	SYSTEM LOCAL CONTROLLER (E-NET)
JOB SP	LED BLANK OUT SIGN
JOB SP	RETROREFLECTIVE BACKPLATES
JOB SP	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB SP	PEDESTRIAN SIGNAL HEAD RELOCATION
JOB SP	ACCESSIBLE PEDESTRIAN SIGNAL (APS)
JOB SP	EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN
JOB SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB SP	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB SP	LED ROADWAY ILLUMINATION POLE
JOB SP	LED LUMINAIRE ASSEMBLY (BUG UO TYPE)
JOB SP	LED TRAFFIC SIGNAL HEAD
JOB SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB SP	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB SP	PEDESTAL TYPE SERVICE POINT ASSEMBLY
JOB SP	IMPRINTED AGGREGATE REINFORCED PREFORMED THERMOPLASTIC PAVEMENT MARKING SYSTEM
JOB SP	VIDEO DETECTOR ROTATION
JOB SP	VIDEO DETECTION SYSTEM
JOB SP	SHORING FOR CULVERTS
JOB SP	AIRPORT CLEARANCE REQUIREMENTS
JOB SP	PRIME CONTRACTOR PERFORMANCE EVALUATION
JOB SP	PARTNERING REQUIREMENTS
JOB SP	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB SP	VALUE ENGINEERING
JOB SP	UTILITY ADJUSTMENTS
SP 108-1	LIQUIDATED DAMAGES
SS 100-3	CONTRACTOR'S LICENSE
SS 100-4	DEPARTMENT NAME CHANGE
SS 102-2	ISSUANCE OF PROPOSALS
SS 102-3	PREQUALIFICATION OF BIDDERS
SS 103-2	CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
SS 105-4	MAINTENANCE DURING CONSTRUCTION
SS 107-2	RESTRAINING CONDITIONS
SS 108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
SS 210-1	UNCLASSIFIED EXCAVATION
SS 306-1	QUALITY CONTROL AND ACCEPTANCE

Arkansas Department of Transportation
Supplemental Specifications and Special Provisions Listing
State Job Number 061922

The following supplemental specifications and special provisions for this project supplement the standard specifications, edition of 2014. In case of conflict, the supplemental specifications and special provisions shall govern.

SS 400-1	TACK COATS
SS 400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
SS 400-5	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
SS 400-6	LIQUID ANTI-STRIP ADDITIVE
SS 400-7	TRACKLESS TACK
SS 404-3	DESIGN OF ASPHALT MIXTURES
SS 409-2	ASPHALT LABORATORY FACILITY
SS 410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
SS 410-2	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
SS 410-4	EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
SS 416-1	RECYCLED ASPHALT PAVEMENT
SS 501-3	PORTLAND CEMENT CONCRETE PAVEMENT
SS 502-1	WELDED WIRE REINFORCEMENT
SS 505-1	PORTLAND CEMENT CONCRETE DRIVEWAY
SS 600-2	INCIDENTAL CONSTRUCTION
SS 603-1	LANE CLOSURE NOTIFICATION
SS 604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
SS 604-3	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
SS 620-1	MULCH COVER
SS 621-1	FILTER SOCKS
SS 632-1	CONCRETE ISLAND
SS 633-1	CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
SS 634-1	CURBING
SS 700-2	TRAFFIC CONTROL FACILITIES
SS 723-1	GENERAL REQUIREMENTS FOR SIGNS
SS 729-1	CHANNEL POST SIGN SUPPORT
SS 802-5	CONCRETE FOR STRUCTURES

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS

Errors noted in the printed book of Standard Specifications for Highway Construction, Edition of 2014, are listed below and this publication is hereby revised as follows:

- Page 124: The third sentence of the first paragraph of Subsection 110.03(c) should read: The Engineer will make a decision within 10 business days concerning the necessity or practicability of the request.
- Page 195: The sixth paragraph of subsection 303.02 should read: For Classes 1 through 8 materials, the fraction passing the #200 (0.075 mm) sieve shall not be greater than three-fourths of the fraction passing the #40 (0.0425 mm) sieve. For Classes 3 through 8, the fraction passing the #40 (0.425 mm) sieve shall have a liquid limit not greater than 25.
- Page 363: In the second paragraph of Subsection 502.02, the reference to ASTM 775 should be replaced by “ASTM A 775”.
- Page 636: In the second paragraph of Subsection 730.02, the references to AASHTO M 183 should be replaced with ASTM A36.
- Page 637: The last sentence of the second paragraph of Subsection 730.03 should read: All bolts, nuts, and washers shall be galvanized according to AASHTO M 232 or ASTM B 695, Class 40 or 50.
- Page 767: In the fourth paragraph of Subsection 807.06(a), the reference to ASTM B595 should be replaced by “ASTM B695”.
- Page 841: Subsection 817.04(a) should read: The treatment of lumber and timber shall meet the applicable requirements of the current edition of the AWP, Standards U1, Commodity Specification E, Use Category UC4C.

CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Davis-Bacon and Related Act Provisions
- IV. Contract Work Hours and Safety Standards Act Provisions
- V. Subletting or Assigning the Contract
- VI. Safety: Accident Prevention
- VII. False Statements Concerning Highway Projects
- VIII. Implementation of Clean Air Act and Federal Water Pollution Control Act
- IX. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- X. Certification Regarding Use of Contract Funds for Lobbying
- XI. Use of United States-Flag Vessels

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. Historically, contracting agencies using Federal-aid highway funds were required to ensure Form FHWA-1273 was physically incorporated into all contracts and subcontracts. Effective June 10, 2026, this requirement was eliminated [91 FR 25492]. Future use of Form FHWA-1273 is now optional on the part of the contracting agency using Federal-aid highway funds. FHWA continues to make Form FHWA-1273 available as a convenience to contracting agencies. Contracting agencies must continue to ensure compliance with the provisions cited in Form FHWA-1273 in accordance with the provisions regardless of the use of Form FHWA-1273. Accordingly, the contracting agency retains the authority to determine whether the contractor must use Form FHWA-1273 to physically incorporate required contract provisions in each subcontract and in lower tier contracts. Where permitted by the contracting agency, the contractor may choose other ways to include required contract provisions in each subcontract, besides incorporating Form FHWA-1273. Contract provisions in Form FHWA-1273 are not required to be physically included in subcontracts for design services on Federal-aid design-build contracts, or in purchase orders, rental agreements and other agreements for supplies or services.

The applicable provisions 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 or design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents.

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.

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION

The contractor and all subcontractors must comply with the following policies: 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract.

1. Assurances Required:

a. The requirements of 49 CFR Part 26, including any amendments thereto, and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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, including any amendments thereto, 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 recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E, including any amendments thereto, are incorporated by reference. 49 CFR Part 21.

III. 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in

paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

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

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(4) 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 will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. Fringe benefits not expressed as an hourly rate. 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. Unfunded plans. 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, in accordance with the criteria set forth in § 5.28, 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.

f. Interest. In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. Withholding requirements. The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered

necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. Priority to withheld funds. The Department has priority to funds withheld or to be withheld in accordance with paragraph 2.a. of this section or Section IV, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its repurchase costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number

of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must 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.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 [29 CFR part 3](#); and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

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

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with [29 CFR part 30](#), including any amendments thereto.

c. 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 III. 23 CFR 230.111(e)(2). 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 journeyworkers 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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs (1) through (11) of this section, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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 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 [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

IV. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), 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 watchpersons 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. 29 CFR 5.5.

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 and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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.

* \$33 as of January 15, 2025 (See 90 FR 1859) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section III paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its procurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

V. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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" in paragraph 1. of this section 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: (based on longstanding interpretation)

(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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph 1. of this section 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. Pursuant to 23 CFR 635.116(c), 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. (based on longstanding interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however,

contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VI. 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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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).

VII. 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 Part 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 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

VIII. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

IX. 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. 2 CFR 180.220 and 1200.220.

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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

* * * * *

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 CFR 180.335;

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. 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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "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 recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers to 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

X. 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 Part 20, App. A.

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.

XI. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the

extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS** (40 U.S.C. sections 14501(d) and 14701
and the Appalachian Regional Commission Code as
authorized under 40 U.S.C. section 14302)

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 40 U.S.C. 14501 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.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS

Elsewhere in this contract are three Supplemental Specifications on Equal Employment Opportunity designated as PR-1273 Supplements. They are (1) Specific Equal Employment Opportunity Responsibilities (23 U.S.C. 140), (2) Equal Employment Opportunity - Goals and Timetables, and (3) Equal Employment Opportunity - Federal Standards. This notice is to clarify the responsibilities for review of compliance and enforcement for these separate supplemental specification requirements.

The first of the Supplemental Specifications cited above covers the requirements for the equal employment opportunity program under Title 23 for which the Arkansas Department of Transportation (ARDOT) is responsible. The ARDOT performs the necessary compliance review and enforcement of this Supplemental Specification which is applicable to all contractors holding Federal-aid highway contracts.

The latter two Supplemental Specifications are for the specific equal opportunity requirements for Executive Order 11246 which is the sole responsibility of the Office of Federal Contract Compliance Programs (OFCCP), Department of Labor. Review and enforcement under these Supplemental Specifications is performed by OFCCP.

OFCCP has, under Paragraph 8 of the EEO Federal Standards Supplemental Specification, recognized the Arkansas AGC Heavy Highway Affirmative Action Plan as meeting the provisions of that Supplemental Specification and Supplemental Specification (2) cited above. With this recognition, those contractors signatory to the AGC Plan have been waived from individual review by OFCCP. However, OFCCP retains the right to review any such contractors whenever circumstances warrant. Also, contractors non-signatory to the AGC Plan are subject to OFCCP review under EO 11246.

ARDOT and OFCCP have agreed to work towards eliminating duplicative reviews on individual contractors; however, each agency may make reviews at any time notwithstanding the cited agreement.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)**1. General.**

a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form FHWA-1273 and Supplements) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions. The initial measure of the contractor's good faith efforts to comply with these Special Provisions shall be its efforts to meet the goals set forth in the "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)" for minority and female participation expressed in percentage terms for the contractor's work force in each trade on this project.

b. The contractor will work with the Department and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

c. The contractor and all his/her subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy.

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, age, disability, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

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, color, religion, sex, age, disability, or national origin. 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, preapprenticeship, and/or on-the-job training.

3. Equal Employment Opportunity Officer.

The contractor will designate and make known to the Department contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy.

a. 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 equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity 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:

(1) 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 equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

(3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority and female employees.

b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

(1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment, and potential employees.

(2) The contractor's equal employment opportunity 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.

5. Recruitment.

a. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. 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 minority and female applicants, including, but not limited to, State employment agencies, schools, colleges, and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority and female applicants will be discussed with employees.

6. 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, age, disability, or national origin. 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 his 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 his avenues of appeal.

7. Training and Promotion.

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees and applicants for employment.

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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the Optional Training Special Provision is provided under this contract, this subparagraph will be superseded by that Special Provision.

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 minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. Unions.

If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an equal employment opportunity 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, age, disability, or national origin.

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 State Highway Department 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 minority and women 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, age, disability, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 Department.

9. Subcontracting.

a. The contractor's attention is called to the Special Provision on Disadvantaged Business Enterprises in Federal-Aid Highway Construction.

b. The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports.

a. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

(1) the number 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 to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force),

(3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and

(4) the progress and efforts being made in securing the services of Disadvantaged Business Enterprises or subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department and the Federal Highway Administration.

c. The contractors will submit an annual report to the State Highway 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 PR 1391.

11. Corrective Action Plans.

The contractor understands that a designated representative of the Department will periodically review compliance by the contractor with all contractual provisions incorporated pursuant to Executive Order 11246, as amended, and Federal Highway Administration Equal Employment Opportunity Special Provisions implementing the Federal-Aid Highway Act of 1968, where applicable.

In the event that the designated representative of the Department finds that the contractor has failed to comply with any of the aforementioned contractual provisions, he will notify the contractor of this finding in writing. A declaration of default will result in the suspension of all future payments. No declaration of default will be made if the Department and the contractor formally agree to enter into a corrective action plan setting out the specified steps and timetables the contractor will be contractually obligated to perform in order to re-establish his compliance. This corrective action plan, in order to be accepted by the Department, shall include the following mandatory enforcement language:

"If, at any time in the future, the Office of Federal Contract Compliance Programs or the Federal Highway Administration or the Arkansas State Highway Commission or their successor(s) believe that (name of contractor) has violated any portion of this agreement, (name of contractor) shall be promptly notified of the fact in writing. This notification shall include a statement of the facts and circumstances relied upon in forming that belief. In addition, the notification shall provide (name of contractor) with 15 days to respond in writing to the notification except where the Office of Federal Contract Compliance Programs, the Federal Highway Administration or the Arkansas State Highway Commission alleges that such delay would result in irreparable injury. It is understood that enforcement proceedings for violation of this agreement may be initiated at any time after the 15-day period has elapsed (or sooner if irreparable injury is alleged) without issuance of a show cause notice."

"It is recognized that where the Office of Federal Contract Compliance Programs and/or the Federal Highway Administration and/or the Arkansas State Highway Commission believes that (name of contractor) has breached this agreement, evidence regarding the entire scope of (name of contractor) alleged noncompliance from which this agreement resulted, in addition to evidence regarding (name of contractor) alleged violation of this agreement, may be introduced at the enforcement proceeding."

"Violation of this agreement may subject (name of contractor) to sanctions pursuant to the Arkansas State Highway Commission contract administration procedures. It is further recognized that liability for violation of this agreement may also subject (name of contractor) to sanctions set forth in Section 209 of Executive Order 11246, as amended, and/or appropriate relief."

The contractor will submit quarterly reports to the Department as a result of any deficiencies cited during an equal employment opportunity compliance review. The reports will indicate the affirmative action steps taken to correct the deficiencies. Instructions for submission of the reports will be furnished by the Equal Employment Opportunity Section.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES

NOTICE OF REQUIREMENT FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

MINORITIESCOUNTY

Arkansas	16.4%	Lee	26.5%
Ashley	16.4%	Lincoln	16.4%
Baxter	3.3%	Little River	19.7%
Benton	3.3%	Logan	6.6%
Boone	3.3%	Lonoke	16.4%
Bradley	16.4%	Madison	3.3%
Calhoun	16.4%	Marion	3.3%
Carroll	3.3%	Miller	19.7%
Chicot	16.4%	Mississippi	26.5%
Clark	16.4%	Monroe	16.4%
Clay	26.5%	Montgomery	16.4%
Cleburne	16.4%	Nevada	20.2%
Cleveland	16.4%	Newton	3.3%
Columbia	20.2%	Ouachita	16.4%
Conway	16.4%	Perry	16.4%
Craighead	26.5%	Phillips	26.5%
Crawford	5.6%	Pike	20.2%
Crittenden	32.3%	Poinsett	26.5%
Cross	26.5%	Polk	6.6%
Dallas	16.4%	Pope	16.4%
Desha	16.4%	Prairie	16.4%
Drew	16.4%	Pulaski	15.7%
Faulkner	16.4%	Randolph	26.5%
Franklin	6.6%	Saline	15.7%
Fulton	16.4%	Scott	6.6%
Garland	16.4%	Searcy	3.3%
Grant	16.4%	Sebastian	5.6%
Greene	26.5%	Sevier	20.2%
Hempstead	20.2%	Sharp	16.4%
Hot Spring	16.4%	Stone	16.4%
Howard	20.2%	St. Francis	26.5%
Independence	16.4%	Union	16.4%
Izard	16.4%	Van Buren	16.4%
Jackson	16.4%	Washington	3.3%
Jefferson	31.2%	White	16.4%
Johnson	16.4%	Woodruff	16.4%
Lafayette	20.2%	Yell	16.4%
Lawrence	26.5%		

FEMALES

Statewide - 6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is as described in the Proposal Form for this report.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

EQUAL EMPLOYMENT OPPORTUNITY -FEDERAL STANDARDS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

- i. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
- ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
- iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
- iv. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved

Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The

Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees before the start of work and then not less often than once every six months; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site and then not less often than once every six months. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screening procedures, and test to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between sexes.

o. Document and maintain a record of all solicitations of offers for subcontractors for disadvantaged business

enterprise construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, national origin, age or disability.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Employment Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of

these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41CFR60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. In addition to the reporting requirements set forth elsewhere in this contract, the contractor and the subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, shall submit for every month of July during which work is performed employment data as contained under Form PR-1391 (Appendix C to 23 CFR, Part 230), and in accordance with the instructions included thereon.

Rev. 2/11/98

Rev. 2/20/03

Rev. 7/27/06

Rev. 10/24/06

Rev. 9/16/13

Rev. 8/22/17

Rev. 12/13/23

FHWA-1273 SUPPLEMENTAL SPECIFICATION**POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS**

POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
1. Equal Employment Opportunity – Know Your Rights	U.S. Department of Labor (OFCCP)	ARDOT Resident Engineer
2. Company EEO Policy (prepared by the Contractor on the Company's letterhead)	U. S. Department of Labor (OFCCP)	Contractor to Prepare: - EEO policy statement. - Notice encouraging employees to refer minority and female applicants for employment. - Notice informing employees of an available training program and the entrance requirements. - Complaint procedures. - Notice identifying company EEO officer by name, including address and telephone number where EEO officer can be located. - Work environment statement. - Certification of nonsegregated facilities. *h. Notice to unions disseminating EEO commitments and responsibilities and requesting their cooperation.
*Union Contractors Only		
3. Current Wage Rates (PR-1273 Supplement) or SS Revisions of PR-1273 for Off-System Projects	U. S. Department of Labor	Contained in contract. Extra copies may be obtained from Program Management - ARDOT

7/26/96
Rev. 2/11/98
Rev. 2/20/03
Rev. 7/27/06
Rev. 10/24/06
Rev. 9/16/13
Rev. 8/22/17
Rev. 12/13/23

FHWA-1273 SUPPLEMENTAL SPECIFICATION **POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS**

POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
4. "Employee Rights Under the Davis-Bacon Act" (WH 1321)	U. S. Department of Labor	ARDOT Resident Engineer
5. "Employee Rights Under the Davis-Bacon Act" (WH 1321 SPA)	U. S. Department of Labor	ARDOT Resident Engineer
6. Minimum Wage Rate (WH 1088)	U. S. Department of Labor	ARDOT Resident Engineer
7. "NOTICE" Federal Aid Projects (PR-1022)	U. S. Department of Transportation (FHWA)	ARDOT Resident Engineer
8. Job Safety and Health Protection OSHA 3165	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
9. Job Safety and Health Protection OSHA 3167 SPA	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
10. Emergency Phone Numbers of Doctors, Hospital and Ambulance near Job Site for referring injured employees.	U. S. Department of Labor (OSHA)	ARDOT Resident Engineer
11. WCC Form AR-P Workers Compensation Notice and Instructions to Employers and Employees	State of Arkansas	Insurance Carrier
Self-Insurer	State of Arkansas	Administrator - Self-Insured Group

7/26/96

Rev. 2/11/98

Rev. 2/20/03

Rev. 7/27/06

Rev. 10/24/06

Rev. 9/16/13

Rev. 8/22/17

Rev. 12/13/23

FHWA-1273 SUPPLEMENTAL SPECIFICATION

POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
12. Log and Summary of Occupational Injuries and Illnesses (OSHA Form 300) The Summary portion must be posted from February 1 to April 30, of the year following the year covered by the form.	U. S. Department of Labor (OSHA) Public Law 91-596	ARDOT Resident Engineer
13. Family and Medical Leave Act of 1993 (WH-1420) Employers who employ 50 or more employees for at least 20 workweeks in the current or preceding calendar year.	U. S. Department of Labor	ARDOT Resident Engineer
14. Employee Polygraph Protection Act (WH-1462)	U. S. Department of Labor	ARDOT Resident Engineer
15. Your Rights Under USERRA (The Uniformed Services Employment and Reemployment Rights Act)	U. S. Department of Labor	ARDOT Resident Engineer
16. Arkansas Department of Labor Notice to Employer & Employee	Arkansas Department of Labor	ARDOT Resident Engineer
17. Pay Transparency Nondiscrimination Provision	U. S. Department of Labor (OFCCP)	ARDOT Resident Engineer

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
WAGE RATE DETERMINATION

FHWA-1273 Supplemental
Page 1 of 4

"General Decision Number: AR20260164 05/18/2026

State: Arkansas

Construction Types: Highway

Counties: Arkansas Counties of
Garland

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

SUAR2014-036 07/21/2014

	Rates	Fringes
TRUCK DRIVER: SEMI/TRAILER TRUCK.....	\$ 12.50	0.00
TRUCK DRIVER: WATER TRUCK.....	\$ 14.73	0.00
TRUCK DRIVER: LOWBOY TRUCK.....	\$ 17.49	0.00
TRUCK DRIVER: FLATBED TRUCK.....	\$ 21.03	0.00
TRUCK DRIVER: DUMP TRUCK.....	\$ 14.87	0.00
TRAFFIC CONTROL: LABORER-CONES/ BARRICADES/BARRELS - SETTER/MOVER/SWEEPER.....	\$ 11.60	0.00
TRAFFIC CONTROL: FLAGGER.....	\$ 12.00	0.00
OPERATOR: SCREED.....	\$ 15.01	0.00
OPERATOR: SCRAPER.....	\$ 19.31	0.00
OPERATOR: ROLLER.....	\$ 15.87	0.00
OPERATOR: POST DRIVER (GUARDRAIL/FENCES).....	\$ 16.97	0.00
OPERATOR: PAVER (ASPHALT, AGGREGATE, AND CONCRETE).....	\$ 21.04	0.00
OPERATOR: OILER.....	\$ 18.46	0.00
OPERATOR: MILLING MACHINE.....	\$ 17.52	0.00
OPERATOR: MECHANIC.....	\$ 17.82	0.00
OPERATOR: LOADER.....	\$ 17.05	0.00
OPERATOR: HYDROSEEDER.....	\$ 10.79	0.00
OPERATOR: GRADER/BLADE.....	\$ 19.86	0.00
OPERATOR: DRILL.....	\$ 14.85	0.00
OPERATOR: CRANE.....	\$ 21.13	0.00
OPERATOR: BULLDOZER.....	\$ 16.10	0.00
OPERATOR: BROOM/SWEEPER.....	\$ 12.00	0.00
OPERATOR: BOBCAT/SKID STEER/SKID LOADER.....	\$ 16.06	0.00
OPERATOR: BACKHOE/EXCAVATOR/TRACKHOE.....	\$ 16.57	0.00
OPERATOR: ASPHALT SPREADER.....	\$ 15.80	0.00
LABORER: PIPELAYER.....	\$ 14.33	0.00
LABORER: MASON TENDER - CEMENT/CONCRETE.....	\$ 15.23	0.00
LABORER: COMMON OR GENERAL.....	\$ 11.45	0.00
LABORER: ASPHALT, INCLUDES RAKER, SHOVELER, SPREADER AND DISTRIBUTOR.....	\$ 14.42	0.00
IRONWORKER, STRUCTURAL.....	\$ 15.36	0.00
IRONWORKER, REINFORCING.....	\$ 14.22	0.00
HIGHWAY/PARKING LOT STRIPING: PAINTER.....	\$ 21.75	0.00
HIGHWAY/PARKING LOT STRIPING: OPERATOR (STRIPING MACHINE).....	\$ 13.25	0.00

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
WAGE RATE DETERMINATION

FHWA-1273 Supplemental
Page 2 of 4

ELECTRICIAN, INCLUDES TRAFFIC SIGNALIZATION.....	\$ 16.85	0.00
CEMENT MASON/CONCRETE FINISHER.....	\$ 17.44	0.00
CARPENTER (FORM WORK ONLY).....	\$ 18.07	0.00

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 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 <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 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) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than **◆SU◆**, **◆UAVG◆**, **◆SA◆**, or **◆SC◆** denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union

whose collectively bargained rate prevailed in the survey for this 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. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ♦SU♦ identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

♦SU♦ wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ♦SA♦ identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
WAGE RATE DETERMINATION

FHWA-1273 Supplemental
Page 4 of 4

the classifications and rates under the **SA** identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail 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 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.

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END OF GENERAL DECISION"

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

CARGO PREFERENCE ACT REQUIREMENTS

The requirements of the Cargo Preference Act (CPA) and implementing regulations (46 CFR 381.7(a)-(b)) are applicable to this contract. For additional information, see the FHWA's web page:

<https://www.fhwa.dot.gov/construction/cqit/cargo.cfm>

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

**PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND
VIDEO SURVEILLANCE SERVICES OR EQUIPMENT**

In accordance with the requirements of 2 CFR 200.216, equipment utilized on this project for telecommunications and video surveillance services or equipment shall not be produced by:

- 1) Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- 2) Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BUY AMERICA - CONSTRUCTION MATERIALS

Description: **Section 106, Control of Material**, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added as **Subsection 106.01(c) Construction Materials**

Buy America – Construction Materials. (1) General. The Bipartisan Infrastructure Law (BIL) was enacted on November 15, 2021 (BIL Build America, Buy America Act Publication L. No. 117-58). This provision expands the Buy America requirements beyond what was only required for steel and iron products. The steel and iron provisions have not changed with the new law. Buy America requirements are in effect only on Federal-Aid contracts and all construction materials shall be produced/manufactured in the United States. Items specifically excluded from this requirement are cement and cementitious materials; aggregates such as stone, sand, or gravel; aggregate binding agents or additives (including asphalt binders). All other materials permanently incorporated into the project will be subject to Buy America requirements.

(2) Definitions. A construction material includes an article, material, or supply that is or consists primarily of:

- non-ferrous metals;
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cable);
- glass (including optic glass);
- lumber; or
- drywall.

All construction materials shall be produced in the United States. This means all manufacturing processes to produce the construction materials shall occur in the United States. All manufacturing processes for construction materials shall mean the final manufacturing process and the immediately preceding manufacturing stage for the construction material.

All manufactured products permanently incorporated into the project must be manufactured in the United States or assembled from components that are mined, produced, or manufactured in the United States. The combined value of the domestic components of a manufactured product must be greater than 55 percent of the total cost of all components of the manufactured product.

(3) Compliance. All prospective bidders should obtain quotes from suppliers that can furnish the required domestic manufactured materials and the cost of such should be included in the contract unit prices bid for the various individual pay items. Waivers will only be considered when there is no domestic manufacturer of the specific item meeting the requirements in the appropriate section of the Standard Specifications. Questions relating to domestic product availability should be made pre-bid and responses, including possible waivers, will be posted on the Department's website.

The Contractor shall ensure that all manufacturing processes for each covered product comply with this Buy America Provision. Non-conforming products shall be replaced at no expense to the Department. It is the contractor's responsibility to assure all submittals required

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BUY AMERICA - CONSTRUCTION MATERIALS

for Buy America are submitted to the Engineer prior to the products and or materials being incorporated into the project.

Buy America requirements do not apply to temporary elements not permanently incorporated into a project. This includes falsework, temporary sheet piling, detour bridges, temporary elements left in place at the contractor's convenience, unless the contract plans and specifications require steel or iron components or imply that the item be left in place, or items that are simply moved from one place to another within the same project. Buy America only applies to construction materials that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, removed at or before completion of the project.

(4) Certification. The contractor shall provide a certification from the supplier for each construction material, stating that it meets the provisions of this specification or the Build America/Buy America act, prior to incorporating any construction material into the project. The supplier certifying may be the original manufacturer, fabricator, or vendor provided the supplier has sufficient control and knowledge of the manufacturing process to accept responsibility and certify full and complete conformance with the certification. In lieu of the manufacturer's certification, the Contractor or supplier may provide the Domestic Materials Self-Certification Form for the specific product from AASHTO's Product Evaluation & Audit Solution's datamine (www.transportation.org/product-evaluation-and-audit-solutions) or from the NEMA Make it American BABA Registry (<https://www.makeitelectric.org/nema-programs/make-it-american/nema-make-it-american/>).

(5) Examples of Pay Items Affected. The following are items from the Standard Specifications and common special provisions that must meet the requirements of this specification. This list is provided for bidders' information and is not to be considered as all-inclusive as other items covered by the standard specifications, supplemental specifications, and special provisions may also fall under these requirements:

Non-Ferrous Metals	
Item	Specification Section
Aluminum Pipe Culverts	606
Aluminum Chain Link Fence	619
Aluminum Gates	619
Mailboxes	637
Electrical Conductors	700, 708
Controller Cabinet (cabinet assembly)	701, 702, 703
Ground Rods	701, 712, 714, 715
System Local Controller/Actuated Controller components (surge protector, conflict monitor, switches, flashers, relays, wiring harness, clocks, etc.)	701. Job SP
Pre-Timed Controller (cabinet and internal equipment)	702
Flashing Beacon Controller (cabinet and all internal equipment)	703

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BUY AMERICA - CONSTRUCTION MATERIALS

Loop Wiring	704
Vehicle Detectors (including all electrical components and mounting racks)	704
Feeder Wire	704
Preformed Detector Loops	704
Loop Wiring in Duct	705
Traffic Signal Heads (all types)	706, Job SP
Pedestrian Signal Heads	707
Traffic Signal Cable	708
Sign Supports - all types (including clips and fasteners)	724, 730
Sign Panels (including clips and fasteners)	723, 725, 726, 727, 728
Video Detectors (detector, processor, and other equipment)	733
Video Cable	733
Metal Bridge Railing	806
Bronze or Copper Alloy Bearing and Expansions Plates	807
Bridge Name Plates	812
Accessible Pedestrian Signals (APS)	Job SP
Electrical Conductors for Luminaires	Job SP
Electrical Conductors-in-Conduit	Job SP
LED Roadway Illumination Poles	Job SP
Luminaires	Job SP
Pedestal Type Service Point Assembly	Job SP
Retroreflective Backplates	Job SP
Wrong Way Detection System Controller Cabinet	Job SP
Copper plumbing lines and fittings	Job SP

Plastic/Polymer Based Products	
Item	Specification Section
Joint Sealers (Types 3 and 4)	501,503, 504,507,509
Epoxy Coating for Dowel Bars and Reinforcing Steel	501, 502, 507, 804
Epoxy Resin Anchoring Systems (Dowel Bars, Hand Rails, Metal Bridge Railing, Anchor Bolts)	507, 633, 806, 807
Polyethylene Pipe Culverts	606
PVC Pipe Culverts	606
RC Pipe Culvert Gaskets	606
Drop Inlet Steps	609, 610, 640
ABS or Polyethylene Pipe for Underdrains	611
PVC Pipe for Underdrain Laterals	611

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BUY AMERICA - CONSTRUCTION MATERIALS

Filter Fabrics	611, 625, 629, 816
Geotextile Fabrics	625
Tactile Panels for Wheelchair Ramps	641, Job SP
System Local Controller/Actuated Controller components (surge protector, conflict monitor, switches, flashers, relays, wiring harness, clocks, etc.)	701, Job SP
Pre-Timed Controller (internal equipment)	702
Flashing Beacon Controller (all internal equipment)	703
Vehicle Detectors (all electrical components)	704
Traffic Signal Heads (all types)	706, Job SP
Pedestrian Signal Heads	707
Non-Metallic Conduit (PE & PVC)	710
Paint for Reflectorized Paint Pavement Markings	718
Thermoplastic Pavement Markings (all)	719
Permanent Pavement Marking Tape	720
Raised Pavement Markers (markers and epoxy adhesive)	721
Sand Barrels/Lids for Impact Attenuation Barriers	731
Video Detectors (detector, processor, and other equipment)	733
Paint Systems for Structural Steel	807, 820
Preformed Joint Seals	809
Silicone Joint Sealants	809
Accessible Pedestrian Signal (APS) components	Job SP
Cellular Modem	Job SP
Enhanced Thermoplastic Pavement Markings	Job SP
Ethernet Switch (all types)	Job SP
Geogrids (all types)	Job SP
Hybrid Video/Radar Detection System components	Job SP
Latex Modifier in Latex Modified Concrete Overlays	Job SP
Lightweight Panels for Sound Reflecting Noise Barriers	Job SP
Overhead Digital Message Sign Assembly	Job SP
Polymer Resin in Polymer Overlays	Job SP
Polypropylene Pipe Culverts	Job SP
PTZ Camera System	Job SP
Radar Detection System	Job SP
Wrong Way Detection System FLIR Thermal Sensor	Job SP
Wrong Way Detection System Solar Panel	Job SP
PVC piping and fittings for building projects	Job SP

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BUY AMERICA - CONSTRUCTION MATERIALS

Glass	
Item	Specification Section
Glass Beads (drop on application)	718, 719
Fiber Optic Cable	Job SP
Solar Panels (Wrong Way Detection Systems and other ITS systems)	Job SP
Windows in Building Construction	Job SP

Lumber	
Item	Specification Section
Wood Guard Rail Posts	617, 639
Wood Block Outs for Guardrail	617,639
Wood Posts for Guard Cable	618
Fence Posts and Braces (Type A, B, C and D)	619
Mailbox Supports	637
Treated Wood Poles	716
Treated Lumber	817
Treated Bridge Timbers	817
Timber Piling	818
Framing Lumber, Plywood, Trim Lumber in Building Construction	Job SP

Drywall	
Item	Specification Section
Drywall in Building Construction	Job SP

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****VENDOR REGISTRATION REQUIREMENT**

To ensure proper information is on file for all contractors on ARDOT construction projects, prime contractors and subcontractors shall submit vendor registration information using the ARDOT Vendor Registration Form.

The ARDOT Vendor Registration Form is a Microsoft Form developed to allow the Department to collect vendor information electronically and transmit that information into the Department's construction management system (CMS).

The form may be used both for initial registration and for submission of updated vendor information when changes are needed, such as updated contact information.

Contractors may complete the ARDOT Vendor Registration Form at any time to be included in the construction management system as a Vendor. The form allows contractors to indicate if they wish to be considered for Prequalification or for DBE Certification. The form will not complete the Prequalification or DBE Certification process but will instead initiate the process with the proper Divisions in ARDOT. All bidders must submit this form prior to bidding on any Proposal to ensure ARDOT data is correct and complete. Any contractors who will be added as Subcontractors on the Contract shall complete the ARDOT Vendor Registration Form prior to submitting the actual subcontract.

Vendors shall ensure that all information submitted through the ARDOT Vendor Registration Form is complete and accurate. The Department may require correction or resubmission of incomplete or inaccurate information before the registration is considered acceptable.

No direct payment will be made for furnishing and submitting vendor registration information. All costs associated with complying with this Special Provision shall be considered incidental to the contract.

The ARDOT Vendor Registration Form is available at the following link:

<https://forms.office.com/Pages/ResponsePage.aspx?id=k42YmO7x6EGK6v9zsAW4fbNdDoviCDRLsOknaQRB5A9UME5XOVc0T1pKMU84VFQwMUY5Nk5NQTY0MCQIQCN0PWcu>

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****DOCUMENTATION OF PAYMENTS MADE – PROMPT PAYMENT (SIGNET)**

In accordance with Section 108.01 of the Standard Specifications, the Contractor shall pay all subcontractors their respective subcontract amount within 10 calendar days after the Contractor receives payment from the Department. Payment is defined as issuing an Electronic Funds Transfer (EFT) or mailing a check to a subcontractor. The 10-day requirement is met on the date that payment is issued to the subcontractor.

First-tier subcontractors have the same obligation to any second-tier subcontractors. Subcontractors must pay their second-tier subcontractors within 10 days of receipt of payment from the Prime Contractor.

ARDOT monitors payments made by prime contractors to both DBE and non-DBE subcontractors to ensure compliance with prompt payment requirements. Prime contractors are required to report payments made to all subcontractors, and subcontractors must report payments made to any lower-tier subcontractors. Subcontractors are required to confirm receipt of payment.

The tracking of subcontractor prompt payment is conducted using the Signet™ application. Signet™ is a third-party service, supported by the software vendor, which is used by both Prime and Subcontractors. Signet™ is a reporting tool only and does not process financial transactions. ARDOT does not provide direct technical support for Signet™. Information about Signet™ may be found at <https://signet-help.zendesk.com> and by clicking the Signet™ tab.

Signet™ shall be required for use on this construction contract.

Upon completion of the first payment estimate on the contract Signet™ will automatically notify the Contractor via email prompting registration in Signet™ for that contract. The Prime Contractor will be required to pay a one-time, fixed fee of \$1,100 for this contract. Payment will be made to the Signet™ vendor. This will activate use of Signet™ for the Prime and all Subcontractors for the duration of that contract, regardless of contract value, number of subcontractors, contract duration, or number of payments reported. Subcontractors will not be charged any fee to register for contracts.

After each estimate, the Prime Contractor will report remitted payment to subcontractors in Signet™. This will trigger notification to each subcontractor via email requesting verification of the reported payment. The subcontractor will be given the opportunity to register with Signet™ at that time (for no cost).

The Prime or Subcontractor reporting payment must report the following information in Signet™:

- The name of the subcontractor or second-tier subcontractor receiving payment.
- The dollar amount of the payment made to the subcontractor or second-tier subcontractor.
- The date the payment was made to the subcontractor or second-tier subcontractor.
- Any retainage, which is only permitted if it was included in the individual subcontract when it was submitted to the Department for acknowledgement.
- The DBE Function performed for this payment (if the subcontractor/second-tier subcontractor is a DBE).
- Other information required by Signet™.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****DOCUMENTATION OF PAYMENTS MADE – PROMPT PAYMENT (SIGNET)**

The contractor must report the return of retainage or other withholdings in separate, standalone payment entries (separate from routine, planned progress payment estimates).

In the event that no subcontract work is included in a payment estimate, such that no payment is due to any subcontractors, the Prime Contractor shall mark the payment complete within Signet™, and no other payments are required to be reported for that estimate.

Subcontractors must verify in the Signet™ application each payment reported by a payer within 10 days of the payment being reported by the payer. This verification includes whether the payment was received and, if so, whether it was as expected.

Basis of Payment. The cost of registration for the Signet™ application will be reimbursed by the Department using a line item in the contract. The reimbursement will be set to match the current cost of the registration fee for Signet™ and will not be bid by the contractor. All costs for usage, time, labor, or other costs for reporting payments to subcontractors through the Signet™ application will be considered incidental and no direct payment will be made for these.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BIDDING REQUIREMENTS AND CONDITIONS

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth sentence of the second paragraph of **Subsection 102.01** is hereby deleted, and the following substituted therefore:

Prospective bidders may file a questionnaire at any time; however, prospective bidders will not be given authorization to submit a proposal unless a rating has been extended based on an acceptable questionnaire.

The following paragraph has been added to **Subsection 102.01**.

A contractor with common officers/owners/partners of any firm, partnerships, joint ventures, or corporations that is seeking prequalification, has been prequalified, or has entered into a previous or current contract with the Commission may have the prequalification denied, limited, or revoked for the reasons listed in Subsection 102.04(a)-(m).

The last paragraph of **Subsection 102.01** is hereby deleted.

The second sentence of **Subsection 102.02** is hereby deleted, and the following substituted therefore:

The Notice to Contractors will contain a description of the proposed work, and information regarding access to proposal documents, plans, specifications, and the amount and nature of the proposal guaranty.

Subsection 102.03 is hereby deleted, renamed **Contents of Proposal Documents**, and the following substituted therefore:

The proposal documents will state the location and description of the contemplated construction and will show the estimate of the various quantities and kinds of work to be performed or materials to be furnished, and will have a schedule of items. The proposal documents will state the time in which the work must be completed, the amount of the proposal guaranty, and the date and time of the letting of work. The documents will also include any special provisions or requirements that vary from or are not contained in the standard specifications.

All forms included in the proposal documents are considered a part thereof. The plans, specifications, and other documents designated in the proposal documents will be considered a part of the proposal whether included or not.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BIDDING REQUIREMENTS AND CONDITIONS

The first through fourth paragraphs of **Subsection 102.04** are hereby deleted, and the following substituted therefore:

To become an eligible bidder, prospective bidders must be registered to bid in Arkansas with Bid Express. Prospective bidders must also contact the Program Management Division at (501) 569-2261 during regular business hours between the date the project is advertised and 4:30 p.m. on the day prior to the scheduled bid opening to request to become eligible to bid specific projects. Only prequalified contractors or their authorized representative may request to become an eligible bidder.

If the prospective bidder's prequalification rating is not "unlimited", the bidder shall file a certification with the Department citing all contracts in force and the unfinished value of such work. A prospective bidder will not be allowed to submit a proposal until a certification for the current bidding period is on file and the amount of work the contractor may be allowed to undertake is determined. The contractor's prequalification rating, less the unfinished value of all contracts in force, will determine the amount of additional work that the contractor may be allowed to undertake. A contractor will not be allowed to submit a proposal on an individual project for which the estimated cost is more than the amount that the contractor may be allowed to undertake, but the contractor will be allowed to submit a proposal on more than one project, providing that the estimated cost of each project is not more than the amount that the contractor may be allowed to undertake. In the event a contractor submits a low bid on more than one project and the aggregate amount is greater than the amount the contractor may be allowed to undertake, the Commission will exercise its discretion in the award of a particular project or projects.

A charge will be assessed for authorization to submit a proposal, paper copies of the proposal documents, and plans issued. These services are provided during regular business hours until 4:30 p.m. on the day prior to the scheduled bid opening at the Arkansas Department of Transportation, 10324 Interstate 30, Little Rock, Arkansas 72209, (501) 569-2261. Payment shall be made at the time services are provided or upon receipt of statement therefore. No refund will be allowed for bids not submitted or for plans or proposal documents returned.

The second sentence of the first paragraph of **Subsection 102.06** is hereby deleted, and the following substituted therefore:

The bidder is expected to examine carefully the site of the proposed work, the proposal documents, plans, specifications, supplemental specifications, and special provisions before submitting a proposal.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BIDDING REQUIREMENTS AND CONDITIONS

The first paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

The proposal shall only be submitted through the internet bidding service, Bid Express. The bidder shall specify a unit price in figures for each pay item for which a quantity is given. A unit price of "zero" (\$0.00) is a valid price and will be considered. A blank unit price is not considered valid. The unit bid price should not be carried beyond 1 cent (\$0.01). Any figures on the unit bid price beyond 1 cent will be dropped.

The second and third paragraphs of **Subsection 102.07** are hereby deleted.

The fifth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

The bidder's proposal must be submitted with a digital signature containing the name of the individual, one or more members of the partnership, one or more members or officers of each firm representing a joint venture, or one or more officers of a corporation, or by an agent of the Contractor legally qualified and acceptable to the Department.

The sixth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

If the proposal is submitted with a digital signature of any person who is not listed in the bidder's Prequalification Questionnaire (Questionnaire Form) as the individual, as a partner of a partnership, or as an officer of a corporation, authorization for such submittal should be on file with the Department prior to the download of bids. This authorization shall be made before the downloading of bids and be in the form of a Power of Attorney duly executed and signed by an official with power to constitute such authority.

The last sentence of the seventh paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

Those items of Asphalt Binder that are subject to a minimum bid price will bear the note "(Minimum bid price is \$120.00 per ton)" within the Schedule of Items of the proposal documents.

The first sentence of the ninth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

The proposal documents for all federal aid projects will contain a bidders list.

The last sentence of the ninth paragraph of **Subsection 102.07** is hereby deleted, and the following substituted therefore:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BIDDING REQUIREMENTS AND CONDITIONS

The information provided will not be used for contract awarding purposes but must be provided before the Contractor will be given authorization to submit proposals for future lettings.

Subsection 102.08 Irregular Proposals is hereby deleted, and the following substituted therefore:

- (a) Proposals will be considered irregular and will be rejected for the following reasons:
 - (1) If the proposal does not contain a unit price for each pay item listed except in the case of authorized alternate pay items.
 - (2) If the proposal is not digitally signed by an authorized representative of the firm.
 - (3) If the proposal is not accompanied by the proper proposal guaranty.
 - (4) If a proposal is received from an individual, firm, partnership, or corporation with an interest, as principal, in another proposal for the same project.
 - (5) If the proposal is not accompanied by the Certification to Submit DBE Participation.
- (b) Proposals will be considered irregular and may be rejected for the following reasons:
 - (1) If the proposal is not accompanied by a bid schedule and bid schedule narrative as required in the proposal documents.
 - (2) Unbalanced proposals in which the prices for some items are out of proportion to the reasonable costs representative of those items.
 - (3) If there are irregularities of any kind that may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.

The first sentence of **Subsection 102.09** is hereby deleted and the following substituted therefore:

No proposal will be considered by the Commission unless a guaranty in the form of a bank draft, certified check, or cashier's check drawn on a solvent bank or trust company, or a bidder's paper bond executed by an approved surety company has been received by the Program Management Division prior to the download of bids.

The following paragraph is hereby added after the first paragraph of **Subsection 102.09**:

Electronic bid bonds are allowed. The prospective bidder should verify their bid bond in their proposal prior to submission.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BIDDING REQUIREMENTS AND CONDITIONS

Subsection 102.10 is hereby deleted and the following substituted therefore:

The proposal shall only be submitted through the internet bidding service, Bid Express.

Subsection 102.11 is hereby deleted, and the following substituted therefore:

A bidder may withdraw or modify a proposal after it has been submitted to Bid Express, up to the time set for the deadline for proposals to be received. A proposal may also be withdrawn if the Commission fails to make an award within 40 calendar days after the date of downloading.

Subsection 102.12 is hereby deleted, renamed **Downloading of Proposals**, and the following substituted therefore:

Proposals will be downloaded and then posted on the Department's website at the time and place indicated in the Notice to Contractors.

The last sentence of **Subsection 102.15** is hereby deleted, and the following substituted therefore:

In any case, the prospective bidders will be contacted prior to the download of bids.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

MANDATORY ELECTRONIC CONTRACT

Paper Contract Documents and Forms will not be accepted.

The Department will only accept and execute an electronic contract for this project through Doc Express, a paperless contracting system. Prospective bidders will need to contact Doc Express to set up an account prior to the bid opening date. The toll-free phone number for Doc Express is 1-888-352-2439 and their website address is www.docexpress.com.

Section 103 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows.

The first sentence of **Subsection 103.06(a)** is hereby deleted, and the following substituted therefore:

The Contract shall be electronically signed by the successful bidder and electronically submitted to the Program Management Division, Construction Contract Procurement Section, together with the required bonds and proof of liability insurance, within 10 business days after the notice of award has been issued.

Subsection 103.08(d)(3)d. is hereby deleted, and the following substituted therefore:

Documentation of the bidder's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal; and

Subsection 103.08(d)(3)e. is hereby deleted, and the following substituted therefore:

Document confirmation from the DBE that it is participating in the contract as provided in the Contractor's commitment.

Subsection 103.08(d)(5) is hereby deleted, and the following substituted therefore:

The preceding information shall be submitted directly to the Arkansas Department of Transportation, Program Management Division, via Doc Express.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

MANDATORY ELECTRONIC DOCUMENT SUBMITTAL

Paper Document Submittals will not be accepted.

The Department will only accept electronically-submitted documents for consideration on this project. All correspondence and submittals to the Department shall be submitted through Doc Express, a paperless contracting system. When signed originals are required, the original shall be the document uploaded to Doc Express and the signature shall be the electronic signature applied through Doc Express. The Contractor shall use the same organizational account for project documentation as used to fulfill the requirements of the Mandatory Electronic Contract Special Provision. The toll-free phone number for Doc Express is 1-888-352-2439 and their website address is www.docexpress.com.

Any reference in the Standard Specifications to document submittal in writing or by U.S. Mail, facsimile, or in person is hereby amended to require that such documents be submitted using Doc Express with the following exceptions:

- Material delivery tickets which are used for payment or for field verification shall be submitted on paper as required by the Standard Specifications for Highway Construction, Edition of 2014.
- Any document with specific submittal requirements in state and/or federal law or federal regulations that conflict with the requirements of this Special Provision shall be submitted in accordance with such state and/or federal law or federal regulations.

A user guide is available on the Department's web page to assist Contractors with the use of Doc Express. The "Contractor Guide to Using Doc Express" is available on the Department's web page at <https://ardot.gov/divisions/construction/doc-express/>.

The Contractor may provide access for subcontractors to view and submit items in Doc Express by following the instructions provided in the "Contractor Guide to Using Doc Express". Once an organizational account is activated and the Contractor provides access to the contract, a subcontractor may submit documents to the Contractor in Doc Express by uploading the electronic documents as directed in the User Guide. Any documents uploaded by the subcontractor must be then retrieved and published by the Contractor within Doc Express for further action by the Engineer. The Engineer will not review or take any actions on any documents submitted by the subcontractor until the document has been appropriately submitted by the Contractor.

Any submittals, documents, subcontracts, proposals, working drawings, or any other items submitted by the Contractor within Doc Express are not considered approved by the Engineer until written notification of the approval is published by the Engineer in the "CON-Correspondence-From Department to Contractor" drawer in Doc Express. Any action taken by the Contractor prior to this notification is taken at the Contractor's own risk.

The Department's System Administration team has no authority to take action on any documents submitted to the system. Access for this team is for management of the application only. Knowledge of any document submitted is not imputed to the Department by the knowledge of Systems Administration.

The requirements of this Special Provision shall supersede the requirements of all other Special Provisions unless such Special Provision includes a stated exception to this Special Provision.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ASSESSMENT OF WORKING DAYS – MAINTENANCE OF TRAFFIC

DESCRIPTION: To accommodate the off peak lane closure time limits shown in the contract “Maintenance of Traffic” Special Provision, the assessment of Calendar Days or Working Days will be based upon the same conditions as a normal Working Day.

For Calendar Day or Working Day projects, the Contractor shall be permitted to begin work on Sunday evening when the allowable lane closure period begins. Sunday evening shall be the allowable off peak lane closure time defined in the contract “Maintenance of Traffic” Special Provision but not prior to 6:00 p.m. On Working Day projects, time will not be assessed for Sunday. No other work will be allowed on Sunday unless an emergency is declared by the Department.

If the Contractor elects to work Friday and complete work on Saturday in accordance with the contract “Maintenance of Traffic” Special Provision, time will be assessed as appropriate for Saturday.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS**

Department Standard Specification **Section 102.04 and Supplemental Specification 102-2** state that the Department reserves the right to refuse to issue, accept, or consider a proposal:

“If the prospective bidder is the Contractor on a current Contract with the Commission on which Liquidated Damages are being assessed, and there are no pending time extensions warranted to remove the project from Liquidated Damages.”

If the prospective bidder goes into liquidated damages on a current Contract with the Commission during the advertisement period for a letting, the Contractor will be notified seven business days prior to the letting that they will not be allowed to bid in the upcoming letting. This notification will be officially transmitted through Doc Express for the project in liquidated damages and via email.

Upon notification that they will not be allowed to bid in the upcoming letting, the Contractor will be provided an opportunity to request a reconsideration of this decision. This request must be transmitted in the form of a letter through Doc Express and via email to the Department for review within two (2) business days of receipt. The Department will review the reconsideration request and render a decision no later than the Friday prior to the letting.

Please note, a bid may be withdrawn at any time prior to the time specified for the bid letting. If a Contractor has been notified that they will not be allowed to bid, and they do not withdraw their bid, the bid will be considered invalid and rejected.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The eighth and tenth bullet within the first paragraph of **Subsection 404.01, Design of Asphalt Mixtures. (a) General** is hereby deleted and the following added:

- A one-gallon sample of performance grade asphalt binder to be used in all Section 405 Asphalt Concrete Hot Mix Base Course and Section 406 Asphalt Concrete Hot Mix Binder Course mix designs.
- Five blended aggregate samples for all Section 405 Asphalt Concrete Hot Mix Base Course and Section 406 Asphalt Concrete Hot Mix Binder Course mix designs.
- A two-gallon sample of performance grade asphalt binder to be used in all Section 407 Asphalt Concrete Hot Mix Surface Course mix designs.
- Ten blended aggregate samples for all Section 407 Asphalt Concrete Hot Mix Surface Course mix designs.

The last sentence of the last paragraph of **Subsection 404.01 Design of Asphalt Mixtures. (a) General** is hereby deleted and the following substituted therefor:

At least fifteen (15) business days shall be allowed for the review of the mix design.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS

Division 106 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added to **Subsection 106.04, Acceptance of Materials**:

All ACHM Contractor Acceptance Tests shall be signed by the technician and submitted electronically through Doc Express in pdf format, and a signed paper copy be given to the ARDOT plant inspector after the completion of each subplot.

The ACHM Microsoft Excel Spreadsheet for Contractors/Suppliers is the required form for documentation and can be downloaded from the following website:

<https://ardot.gov/divisions/construction/construction-information/for-use-on-feb-2024-letting-and-later-achm-spreadsheet/>

To download this file, follow the instructions on the page linked above. Use of this file requires Microsoft Excel.

Any questions or issues arising from the use of this file should be referred to the Resident Engineer.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR ASPHALT BINDER

A price adjustment clause is included in this Contract to provide additional compensation to the Contractor or a credit to the Department for fluctuations in asphalt binder prices. This price adjustment is dependent upon a change in the average price of asphalt binder which results in an increase or decrease in the price of products utilized on this project.

Payment. Payment will be made to the Contractor for monthly fluctuation in the price of asphalt binder used in performing the applicable items of Asphalt Concrete Hot Mix and Ultrathin Bonded Wearing Course work as listed in the table below when the asphalt binder price fluctuates from the base price defined below. Payment may be positive, negative, or nonexistent depending on the circumstances. Payments or deductions for the asphalt binder price adjustment will be included in the Contractors current estimates, and the payment or deduction authorized for each estimate will be based upon the quantities for applicable items of work.

The Asphalt Binder Price Adjustment will be a dollar amount paid as compensation to the Contractor, or as a credit to the Department as reflected on the Current (or Final) Estimate Summary Report as Payment Adjustments.

Asphalt Binder Price Adjustment (ABPA). The Asphalt Binder Price Adjustment (ABPA) for the current estimate will be computed according to the following formula:

$$ABPA = Q \times D \times (IQP / 100)$$

Where

- ABPA = Asphalt binder price adjustment, in dollars;
- Q = Quantities paid for the applicable items on the current estimate; tons of mix for ACHM items or square yards for Ultrathin Bonded Wearing Course
- D = Allowable price differential, in dollars;
- IQP = Item Quantity Percent, Quantity of Indexed Material per unit of the applicable item on the current estimate.

The above formula will be applied to each individual payment of the applicable item. When the Current (or Final) estimate is generated, the sum of these individual adjustments will be included as a Payment Adjustment.

Applicable Items of Work		
ITEM OF WORK	SPECIFICATION NUMBER	ITEM QUANTITY PERCENT
Asphalt Binder in ACHM Base Course	405	100
Asphalt Binder in ACHM Binder Course	406	100
Asphalt Binder in ACHM Surface Course	407	100
Ultrathin Bonded Wearing Course (Type B)	SP	5.5
Ultrathin Bonded Wearing Course (Type C)	SP	5.4

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR ASPHALT BINDER

The terms of this Special Provision will apply only to the items listed in this Special Provision table above. No other items on the contract will be subject to the terms of this Special Provision.

The allowable price differential, "D", for the current estimate will be computed according to the following formula, using the appropriate binder grades:

$$D = P - P(b)$$

P, the asphalt binder current price in dollars per ton, is the Monthly Asphalt Binder Price Index for the month in which the payment entry is entered.

P(b), the asphalt binder base price in dollars per ton, is the Monthly Asphalt Binder Price Index for the month in which the bids for the work were received.

Asphalt Binder Index Determination.

PG64-22 Binders. The Monthly Asphalt Binder Price Index for PG64-22 binders will be determined by calculating the average for performance-graded binder using the Selling Price of PG 64-22 paving grade. The monthly asphalt binder price will be an average of five asphalt binder prices. The prices will be furnished by the four largest asphalt binder suppliers in the State of Arkansas as determined by the previous calendar year. For an asphalt supplier to be included in the asphalt binder price index they must supply at least ten percent of the asphalt binder in Arkansas. The final component in the asphalt binder price index will be the Asphalt Weekly Monitor® furnished by Poten & Partners, Inc. The issue of the Asphalt Weekly Monitor® used will be for the last full week in the previous month received by the Department prior to the first day of the index month. The four largest suppliers included in the asphalt binder price index shall furnish the Department with their average price on the Thursday before the Friday of the last full week of the month. If any supplier fails to submit a price by this deadline, that supplier's price will not be included in the asphalt binder price index for that month.

PG70-22 and PG76-22 Binders (including Asphalt Binder in Ultrathin Bonded Wearing Course). The monthly Asphalt Binder Price Index for PG70-22 and PG76-22 binders (including asphalt binder in Ultrathin Bonded Wearing Course) will be determined by the same method above, except that the price from the Asphalt Weekly Monitor® will not be used in the calculation of the monthly average binder price. The monthly asphalt binder price for PG70-22 and PG76-22 binders will be calculated using the average of the prices supplied by the four largest binder suppliers in the State for those grades.

Supplemental Items Subject to Adjustment. Items included in the contract that are listed in the table above are subject to adjustment in accordance with this provision, regardless of any amount of overrun to the plan quantity. Any new items of work added to the Contract by supplemental agreement that are listed in the table above will be subject to the asphalt binder price adjustments in accordance with this provision. The base asphalt binder price, P(b), for any

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR ASPHALT BINDER

newly added eligible items will be the same $P(b)$ as the eligible items in the Contract, and the new unit price established by supplemental agreement will be determined accordingly.

Viewing Asphalt Binder Price Index. Historical asphalt binder price index values will be available in the "Asphalt Binder Index Report" document located on the ARDOT website at <https://ardot.gov/divisions/construction/construction-information/> under Asphalt Binder Information.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR FUEL

A price adjustment clause is included in this Contract to provide additional compensation to the Contractor or a credit to the Department for fluctuations in diesel fuel prices. This price adjustment is dependent upon a change in the average price of fuel which results in an increase or decrease in the price of products utilized on this project. For the purposes of this specification, it is assumed that all fuel used is diesel fuel and that the fuel use factors shown in the table below cover all fuel used in delivery to the plant, production, hauling to the job site, placement, and finishing of the items of work shown.

Payment. Payment will be made to the Contractor for monthly fluctuation in the price of diesel fuel used in performing the applicable items as listed in the table below when the diesel fuel price fluctuates from the base price defined below. Payments may be positive, negative, or nonexistent depending on the circumstances. Payments or deductions for the fuel price adjustment will be included in the Contractor's current estimates, and the payment or deduction authorized for each estimate will be based upon the quantities for applicable items of work. Subcontracts should include the payment or deduction of fuel price adjustments on pay items listed in the table below when those items are included in a subcontract.

The Fuel Price Adjustment will be a dollar amount paid as compensation to the Contractor, or as a credit to the Department as reflected on the Current (or Final) Estimate Summary Report as Payment Adjustments.

Fuel Price Adjustment (FPA). The Fuel Price Adjustment (FPA) for the current estimate will be computed according to the following formula:

$$FPA = Q \times F \times D$$

Where

- FPA = Fuel price adjustment, in dollars;
- Q = Quantities paid for the applicable items on the current estimate,
- F = The Fuel Use Factor for the applicable items of work subject to this price adjustment, as listed in the table below,
- D = Allowable price differential, in dollars.

The above formula will be applied to each individual payment of the applicable item. When the Current (or Final) estimate is generated, the sum of these individual adjustments will be included as a Payment Adjustment.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR FUEL

Fuel Use Factors		
Item of Work	Specification Numbers	Fuel Use Factor Per Unit
Earthwork: (Unclassified Excavation, Compacted Embankment, Selected Material)	210,302	0.34 gal./C.Y.
Soil Stabilization	Special Provision	2.28 gal./ton
Shaping: (Shaping Roadway Section, Subgrade Preparation, Trenching and Shoulder Preparation, Scarifying and Recompacting Shoulders)	213,214,215,216	2.52 gal./Station
Base Course and Stone: (Stone Backfill, Aggregate Base Course, Soil Aggregate in Cement Treated Base Course, Aggregate in Cement Stabilized Crushed Stone Base Course, Mineral Aggregate in Asphalt Surface Treatment)	207,303,307,308,309,310,402	0.54 gal./ton
ACHM Paving: (ACHM Base Course, ACHM Binder Course, ACHM Surface Course, Open Graded Asphalt Base Course)	405,406,407,417	2.36 gal./ton
Ultrathin Bonded Wearing Course (All Types)	Special Provision	2.18 gal./ton
Milling: (Cold Milling Asphalt Pavement, Grinding Portland Cement Concrete Pavement)	412, 510	0.18 gal./S.Y.
PCC Paving: (Portland Cement Concrete Base, Open Graded Portland Cement Concrete Base, Portland Cement Concrete Pavement, High Early Strength Concrete Pavement, Continuously Reinforced Concrete Pavement, Portland Cement Concrete Driveway)	309, 310,501,503,505	0.44 gal./S.Y.
Structural Concrete (Approach Slabs, Approach Gutters, Class B Concrete-Bridge, Class S Concrete-Bridge, Class S(AE) Concrete-Bridge, Seal Concrete-Bridge, Class A Concrete-Roadway, Class S Concrete-Roadway)	504, 802	1.75 gal./C.Y.
Flatwork: (Concrete Ditch Paving, Concrete Islands, Concrete Walks, Wheelchair Ramps)	605,632,633,641	0.30 gal./S.Y.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR FUEL

When the units of measure in this contract for the items of work listed in the table do not correspond with the units shown in the table (i.e. Asphalt Concrete paid by the square yard, etc.), those items will not be subject to the terms of this special provision or any fuel price adjustment.

The allowable price differential, "D", for the current estimate will be computed according to the following formula:

$$D = P - P(b)$$

P, the current fuel price in dollars per gallon, is the Monthly Fuel Price Index for the month in which the payment entry is entered.

P(b), the fuel base price in dollars per gallon, is the Monthly Fuel Price Index for the month in which the bids for the work were received.

Fuel Price Index Determination. The Monthly Fuel Price Index will be determined by using the On-Highway retail price for No. 2 Diesel Fuel – ULS (Ultra Low Sulfur), as listed for the US Gulf Coast region on the U.S. Energy Information Administration's website. The value used will be that for either the closest Monday prior to the first calendar day of the index month or the first calendar day of the index month, if that is a Monday.

https://www.eia.gov/opendata/qb.php?sdid=PET.EMD_EPD2DXL0_PTE_R30_DPG.W

Supplemental Items Subject to Adjustment. Items included in the contract that are listed in the table above are subject to adjustment in accordance with this provision, regardless of any amount of overrun to the plan quantity. Any new items of work added to the Contract by supplemental agreement that are listed in the table above will be subject to the fuel price adjustments in accordance with this provision. The base fuel price, P(b), for any newly added eligible items will be the same P(b) as the eligible items in the Contract, and the new unit price established by supplemental agreement will be determined accordingly.

Viewing Fuel Price Index. Historical fuel price index values will be available in the "Asphalt Binder Index Report" document located on the ARDOT website under Fuel Price Information at <https://ardot.gov/divisions/construction/construction-information/>.

Opt Out Option. The Contractor, at its own discretion, can choose to opt out of the adjustments for fuel prices determined by this special provision. If the Contractor wishes to utilize this option, an authorized representative of the firm must sign the form on Page 4 of this special provision and submit it to the Department at PMD@ardot.gov prior to the time and date of the bid letting for this project. This representative must currently be listed with the Department as an officer approved to sign contracts in the firm's name.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRICE ADJUSTMENT FOR FUEL

OPT OUT OF PRICE ADJUSTMENTS TO FUEL

As an authorized representative of this company, I hereby choose the option to opt out of the price adjustments for fuel for all pay items allowable by this special provision for this contract. By signature of this form, my firm waives all payment adjustments for fuel indexing for the duration of this project and waives any subsequent appeals for additional compensation for fuel price fluctuations.

This action only applies to the construction contract for the job number listed in the header of this document.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

Company Name: _____

NOTE: To opt out, this completed form must be submitted to the Department at PMD@ardot.gov prior to the time and date of the bid letting for this project.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
ASPHALT MIXTURES WITH PG 76-22 BINDER

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added after the last bullet following the first paragraph of **Subsection 404.01(b), Design Requirements**:

- A maximum of 15% Recycled Asphalt Pavement (RAP) material will be permitted in any mix using PG 76-22 asphalt binder provided that the design has a CT_{Index} (ASTM D8225) of ≥ 75 .
- RAP will not be allowed in Ultrathin Bonded Wearing Course.

The first sentence of the first paragraph of **Subsection 416.03, Materials and Composition**, is hereby deleted, and the following is substituted therefor:

If the Contractor elects to use RAP in the job mixture, the mixture may contain no more than 30% RAP for all binder grades except for PG 76-22 which can contain no more than 15%.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

WARM MIX ASPHALT

DESCRIPTION: The Department will allow the use of Warm Mix Asphalt (WMA). All provisions for the production and placement of conventional HMA mixtures as stipulated in Section 410 Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses of the Standard Specifications for Highway Construction, Edition 2014, are applicable except as noted below.

Section 410 Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 410.03: Replace the third sentence with "WMA production temperatures at the plant shall be according to the Contractor's approved mix design but may be adjusted based on recommendations of the WMA additive/process manufacturer."

Add the following paragraph: "Implementation of best management practices in the control of aggregate moisture content prior to introduction to the drying or mixing drum is highly recommended in order to achieve the maximum benefit of WMA technology."

Section 410.07: Replace the last sentence of the first paragraph with "Spreading and finishing temperatures shall be according to the Contractor's approved mix design, but in no case shall the WMA be placed at a temperature less than 220° F."

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

COLD MILLING - COUNTY PROPERTY

Section 412 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The second sentence of **Subsection 412.01** is hereby deleted and the following is substituted therefor:

The material generated from the milling of tapers or butt joints at the beginning and end of the project, the tapers or butt joints transitioning to an existing structure, and tapers or butt joints at adjoining county roads, city streets, or highways on the project shall be transported and stockpiled at the location shown in the plans and shall become the property of the county in which the project is located or to an adjoining county as designated by the Engineer. The location and quantity of these millings will be designated on the plans or provided by the Engineer. The millings shall be stockpiled in a trapezoidal shape, or as directed by the Engineer, which can be easily measured.

Material generated from the cold milling operations for rut milling, removal of an ACHM overlay of a bridge deck, or other conditions not designated above shall become the property of the Contractor.

The following is added as the second sentence of **Subsection 412.05, Basis of Payment**:

No direct payment will be made for loading, hauling, and stockpiling of the milled material. Full payment will be considered included in the unit price bid for Cold Milling Asphalt Pavement.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

BROADBAND INTERNET SERVICE FOR FIELD OFFICE

Section 602 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added after the first paragraph of **Subsection 602.02(b)**:

Broadband Internet Service shall be provided to the field office where available.

The Broadband Internet Service shall be provided with an Internet Protocol (IP) address which is reachable on the global Internet (public) and which is permanently assigned (static). The Contractor is not required to provide this service if an IP address which is both static and public is not available.

If this service is not available at the beginning of a project but becomes available during the life of the project, the Contractor shall provide the service immediately from the date of availability.

The data transfer rate shall be 3 megabits per second (Mbps) download and 500 kilobits per second (kbps) upload, or higher, with latency not to exceed 150 milliseconds. If the broadband Internet service meets all of the requirements of this specification except for the data transfer rate and/or latency, then the best performing available connection shall be provided.

Prior to the selection of the broadband Internet service provider, the Contractor shall submit to the Resident Engineer, in writing, the proposed method for providing broadband Internet service. The Resident Engineer shall review this submittal and respond in writing regarding the acceptability of the proposed method.

The Broadband Internet Service shall be provided with equipment providing one Ethernet port.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

MAINTENANCE OF TRAFFIC

Section 603 Maintenance of Traffic and Temporary Structures of the Standard Specifications, Edition of 2014, is hereby expanded as follows:

The Contractor shall provide additional traffic control through the project as defined below, in order to provide a safe and convenient traffic flow at all times throughout the limits of each work zone and the approaches thereto.

The Contractor shall assume full responsibility for the safe and efficient movement of traffic through the construction area for the duration of the project. Prior approval by the Engineer shall be required for any alterations of traffic patterns shown on the plans.

All traffic control devices shall be in accordance with the details shown in the plans or on Standard Drawings TC-1, TC-1A, TC-2, TC-3, and TC-6. The Contractor will be responsible for furnishing, placing, maintaining, relocating, and subsequent removal of all traffic control devices within the limits of the project.

The Contractor shall notify the Engineer a minimum of 5 full business days prior to closing a lane. If the Contractor fails to give the proper notification, the lane closure will not be allowed until 5 full business days after the notification was given.

Only one (1) lane closure with a maximum work area of 2 miles will be provided for in the plans. The lane closure shall be installed such that it never exceeds the actual work area by more than $\frac{1}{4}$ mile. The Contractor shall not close any portion of a lane unless active work will begin immediately. In addition, when gainful work is not being accomplished in an area where a lane has been previously closed, steps shall be taken to return traffic to normal conditions - that is, all lanes open to traffic in each direction within 2 hours after construction operations have ceased. All additional labor, materials, and incidentals needed to return the traffic to normal conditions shall be provided, maintained, removed, and replaced, if necessary, at no cost to the Department. Traffic shall not be permitted on any milled surface.

Failure to comply with this requirement will result in a lane use charge for the specified location noted on the table on the next sheet until work begins in the closed lane or the lane closure is removed. The lane use charge shall apply to all construction work and unexpected, but otherwise preventable (as determined by the Engineer), maintenance related lane closures within the prohibited times. This includes lane closures directed by the Engineer to address immediate maintenance needs resulting from a lack of proper preventative maintenance (as determined by the Engineer) within the allowable closure times. A lane closure will not be considered to be removed until all advance warning devices specific to the lane closure have been removed or revised. In assessing this lane use charge any portion of an hour will be counted as a full hour.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

MAINTENANCE OF TRAFFIC

The Contractor shall schedule his work so that no main lane closures exist and no work requiring main lane closures will be performed for the time period of the day before the Holiday through the day after the Holiday for the following Legal Holidays:

- New Year's Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day & the Following Day
- Christmas Eve & Christmas Day

If the Legal Holiday is immediately prior to a weekend or immediately following a weekend, the weekend will be considered a part of the Holiday.

HIGHWAY 7 (SITE 1) (L.M. 8.760 – 9.050)

Site 1 of the project shall not be worked on from November 28th, 2026 through May 1st, 2027, and November 27th, 2027 through May 6th, 2028. The contractor shall schedule his work so that no main lane closures exist and no work requiring main lane closures will be performed for the aforementioned time period for Oaklawn Hot Springs horse racing season.

ENTIRE PROJECT

In addition, single and dual lane closures of the Highways 7 & 70B main lanes will not be permitted during the following time periods:

Route	Time Restrictions (Sunday through Saturday)	Hourly Lane Use Charge
Highway 70 (Section 9B)	7:00 a.m. to 8:00 p.m.	\$6,000
Highway 7 (Section 9) (L.M. 8.760 – 9.050)	7:00 a.m. to 9:00 p.m.	\$3,500
Highway 10 (Section 9) (L.M. 10.230 – L.M. 11.430)	7:00 a.m. to 8:00 p.m.	\$1,500

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

MAINTENANCE OF TRAFFIC

Failure to comply with this requirement will result in a lane use charge for the specified location noted in the aforementioned table per hour until the lane closure is removed. The lane use charge shall apply to all construction work and unexpected, but otherwise preventable (as determined by the Engineer), maintenance related lane closures within the prohibited times. This includes lane closures directed by the Engineer to address immediate maintenance needs resulting from a lack of proper preventative maintenance (as determined by the Engineer) within the allowable closure times. A lane closure will not be considered to be removed until all advance warning devices specific to the lane closure have been removed or revised. In assessing this lane use charge any portion of an hour will be counted as a full hour.

The Contractor shall schedule and perform the work, including the placement and removal of traffic control devices, to ensure that all Highways 7 & 70B traffic lanes are open at all times, with the aforementioned exceptions.

Special events or occurrences could cause traffic to become congested. When this occurs, the Contractor shall immediately modify the work schedule, working methods, or procedures to lessen the impact of the work on traffic or as directed by the Engineer.

The Contractor will regulate the access of work vehicles and equipment to the work area while ensuring safety to the traveling public and minimum damage to highway facilities. Any damage to the highway facility or vegetation caused by the Contractor shall be repaired at no cost to the Department. Unless operating within the area closed to traffic, the Contractor's work vehicles shall travel in the direction of the normal traffic flow. Only those vehicles necessary for the work shall be allowed in the work zone. All other vehicles shall be parked at a safe location outside the work zone, as approved by the Engineer.

General equipment storage areas or operations centers will be allowed within the limits of the right of way only where permitted by the Engineer. At the end of the work day, equipment shall be either shielded from traffic by an approved positive barrier or placed so it is not within 30 feet of any lane carrying traffic.

The Contractor shall conduct his operations so that no equipment or personnel shall occupy any portion of the roadway that remains designated for the passage of traffic.

BASIS OF PAYMENT: There shall be no direct payment for fulfilling the requirements of the Special Provision, but compensation shall be considered included in the price bid for Maintenance of Traffic.

Traffic control devices, where shown on the plans for payment, will be paid for at the contract unit price for each item involved. All additional traffic control devices beyond the contract amount shall be provided, maintained, and replaced, if necessary, at no cost to the Department.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
SURFACE-APPLIED DETECTABLE WARNING PANELS

DESCRIPTION: This item shall consist of furnishing and installing surface-applied detectable warning panels, in accordance with these specifications and the Standard Drawings, in conformity with the color, of the dimensions shown on the plans, at the locations shown on the plans, or as directed by the Engineer. The panels shall be placed on existing concrete surfaces and the work shall comply with the appropriate manufacturer's installation instructions.

MATERIALS: Surface-applied panels used shall be from suppliers/manufacturers on the Department's Qualified Products List (QPL) for Cast-In-Place Tactile Panels or must have prior approval from the Engineer.

The color of the panels shall conform to Federal Color No. 33538 unless specified differently in the plans or with prior Engineer approval. The color of the panels shall be homogeneous throughout the product and be ultraviolet stabilized to minimize color fade.

The surface shall be non-slip and incorporate truncated domes made of the same material as the panel. Dimensions and spacing of the truncated domes shall be in accordance with Standard Drawings WR-1 or WR-2 and shall comply with applicable American with Disabilities Act Accessibility Guidelines (ADAAG) and American with Disabilities Act (ADA) regulations regarding detectable warning surfaces. The panels shall have beveled edges and serve as detectable warnings in accordance with ADA Standards for Accessible Design Title III Regulation 28 CFR Part 36 (2010) Section 705.

The tactile panels shall have a minimum nominal thickness of 0.18 inches, exclusive of the height of the truncated domes. The panels shall be supplied with a proper anchoring system and/or adhesive which shall be proven and accepted by the panel manufacturer.

Construction Requirements: Surface-Applied Detectable Warning Panels shall be installed utilizing adhesive and drilled anchors in accordance with the manufacturer's recommendations.

Method of Measurement: Surface-Applied Tactile Panels will be measured by the square foot.

Basis of Payment: Work completed and accepted and measured as provided above will be paid for at the contract unit price per square foot for Surface-Applied Detectable Warning Panels, which price shall be full compensation for furnishing all materials, cleaning and preparing the concrete surface, and for all labor, equipment, tools, and incidentals necessary to complete the work.

Pay Item

Surface-Applied Detectable Warning Panels

Pay Unit

Square Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACTUATED CONTROLLER

Section 701 Actuated Controller of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The second paragraph of **Subsection 701.02 Materials (a) General** is hereby deleted and the following substituted therefore:

Prior to the ordering of all traffic signal equipment, the Contractor shall submit to the Engineer two (2) printed copies of the applicable brochures containing the design criteria for the equipment which the Contractor proposes to install for approval. The specific items that are proposed for use shall be clearly marked in the applicable brochures. A list shall be attached to identify the item and contain the manufacturer, quantity, model, and identifying descriptions of each item. Adequate engineering data, essential shop drawings, and schematic diagrams shall be provided for review. Partial submittals will not be accepted for consideration and shall be returned for correction without review.

- 1. Review.** For all traffic signal equipment submittals, the Engineer's review of the equipment submittals should be completed within thirty (30) days from the date of the submission unless otherwise specified. Once the Engineer has determined that the equipment submitted meets the design criteria, a written approval will be provided, in which no further action is required. If equipment submitted for use is rejected, the Contractor shall re-submit the equipment for review within fifteen (15) days of notification of equipment rejection. Resubmittal of rejected equipment for review will be considered the starting point of a new approval cycle as described.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

TRAFFIC SIGNAL CONTROLLER (MODIFICATION)

DESCRIPTION. This item shall consist of furnishing all materials, equipment, tools and labor necessary, and modifying an existing traffic signal control cabinet to operate as indicated on the plan sheets. All construction and materials shall be in accordance with the Standard Specifications for Highway Construction, Edition of 2014, unless superseded by this special provision.

MATERIALS. Contractor shall supply all necessary load switches, relays, lightning suppression, terminal facilities, wiring harnesses and incidentals necessary to achieve operation as shown on the plan sheet(s). This shall include any reprogramming and modifications of conflict monitor and traffic signal controller.

CONSTRUCTION REQUIREMENTS. The contractor shall perform all work possible that will minimize the time that the intersection is out of operation. If, in the opinion of the engineer, traffic conditions warrant, contractor shall provide flagmen to direct traffic while intersection is out of service.

The contractor shall make all modifications to the controller cabinet and intersection wiring necessary to accommodate entrance and wiring of the facilities. This includes wiring in place any additional wiring harnesses necessary to accommodate new or modified equipment and removing designated equipment from the cabinet.

Any equipment removed shall be disposed of as described on the plan sheets, or turned over to the Engineer.

A new set of cabinet diagrams shall be provided for any changes that are made.

METHOD MEASUREMENT. Traffic Signal modification will be measured by the unit price bid per each.

BASIS OF PAYMENT. Work completed, accepted and measured as provided above will be paid for at the contract unit price bid for each Traffic Signal Controller (Modification), which price shall be full compensation for furnishing all equipment required; mounting, wiring and testing; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Traffic Signal Controller (Modification)

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

CABINET DRAWER ASSEMBLY

Section 701 Actuated Controller of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 701.02 (d) (10) Wiring Diagrams and Controller Manual is hereby deleted and the following substituted therefore:

Three copies of the Cabinet Wiring Diagram and one copy of the controller manual shall be supplied with each cabinet. One diagram and the manual shall be placed in the "Cabinet Drawer Assembly". The "Cabinet Drawer Assembly" shall be fabricated to the approximate dimensions shown on the plans. Included with the "Cabinet Drawer Assembly" will be all hardware necessary to fasten and install the Assembly to the underside of a cabinet shelf roughly at the midpoint of the Cabinet vertically. One diagram shall be delivered to the City or County before final inspection of the intersection. One diagram shall be given to the Engineer.

The "Cabinet Drawer Assembly" shop drawing shall be included in the traffic equipment submittal.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****PASSIVE PEDESTRIAN DETECTION SYSTEM**

1. **DESCRIPTION.** This item shall consist of furnishing, installing, configuring, testing, calibrating, and placing into operation a complete Passive Pedestrian Detection System (hereinafter the System) at the locations shown on the plans, or as directed by the Engineer. The System shall use artificial intelligence (AI) based video analytics to automatically detect, track, and classify pedestrians and other vulnerable road users (VRU), and to predict pedestrian crossing intent, in order to place an automatic call for the pedestrian phase of the traffic signal controller- for a signal, pedestrian hybrid beacon (PHB) or Rectangular Rapid Flashing Beacon, or In-Road Warning Light System - without manual actuation of a pedestrian pushbutton.

The System furnished under this item shall be the Derq SENSE Passive Detection System as manufactured by Derq Inc., or an approved equal meeting the requirements of this special provision. Approval of an equal system shall be obtained from the Engineer prior to ordering materials.

The System shall be capable of operating as a replacement or supplement to a pedestrian pushbutton actuation as described in the plans

All materials and construction shall conform to the applicable requirements of the Standard Specifications for Highway Construction, latest edition, with applicable supplemental specifications, and to the reference standards listed in Subsection 2(I) of this special provision.

2. **MATERIALS.** The System shall consist of, but is not necessarily limited to, the major components described in (A) through (K) below.

(A) **General.** The System shall include, at a minimum, the following components, all of which are subsidiary to this item unless otherwise shown on the plans:

- AI Edge Processor (one per intersection, unless otherwise shown on the plans);
- Interface to the Detection camera(s), of the type and quantity shown on the plans;
- Traffic signal controller interface hardware;
- Interface and communications cabling, connectors, and terminations;
- Power supply and transient voltage surge protection;
- Software license(s) for all functions specified herein; and
- All mounting hardware, brackets, conduit, wiring, junction/pull boxes, and incidentals necessary for a complete and functional installation.

(B) **System Performance Requirements.** The System shall meet the following minimum performance requirements:

- Detection and Classification: The System shall detect, track, and classify all road users within the field of view of the detection camera(s), including pedestrians,

bicyclists, mobility aid users, and personal mobility devices, in all lighting and weather conditions, including nighttime, low light, occlusion, smoke, haze, rain, snow, sun glare, and fog.

- Accuracy: Detection accuracy shall be not less than 95 percent for vehicle, pedestrian, and bicycle detection, as substantiated by independent third-party agency or academic testing. Flexible detection zone configuration and algorithms designed to mitigate false positives.
- Intent Prediction: The System shall predict the intent of each detected VRU, including the intent to enter the roadway in or near a marked or unmarked crosswalk, not less than two (2) seconds prior to entry into the roadway.
- Detection Zones: The System shall support an unlimited number of user-configurable detection zones within the field of view. Each zone shall be independently configurable by road user class, direction of travel, directionality, presence duration, and traffic phase, and shall allow a configurable delay in the controller input.
- Loop Emulation: The System shall be capable of emulating an inductive loop detector, converting road user presence within a configured detection zone into a traffic signal controller input in either pulse or presence mode.
- Response: Upon detection of pedestrian presence and predicted crossing intent, the System shall place a call for the pedestrian phase in accordance with the timing and operational parameters shown on the plans.
- Controller Status: The System shall be capable of reading the phase or detector channel active in the traffic signal controller, including calls received from a third-party detection system such as a pedestrian pushbutton, and shall be capable of using User-Logic Command Operation (IF-THEN-ELSE) where available.
- Geofenced Detection: The System shall support geofenced detection and tracking of VRUs at the intersection to support passive detection and safety functions, including passive pedestrian presence detection to call the pedestrian phase.
- Failsafe Operation: The System shall revert to a failsafe operating mode in the event a system or sensor health issue is reported, and shall be user-configurable to operate in one of the following three modes: (1) maximum recall, (2) minimum recall, or (3) user-configurable fixed recall.
- Data Storage: Event data shall be stored within the United States with configurable data retention settings. Storage capacity shall be not less than 1,000,000 events or 720 hours of high-definition video recording.

(C) AI Edge Processor. The AI Edge Processor shall be a ruggedized, fanless, in-cabinet unit meeting the following requirements:

- Processing Capacity: Capable of simultaneously processing real-time video from not less than eight (8) high-definition camera feeds, and of generating multi-object tracking and classification metadata at a minimum update frequency of 10 Hz per stream.
- Camera Support: Camera agnostic, supporting rectilinear, panoramic (fisheye), and thermal cameras, in fixed or pan-tilt-zoom configuration, over network or analog (using an encoder) connections, using H.265, H.264, MJPEG, or MPEG-4 formats over RTSP or HTTP protocols. The unit shall support software-based

digital pan, tilt, rotate, and zoom (PTRZ) to define the field of view from any video stream.

- Network and Ports: Not less than four (4) gigabit Power over Ethernet (PoE) ports or two (2) gigabit PoE+ ports with a combined 60-watt power budget; four (4) channel isolated digital input and four (4) channel isolated digital output; two (2) USB 3.0 ports; and one (1) HDMI port supporting 3840 x 2160 resolution at 60 Hz. PoE shall conform to IEEE 802.3.
- Electrical: Input power of 9 to 36 VDC, or 12 VDC using an external AC/DC power adapter as required by manufacture, with built-in surge protection of not less than plus or minus 6 kV.
- Environmental: Rated for continuous operation from -34°C to +74°C (-29°F to +165°F); operation at up to 95 percent relative humidity (non-condensing) at 40°C; and shock and vibration resistance of not less than 10G at 11 ms and 3Grms at 5 to 500 Hz, random, one hour per axis. The unit shall operate without a built-in fan.
- Certifications: UL, CB, CE, FCC, BSMI, and CCC certified; conforming to all applicable NEMA TS 2 environmental requirements as a standalone device, without external or ancillary hardware for compliance; and conforming to FCC Title 47, Part 15, Subpart B, Class A, tested in accordance with ANSI C63.4.
- Indication: Not less than four (4) LED indicators displaying the health and status of the unit's power, network, and serial communication.

(D) Detection Cameras. Detection camera(s) shall be furnished of the type(s) and quantity shown on the plans and shall be compatible with the AI Edge Processor specified herein and meet the minimum performance standards:

- 360-degree camera:
 - Where shown on the plans, the fisheye camera shall provide 360-degree panoramic coverage.
 - A minimum resolution of 1280 x 1280
 - Minimum Framerate of 10 frames per second,
 - Low light capabilities (min: 0.04lux) and/or Night vision/Active infrared
- Power: Each camera shall be powered over Ethernet from the AI Edge Processor and shall not require a separate power source unless otherwise shown on the plans.

(E) Traffic Signal Controller Interface. The System shall interface with the traffic signal controller without field modification to the controller, using the interface type shown on the plans:

- Network: SNMP, HTTP, NTCIP 1202, NTCIP 1211, NTCIP 1218, SAE J2735, or AB3418.
- Serial: 25-pin D-subminiature (DB25) SDLC connector, compatible with TS2 (using a DB25-to-DB15 converter), ATC-SB1, and 2070 ITS-SP3 and ITS-SP5/8 controller SDLC interfaces, through software configuration without hardware modification to the unit.
- Hardwire: 37-pin I/O connector providing not less than 32 output channels, using digital I/O or dry contact closures.

- (F) **Interface and Communications Cabling.** All wiring furnished under this item shall comply with the applicable requirements of the National Electrical Code (NEC) and the following:
- Cable between the detection camera(s) and the AI Edge Processor shall be minimum Category 5e cable as specified in the in the Video detection system SP, if a CAT6 cable is recommended by the manufacturer based on the specification of the video detector; it shall follow the equivalent Category 6 standards and be approved by the engineer before purchasing or installing.
- (G) **Power Supply and Surge Protection.** The power supply shall be furnished in the configuration shown on the plans:
- Where the AI Edge Processor is not powered from an existing PoE+ source, a 12 VDC to AC/DC power adapter shall be furnished and installed within the controller cabinet and wired to the cabinet regulated AC power in accordance with the NEC and the cabinet manufacturer's recommendations.
 - The System shall include built-in transient voltage surge suppression of not less than plus or minus 6 kV on field wiring. Surge protection shall conform to IEEE/ANSI C62.41, and all surge protective devices shall be UL Listed in accordance with UL 1449.
- (H) **Software, Licensing, and Remote Monitoring.**
- Software required for configuration, operation, and monitoring of the System shall be included as subsidiary to this item and shall include all licenses necessary to support the specified functions for the useful life of the device.
 - Optional services, such as remote data analytics, cloud-based monitoring, or system health reporting not required for normal operations, may require a subscription after 1-year. Any subscription requirements, associated features, and renewal costs shall be clearly identified in the Contractor-provided product data and cut sheets.
 - The System shall provide a web-based dashboard accessible to an unlimited number of users and shall allow both remote and local configuration and maintenance, including over-the-air software updates.
 - The System shall provide high frequency health and status checks, including power failure, memory usage, processor usage, and communications failure, and shall provide system monitoring reports.
 - The System shall provide real-time notification of detected events and system health issues by email, SMS, and customizable push or pull application programming interface (API) to third-party systems, including advanced traffic management systems (ATMS).
 - The System shall have an uptime of not less than 99 percent.
 - Where a hosted or cloud-based software platform is furnished, the platform shall be certified to a recognized third-party information security standard, such as SOC 2 Type II.
 - The Contractor shall furnish the Department, or the local agency responsible for maintenance, not less than two (2) active user accounts for the monitoring platform for the duration of the license term shown on the plans.

- All wireless transmitting equipment furnished under this item shall comply with the applicable requirements of FCC Title 47, Part 15.
- (I) **Submittals.** Prior to ordering materials, the Contractor shall submit to the Engineer, for approval, not less than two (2) copies of the manufacturer's catalog cut sheets, technical specifications, wiring diagrams, and installation instructions for each component of the System. The Contractor shall also submit documentation of the independent third-party agency or academic testing substantiating the detection accuracy specified in Subsection 2(B). No materials shall be ordered until the submittals have been approved by the Engineer.
- (J) **Manufacturer's Warranty and Training.** The System, including all hardware and software components, shall be warranted by the manufacturer against defects in materials and workmanship for a period of not less than three (3) years from the date of final acceptance. The warranty period shall include software maintenance and updates for the same period. Where an extended warranty is shown on the plans, the Contractor shall furnish the extended warranty in accordance with the manufacturer's published terms. The Contractor shall provide, or arrange for the manufacturer to provide, not less than sixteen (16) hours of training to Department or local agency personnel in the operation, configuration, and maintenance of the System, and shall furnish a complete set of equipment lists, operation and maintenance manuals, and wiring diagrams.

3. **CONSTRUCTION REQUIREMENTS.**

- Install all system components in accordance with the manufacturer's written instructions and the plans. Coordinate with the manufacturer's representative, at no additional cost to the Department, for initial system setup, detection zone configuration, and camera alignment.
- Install the AI Edge Processor within the traffic signal controller cabinet or an approved enclosure as shown on the plans. The Contractor shall perform any necessary cabinet modifications and removal of existing equipment required for installation.
- Mount detection cameras in accordance with the plans, manufacturer requirements, or as directed by the Engineer to provide the required crosswalk and approach coverage. The Contractor shall complete final camera alignment and detection zone calibration, with manufacturer support as needed, and verify operation in the presence of the Engineer.
- Configure the System to interface with the traffic signal controller such that detected pedestrian presence and crossing intent automatically place a pedestrian phase call, as specified in the plans or directed by the Engineer.
- Upon completion, demonstrate full system functionality to the Engineer, including detection performance, pedestrian call operation for all detection zones, daytime and nighttime operation, and fail-safe functionality prior to acceptance.
- The Contractor shall, at no additional cost to the Department, repair or replace any defective, damaged, or noncompliant components identified prior to final acceptance.

4. **METHOD OF MEASUREMENT.** Passive Pedestrian Detection System will be measured by the unit (Each). One unit shall consist of one complete and operating System at a single location, including the AI Edge Processor.

5. **BASIS OF PAYMENT.** Work completed and accepted, and measured as provided above, will be paid for at the contract unit price bid per each for Passive Pedestrian Detection System. The price bid shall be full compensation for furnishing, installing, configuring, testing, calibrating, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Passive Pedestrian Detection System	Each

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

1. **DESCRIPTION.** This item shall consist of furnishing, installing, testing, calibrating, and placing into operation a complete In-Road Lighting (IRL) System at the location(s) shown on the plans.

The IRL System shall provide enhanced pedestrian visibility, through pavement mounted high intensity LED warning lights activated by pushbutton actuation or passive, non-contact detection of a pedestrian approaching, waiting at, or occupying a marked crosswalk. In -roadway warning lights shall cease operation after the pedestrian clears the crosswalk.

The in-road lighting furnished under this item shall be the MLK150 In-Road LED-Illuminated Markers as manufactured by Lane Light Traffic Technologies Inc., or an approved equal meeting the requirements of this special provision.

All materials and construction shall conform to the applicable requirements of the Standard Specifications for Highway Construction, latest edition, with applicable supplemental specifications, and to the reference specified throughout this special provision.

2. **MATERIALS.** The IRL System shall include all equipment, materials, software, controls, power supply components, communication equipment, wiring, conduit, mounting hardware, and appurtenances necessary to provide a complete and fully operational installation. The System shall consist of, but is not necessarily limited to, the major components described in (A) through (F) below. All components shall be fully compatible by the system manufacturer. The Contractor shall demonstrate interoperability of all furnished components and, except where the plans establish separate pay items, shall be considered subsidiary to the single pay item for In-Road Warning Lighting System.

- (A) **In-Road LED Warning Light Units.** Each in-road light unit shall be a self-contained, LED-illuminated marker suitable for direct installation flush, and shall meet the following minimum requirements:
- Housing: Upper and lower housings shall be machined or cast aluminum alloy 6061-T6, or approved equal, conforming to the applicable mechanical and physical property requirements of ASTM B221 for the alloy and temper furnished.
 - Lens: Borosilicate glass, resistant to abrasion, thermal shock, and ultraviolet (UV) degradation.
 - Environmental Rating: IP68 (dust-tight, protected against continuous submersion) in accordance with IEC 60529, or an equivalent recognized ingress-protection standard approved by the Engineer.
 - Load Rating: Minimum 80,000 lbf (36,000 kgf) static vertical load, suitable for direct installation within a vehicular travel lane.
 - Operating Temperature: -13°F to +167°F (-25°C to +75°C), minimum range.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

- LED Color: Yellow (amber), conforming to the chromaticity requirements applicable to in-roadway warning lights under the MUTCD/ITE, unless another color is specifically required by the plans.
 - Light Intensity: Minimum 3,500,000 cd/m².
 - Dimming: Capable of automatic day/night brightness adjustment via pulse-width modulation (PWM) or equivalent method, controlled by the System Controller.
 - Electrical: Low-voltage, 3-wire DC supply, 12-36 VDC operating range, with power consumption not to exceed 2.5 W (nominal) per unit unless otherwise shown on the plans.
 - Snowplow Compatibility: Units shall be furnished and installed in a flush, snowplow-compatible profile (0 in. [0 mm] above the finished roadway surface).
 - Configuration: Uni-directional and asphalt compatible lower housing, shall be furnished as required by the roadway surface type and unit spacing shown on the plans.
 - MUTCD Compliance: In-road warning light units shall comply with all applicable requirements of the latest edition of the MUTCD, including Section 4U, In-Roadway Warning Lights. The installed system shall utilize approved light color, placement, flash characteristics, and operating modes consistent with MUTCD requirements.
- (B) **Passive Pedestrian Detection.** The IRL System shall be integrated with a passive pedestrian detection system at each crosswalk approach. The detection system shall automatically activate the warning lights upon detection of a pedestrian approaching or entering the crossing and shall maintain activation for the programmed crossing interval. The passive pedestrian detection system shall conform to the requirements of the **Passive Pedestrian Detection Special Provision**, including all requirements related to detection technology, coverage, enclosure, controller interface, response time, calibration, and system performance. The Contractor shall furnish and install all equipment necessary to provide a complete and fully functional integrated system.
- (C) **System Controller.** A single, field-programmable System Controller shall control the activation, timing, dimming, and flash pattern of all In-Road LED Warning Light Units and Passive Pedestrian Detection Unit(s) at each crossing location, and shall meet the following minimum requirements:
- Activation Modes: Field-configurable, at minimum, for (1) Passive Pedestrian Detection (automatic, non-contact activation); (2) scheduled/continuous flash

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

operation (e.g., school zone time-of-day schedules); and (3) manual/maintenance override.

- Adjustable Settings: Separately adjustable day and night brightness (dimming) percentages, adjustable crossing (flasher) time, selectable flash pattern, solar/light-dim voltage threshold (where applicable), time zone, and daylight saving time settings.
- Scheduling: Capable of supporting creation and remote editing of time- and date-based flash schedules (e.g., school zone schedules) through the manufacturer's software interface described in (F) below.
- Enclosure: NEMA 250 rated enclosure appropriate for the mounting location shown on the plans (existing traffic signal cabinet, stand-alone cabinet, or pole-mounted enclosure).

(D) Power Supply.

- AC Configuration: Service conductors, disconnects, and wiring furnished from a Department- or utility-provided electrical service point shall comply with the applicable requirements of the NEC, including Article 250 (Grounding and Bonding) and Article 300 (Wiring Methods), and with Section 706 and Section 711 of the Standard Specifications, as applicable.

(E) Remote Monitoring and Communications. The System shall include a cellular (LTE) or equivalent communications module and shall meet the following minimum requirements:

- The communications module shall automatically and periodically upload system and device status data, including at a minimum connectivity status, battery/panel voltage, and activation counts, to a web-based, password-protected monitoring platform.
- The monitoring platform shall provide, at a minimum, a map-based display of all System locations and their connectivity status; the ability to view and export activation and status logs; and automated notifications for low-battery, critical-battery, and loss-of-communication (connectivity) alert conditions.
- The Contractor shall provide the Department, or the local agency responsible for system maintenance, with a minimum of two (2) fully functional administrative user accounts and all software licenses necessary to access, monitor, configure, and maintain the System. Licenses shall be perpetual or otherwise remain active and fully supported for the expected service life of the System without requiring additional subscription fees, renewal costs, or other charges to the Owner.
- All wireless transmitting equipment furnished under this item shall comply with the applicable requirements of FCC Title 47, Part 15.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

- Software required for configuration, operation, and monitoring of the System shall be included as subsidiary to this item and shall include all licenses necessary to support the specified functions for the useful life of the device.
 - Optional services, such as remote data analytics, cloud-based monitoring, or system health reporting not required for normal operations, may require a subscription after 1-year. Any subscription requirements, associated features, and renewal costs shall be clearly identified in the Contractor-provided product data and cut sheets.
- (F) **Wiring, Conduit, and Grounding.** All wiring furnished under this item shall comply with the applicable requirements of the National Electrical Code (NEC/NFPA 70):
- Low-voltage DC control and power wiring between the In-Road LED Warning Light Units, Passive Pedestrian Detection Unit(s), and System Controller shall comply with NEC Article 300 (Wiring Methods) and, where applicable, NEC Article 725 (Class 1, Class 2, and Class 3 Remote-Control, Signaling, and Power-Limited Circuits) and/or NEC Article 411 (Low-Voltage Lighting Systems).
 - Line-voltage AC wiring associated with the Power Supply shall comply with NEC Article 250 (Grounding and Bonding) and NEC Article 300 (Wiring Methods).
 - Conduit, pull boxes, and junction boxes necessary to route wiring between components of the System shall conform to Section 711 of the Standard Specifications and, except where separately established as a bid item on the plans, shall be considered subsidiary to this item.
 - Wiring between in-pavement units and the System Controller shall be installed in accordance with the manufacturer's recommendations for the pavement type at each location, and all in-pavement connections shall be fully sealed and waterproof.
- (G) **Submittals.** Prior to ordering materials, the Contractor shall submit to the Engineer, for approval, not less than two (2) copies of the manufacturer's catalog cut sheets, technical specifications, wiring diagrams, and installation instructions for each component of the System. The Contractor shall also submit documentation of the independent third-party agency or academic testing substantiating the detection accuracy specified in Subsection 2(B). No materials shall be ordered until the submittals have been approved by the Engineer.
- (H) **Manufacturer's Warranty.** The IRL System, including all hardware and software components, shall be warranted by the manufacturer against defects in materials and workmanship for a period of not less than five (5) years from the date of final acceptance. The warranty shall include providing replacements within ten (10) calendar days of notification for defective parts and equipment during the warranty period at no cost to the Owner..The warranty period shall include

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

software maintenance and updates for the same period. Where an extended warranty is shown on the plans, the Contractor shall furnish the extended warranty in accordance with the manufacturer's published terms. The Contractor shall provide, or arrange for the manufacturer to provide, not less than sixteen (16) hours of training to Department or local agency personnel in the operation, configuration, and maintenance of the System, and shall furnish a complete set of equipment lists, operation and maintenance manuals, and wiring diagrams.

3. CONSTRUCTION REQUIREMENTS.

The Contractor shall provide an authorized manufacturer's representative on site during installation, initial system startup, calibration, and acceptance testing. The manufacturer's representative shall verify that the system has been installed in accordance with the manufacturer's written requirements and shall provide written certification to the Engineer that the installation complies with the manufacturer's recommendations and is eligible for full warranty coverage.

Passive Pedestrian Detection Unit(s) Final aiming and calibration of each detection zone shall be performed by the Contractor, with the manufacturer's technical support as needed, and documented in writing to the Engineer prior to final acceptance. Refer to the **Passive Pedestrian Detection Special Provision** for additional construction requirements.

In-road LED warning light units shall be installed in a snow-plowable profile and sealed in accordance with the manufacturer's written recommendations for the pavement type and installation conditions at each location. Installed units shall be flush with the finished pavement surface and free of any lip, gap, protrusion, or surface discontinuity. The finished installation shall provide a smooth riding surface that does not present a hazard to bicycles, pedestrians, maintenance equipment, or snow-removal operations.-

The Contractor shall schedule and sequence the work to minimize the duration of any crosswalk or adjacent sidewalk closure. When temporary closure of a crosswalk is required, the Contractor shall maintain pedestrian access and provide temporary pedestrian traffic control measures in accordance with the Contract Documents and the current MUTCD. All pedestrian accommodations shall be established prior to closing the affected pedestrian facility.

Upon detection of a pedestrian within the designated detection zone, the System shall activate the In-Road LED Warning Light Units within one (1) second. The duration of activation shall be sufficient to accommodate a pedestrian traversing the full crosswalk length and shall remain active continuously while the pedestrian occupies the crosswalk. The Contractor shall demonstrate, through acceptance testing witnessed by the Engineer, that the System maintains activation for the full duration of a pedestrian crossing event

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

and does not terminate prematurely. Any failure to maintain activation while a pedestrian is within the crosswalk shall constitute noncompliance with this specification.

- (A) Acceptance Testing:** Upon completion of installation, programming, calibration, and startup, the Contractor shall perform field acceptance testing in the presence of the Engineer. Acceptance testing shall demonstrate that the complete system operates in accordance with the Contract Documents and manufacturer's requirements.

Testing shall include, at a minimum:

- Verification of proper operation of all in-road warning light units.
- Verification of proper operation of all activation devices, detectors, push buttons, communications equipment, controllers, and associated system components.
- Verification of flash patterns, timing sequences, and activation durations.
- Verification of system operation during daytime and nighttime conditions.
- Verification of system recovery following power interruption or communications loss.
- Verification that all warning light units activate and operate as intended upon system activation.

Any deficiencies identified during field acceptance testing shall be corrected by the Contractor and the affected portions of the test repeated until satisfactory operation is demonstrated.

Following successful completion of field acceptance testing, the system shall be placed into an operational acceptance period of 30 consecutive calendar days. During the operational acceptance period, the system shall perform all required functions continuously and without error, failure, malfunction, or unplanned interruption. The operational acceptance period shall be used to demonstrate the reliability and functionality of the complete installed system under normal operating conditions.

A system failure shall include, but not be limited to:

- Failure of any in-road warning light unit to operate as specified.
- Failure of any detector, push button, controller, power supply, communication device, or other system component.
- Failure of the system to activate when required.
- False or unintended system activations.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

- Communication or network failures affecting system operation.
- Any condition that prevents the system from performing its intended function.
- Any component requiring repair, replacement, reprogramming, or adjustment due to improper operation.

If a system failure occurs at any time during the 30-day operational acceptance period, the Contractor shall promptly investigate and correct the cause of the failure at no additional cost to the Owner.

Upon correction of the failure, a new 30-consecutive-calendar-day operational acceptance period shall begin. Credit shall not be given for any portion of the previous acceptance period completed before the failure occurred.

Final acceptance will not be granted until the system has successfully completed a full 30 consecutive calendar days of error-free operation following correction of all deficiencies identified during the acceptance period.

4. **METHOD OF MEASUREMENT.** In-Road Warning Light System, Passive Pedestrian Detection will be measured by the unit (Each). One unit shall consist of one complete, functioning System, as shown on the plans, serving a single crosswalk or midblock crossing location, and shall include all In-Road LED Warning Light Units, System Controller, Power Supply, and Remote Monitoring/Communications components required to serve that location, regardless of the number of individual in-road light units, detection units, or approaches comprising that location.
5. **BASIS OF PAYMENT.** Work completed and accepted, and measured as provided above, will be paid for at the contract unit price bid per each for In-Road Warning Light System, Passive Pedestrian Detection, which price shall be full compensation for furnishing, installing, testing, calibrating, and placing into operation the complete System; and shall include, but not be limited to, the following items, all of which are considered subsidiary to this pay item and for which no separate payment will be made, unless otherwise established as a separate pay item on the plans:
 - In-Road LED Warning Light Units, of the number and configuration shown on the plans;
 - System Controller;
 - Power Supply, complete with solar panel(s), charge controller, and battery, or AC service wiring and disconnects, as applicable;
 - Remote Monitoring/Communications equipment and associated software licenses;

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IN-ROAD WARNING LIGHT SYSTEM**

- Mounting hardware, anchors, foundations, conduit, wiring, and junction/pull boxes;
- Signage, where required for use with the System;
- Manufacturer's warranty, submittals, field calibration, and Department/local agency training;
- and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item**Pay Unit**

In-Road Lighting System

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB)

1. **Description.** This item consists of furnishing and installing a solar powered Rectangular Rapid Flashing Beacon (RRFB) at the locations shown on the plans or as directed by the Engineer. Each assembly shall be solar powered, and pedestrian activated. All construction and materials shall be in accordance with the Standard Specifications for Highway Construction, Edition of 2014, with applicable supplemental specifications.
2. **Materials.** All work shall comply with the ADA and the MUTCD. Each RRFB shall be pedestrian-activated and shall be furnished as a complete assembly in accordance with the following requirements.

(a) **Light Bar.** Each RRFB unit shall include the following:

- i. **Single-Sided RRFB.** One single-sided light bar containing 2 rectangular indications facing traffic and 1 indication on each end of the light bar visible to pedestrians in the crosswalk for each direction.
- ii. **Double-Sided RRFB.** Two single-sided light bars mounted back-to-back, each containing 2 rectangular indications facing traffic and 1 indication on each end visible to pedestrians in the crosswalk for each direction.

Each RRFB unit shall consist of two rapidly flashing rectangular yellow indications, each with an LED-array-based pulsing light source. Each vehicle-facing indication shall be at least 5 inches wide and at least 2 inches high. The 2 vehicle indications for each RRFB light bar shall be aligned horizontally, with the longer dimension horizontal, and with a minimum spacing of 7 inches between the nearest edges of the two indications. The outside edges of the RRFB indications, including housings, shall not project beyond the outside edges of the W11-2, S1-1, or W11-15 sign that the RRFB supplements.

The daylight intensity of the yellow indications shall meet the minimum specifications for Class 1 yellow peak luminous intensity in SAE J595, Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles. The light bar housing shall be constructed of durable, corrosion-resistant powder-coated aluminum with stainless steel fasteners.

(b) **Control Circuit.** The control circuit shall be capable of independently flashing up to 2 independent outputs. The LED light outputs and flash pattern shall be factory programmed. When activated, each RRFB shall flash the 2 indications following the MUTCD-recommended flash pattern.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB)

When activated, the 2 yellow indications in each RRFB unit shall flash in a rapidly flashing sequence and shall provide 75 flashing sequences per minute.

The RRFB shall be normally dark, shall initiate operation only upon pedestrian actuation, and shall cease operation at a predetermined time after the pedestrian actuation or, when passive detection is used, after the pedestrian clears the crosswalk.

When activated, all RRFB units associated with a given crosswalk, including any advance crossing signs, shall commence operation simultaneously and shall cease operation simultaneously.

The predetermined flash period shall be initiated each time a pedestrian is detected, whether through passive detection or by a pedestrian push button, including when pedestrians are detected while the RRFBs are already flashing or immediately after the RRFBs have ceased flashing.

The flash rate of each individual RRFB indication, as applied over the full flashing sequence, shall not exceed 5 flashes per second to avoid frequencies that might cause seizures.

(c) Controller. The controller shall be either web-enabled to allow remote programming and system diagnostics, including flash time, flash pattern, battery voltage, and temperature, or shall include an onboard user interface that provides system diagnostics and allows changes to system settings. The control circuit shall be installed in an IP67, NEMA-rated enclosure that is dust-tight and waterproof to a depth of 3 feet for 30 minutes.

(d) Battery. The battery shall be a 12 VDC Absorbed Glass Mat (AGM), sealed lead-acid, maintenance-free battery. The battery shall have a minimum rating of 40 Ah and shall conform to Battery Council International (BCI) specifications. The battery shall have an operating temperature range of -76 °F to 140 °F. The battery shall be solar charged and shall provide a capacity up to 30 days of autonomy without sunlight, depending on ambient temperature and number of activations.

(e) Wireless Radio. The radio control system shall operate on 900 MHz frequency-hopping spread-spectrum network with a normal operating range of 1,000 feet. The radio system shall operate from 3.6 VDC to 15 VDC. The radio shall provide wireless communication between assemblies to integrate the pushbutton activation of the indications. The radio shall synchronize all remote light indications so that they activate

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB)

within 120 milliseconds of each other and remain synchronized throughout the duration of the flashing cycle.

(f) Solar System Housing. The solar system housing shall be a NEMA 3R rated fiberglass cabinet with lockable clasps.

(g) Solar Panel. The solar panel shall provide a minimum peak total output of 55 watts. It shall be affixed to an aluminum plate and bracket and shall be adjustable from 45 degrees to 60 degrees to facilitate maximum solar collection and battery performance. The Solar Panel Assembly, including panel, plate, and bracket, shall be mounted on a 360-degree rotatable pole-cap mount to facilitate maximum solar collection and battery performance. The solar panel shall have a minimum operating temperature range of -40 °F to 185 °F.

(h) Pushbutton. The audible pushbutton station shall be an ADA-compliant pushbutton with a field-adjustable directional arrow or bidirectional arrow, piezo-driven with visual LED indication, and an audible message spoken twice stating, "Warning lights are flashing." The unit shall include a weatherproof speaker. The pushbutton enclosure shall meet or exceed NEMA 250, Type 4X requirements. The enclosure cover and backplate shall be powder-coated cast aluminum. The audible pushbutton shall not use vibrotactile indications or percussive indications.

(i) Signs. All signs shall comply with Section 723. The Contractor shall provide all mounting hardware, sign blank, sheeting, tools, equipment, and labor necessary to complete installation.

Two sets of signs shall be provided with each pole, unless otherwise shown on the Plans. Each set shall include:

One 36-inch by 36-inch sign (W11-2 Pedestrian, S1-1 School, or W11-15 Trail Crossing, as shown on the Plans),

One 30-inch by 21-inch arrow placard (W16-7P or W16-7aP, as shown on the Plans), and

One R10-25 sign reading "PUSH BUTTON FOR WARNING LIGHTS/WAIT FOR GAP IN TRAFFIC," measuring 9 inches by 12 inches, installed at each pushbutton station.

(j) Signpost. The signpost or pole shall be as shown on the Plans.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB)

(k) Equipment Submittal. In accordance with the Actuated Controller Special Provision, the Contractor shall submit the following items to the Engineer for approval:

1. Cabinet
2. Controller
3. Solar Panel
4. Light Bar
5. Push Button Station
6. Pedestal Pole
7. Pedestal Base

The Contractor shall submit additional items and information to the Engineer upon request.

3. **Construction Requirements.** The RRFB assembly, signs, pushbuttons, solar panel, cabinet, and associated equipment shall be installed at the locations shown on the Plans or as directed. Installation shall include all mounting hardware, wiring, adjustments, and system testing necessary to place the equipment into proper operating condition.
4. **Method of Measurement.** Rectangular Rapid Flashing Beacons (RRFB) will be measured per unit. A unit shall consist of one fully installed and operational RRFB assembly, including all equipment, hardware, signs, pushbuttons, solar power components, and accessories required for a complete and functional installation.
5. **Basis of Payment.** Payment for the Work specified in this Section will be made at the Contract unit prices bid for the pay items shown in the Contract. The Contract unit prices will constitute full compensation for completing the Work specified in this Section. Work not designated for separate payment under this Section will be considered incidental and included in the Contract unit prices bid for other items of Work.

Payment will be made under:

Pay Item

Pay Unit

Rectangular Rapid Flashing Beacon (RRFB)

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

1. **Description.** This item consists of furnishing and installing an AC-powered Rectangular Rapid Flashing Beacon (RRFB) at the locations shown on the plans or as directed by the Engineer. Each assembly shall be powered via standard 100-240 VAC and pedestrian activated. All construction and materials shall be in accordance with the Standard Specifications for Highway Construction, Edition of 2014, with applicable supplemental specifications.
2. **Materials.** All work shall comply with the ADA and the MUTCD (latest editions). Each RRFB shall be pedestrian-activated and shall be furnished as a complete assembly in accordance with the following requirements.

(a) **Light Bar.** Each RRFB unit shall include the following:

- i. **Single-Sided RRFB.** One single-sided light bar containing 2 rectangular indications facing traffic and 1 indication on each end of the light bar visible to pedestrians in the crosswalk for each direction.
- ii. **Double-Sided RRFB.** Two single-sided light bars mounted back-to-back, each containing 2 rectangular indications facing traffic and 1 indication on each end visible to pedestrians in the crosswalk for each direction.

Each RRFB unit shall consist of two rapidly flashing rectangular yellow indications, each with an LED-array-based pulsing light source. Each vehicle-facing indication shall be at least 5 inches wide and at least 2 inches high. The 2 vehicle indications for each RRFB light bar shall be aligned horizontally, with the longer dimension horizontal, and with a minimum spacing of 7 inches between the nearest edges of the two indications. The outside edges of the RRFB indications, including housings, shall not project beyond the outside edges of the W11-2, S1-1, or W11-15 sign that the RRFB supplements.

The daylight intensity of the yellow indications shall meet the minimum specifications for Class 1 yellow peak luminous intensity in SAE J595, "Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles".

The light bar housing shall be constructed of minimum 12-gauge aluminum, corrosion-resistant powder-coated aluminum with stainless steel fasteners.

The light bar bracket assembly shall be constructed such that the signal head can be removed or adjusted easily in the field.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

(b) Control Circuit. The control circuit shall be capable of independently flashing up to 2 independent outputs. The LED light outputs and flash pattern shall be factory programmed. When activated, each RRFB shall flash the 2 indications following the MUTCD-recommended flash pattern.

When activated, the 2 yellow indications in each RRFB unit shall flash in a rapidly flashing sequence and shall provide 75 flashing sequences per minute.

The RRFB shall be normally dark, shall initiate operation only upon pedestrian actuation, and shall cease operation at a predetermined time after the pedestrian actuation or, when passive detection is used, after the pedestrian clears the crosswalk.

When activated, all RRFB units associated with a given crosswalk, including any advance crossing signs, shall commence operation simultaneously and shall cease operation simultaneously.

The predetermined flash period shall be initiated each time a pedestrian is detected, whether through passive detection or by a pedestrian push button, including when pedestrians are detected while the RRFBs are already flashing or immediately after the RRFBs have ceased flashing.

The flash rate of each individual RRFB indication, as applied over the full flashing sequence, shall not exceed 5 flashes per second to avoid frequencies that might cause seizures.

(c) Controller. The controller shall be either web-enabled to allow remote programming and system diagnostics, including flash time, flash pattern, battery voltage, and temperature, or shall include an onboard user interface that provides system diagnostics and allows changes to system settings. The control circuit shall be installed in an IP67, NEMA-rated enclosure that is dust-tight and waterproof to a depth of 3 feet for 30 minutes.

The controller must provide for communications between all RRFBs operating in connection with a specified crossing as indicated in the plans

- (i) Wireless Communications. RRFB must be capable of operating hardwired or through wireless communications. When wireless communications are required, all associated units (i.e. on the opposite sides of the road as well as the unit in the median, when included,) will communicate wirelessly. The radio transmitter and receiver will use an unlicensed frequency. The wireless communication system will work to ensure that the lights will flash

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

for a period that will allow pedestrians to safely cross the street. The amount of time will be determined by the Engineer. The initiation of the signal for the flashers to commence flashing will be by pedestrian push button. Each time a pedestrian pushes a button, the countdown timers will reset to the preset count down time; thus allowing the beacons to flash for a full cycle for this pedestrian.

- (ii) Hardwired Systems. When required by the plans, the system must be capable of operation using one cabinet mounted at a location shown on the plans. Conductor for the 12 Vdc circuits to the RRFB's and pushbutton detector must be as required on the plans.

(d) Power Cabinet. Power module cabinets shall be rated to a minimum of NEMA 3R and shall be an aluminum alloy or stainless steel. The cabinet shall be of clean-cut design and appearance. The size of the cabinet shall be such as to provide ample space for housing the controller and associated electrical devices that are to be furnished with it, together with other auxiliary devices herein specified.

The AC/DC power supply shall be mounted inside the cabinet with no external control cabinet required.

Cabinet shall be vented to provide cooling of the electronic system. The vents shall be screened to prevent ingress by insects and other debris.

Cabinet shall have tamper-proof hinged door with an integrated padlockable latch for use with lock shackles up to 1/4" or ability to accept a national industry standard #2 padlock.

Cabinet shall have integrated mounting brackets to accept industry standard banding and shall include trade size threaded pipe nipple to facilitate running wiring internal to a pole.

Cabinet shall have exposed spring-loaded push button terminal blocks for final electrical connections.

All fasteners shall be stainless steel.

(e) Power Assembly. Unit shall include a universal AC/DC power supply that accepts conventional 100-240 VAC input and outputs as required for operation. It shall be rated for manufacture required wattage; featuring short circuit, overload and overvoltage protection. AC wiring input shall terminate on DIN-rail mounted terminal blocks. Power supply shall have a status LED indicating power is on. Power supply shall be field replaceable.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

(f) Surge Protection Device Surge Protection Device. Unless approved otherwise, provide a suitable surge protection device (SPD) capable of protecting up to 120 Vac, 60-amp service, have no follow current, respond in 5 nanoseconds, and will allow automatic recovery. The SPD must have a minimum peak surge current rated for 10kA/mode/phase total. (Example: Edco SPA-100T, Hesco HE100.) The surge arrestor will be of a size adequate to fit the enclosure. It will operate from -30°F to +140°F.

(g) Wireless Radio. The radio control system shall operate on 900 MHz or 2.4GHz frequency-hopping spread-spectrum network with a normal operating range of 1,000 feet and be in accordance with FCC rules for transmission power. The radio system shall operate on a low-voltage DC system compatible with system devices from -30 °F to + 140 °F. The radio shall provide wireless communication between assemblies to integrate the pushbutton activation of the indications. The radio shall synchronize all remote light indications so that they activate within 120 milliseconds of each other and remain synchronized throughout the duration of the flashing cycle.

Upon detection of a push button, touchless or passive detection, the Power Module shall broadcast an activation to all other nearby RRFBs sharing the same network parameters. The RRFB, when triggered, shall activate other RRFBs linked with the same network parameters by wireless communication within 1000' (304 m).

RRFBs shall have a minimum of 8 unique channels that can be configured on-site to avoid local wireless congestion.

RRFBs shall have "unlimited" unique network parameter combinations to create a link between more than one system. Linking multiple systems shall avoid inadvertent activations of nearby other RRFBs using default network parameters.

(h) Pushbutton. The audible pushbutton station shall be an ADA-compliant pushbutton with a field-adjustable directional arrow or bidirectional arrow, piezo-driven with visual LED indication, and an audible message spoken twice stating, "Warning lights are flashing." The unit shall include a weatherproof speaker. The pushbutton enclosure shall meet or exceed NEMA 250, Type 4X requirements. The enclosure cover and backplate shall be powder-coated cast aluminum. The audible pushbutton shall not use vibrotactile indications or percussive indications.

(i) Signs. All signs shall comply with Section 723. The Contractor shall provide all mounting hardware, sign blank, sheeting, tools, equipment, and labor necessary to complete installation.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

Two sets of signs shall be provided with each pole, unless otherwise shown on the Plans. Each set shall include:

One 36-inch by 36-inch sign (W11-2 Pedestrian, S1-1 School, or W11-15 Trail Crossing, as shown on the Plans),

One 30-inch by 21-inch arrow placard (W16-7P or W16-7aP, as shown on the Plans), and

One R10-25 sign reading "PUSH BUTTON FOR WARNING LIGHTS/WAIT FOR GAP IN TRAFFIC," measuring 9 inches by 12 inches, installed at each pushbutton station.

(j) Pedestal Pole. The signpost or pole shall be as shown on the Plans. If not shown, pole shall be 4" diameter aluminum pedestal pole with nominal 4" national pipe thread (NPT) as required at the end of the pipe. The top of the pole shall include a cap of similar material.

(k) Pedestal Base. Base shall be industry standard break-away pedestal (cast aluminum). A pole and base collar assembly (aluminum) shall be included.

(l) Wiring. Conductors shall run through the shaft to the pole base. Approved watertight breakaway disconnect, dual rated for copper and aluminum connections, shall be used to terminate the wires in the pole base, and from the pole base to the splices in the pull box. The current carrying conductor shall be fused. The EGC shall be neutral/dummy fused. All in-line disconnects shall be located in the pole base.

Waterproof breakaways disconnect and URD multi-port connectors shall be a mechanical "Homac Flood-seal", "Eaton Bussmann," or approved equivalent.

All conductors for RRFB and wiring requirements for poles with RRFB shall be considered subsidiary to the Rectangular Rapid Flashing Beacon (RRFB) - AC.

(m) Equipment Submittal. In accordance with the Actuated Controller Special Provision, the Contractor shall submit the following items to the Engineer for approval:

1. Cabinet
2. Controller
3. Power Assembly
4. Surge Protection Device

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

- 5. Wireless Radio
- 6. Light Bar
- 7. Push Button Station
- 8. Pedestal Pole
- 9. Pedestal Base

The Contractor shall submit additional items and information to the Engineer upon request.

- 3. **Construction Requirements.** The RRFB assembly, signs, pushbuttons, power assembly, cabinet, and associated equipment shall be installed at the locations shown on the Plans or as directed. Installation shall include all mounting hardware, wiring, adjustments, and system testing necessary to place the equipment into proper operating condition. The RRFB system shall be complete with all materials and equipment necessary for the satisfactory operation of the system whether specifically mentioned or not.
- 4. **Method of Measurement.** Rectangular Rapid Flashing Beacons (RRFB) - AC will be measured per unit. A unit shall consist of one fully installed and operational RRFB assembly, including all equipment, hardware, signs, pushbuttons, and accessories required for a complete and functional installation.
- 5. **Basis of Payment.** Payment for the Work specified in this Section will be made at the Contract unit prices bid for the pay items shown in the Contract. The Contract unit prices will constitute full compensation for completing the Work specified in this Section. Work not designated for separate payment under this Section will be considered incidental and included in the Contract unit prices bid for other items of Work.

Payment will be made under:

Pay Item

Pay Unit

Rectangular Rapid Flashing Beacon (RRFB) - AC

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO.061922

RECTANGULAR RAPID FLASHING BEACON (RRFB) AC POWER

1. **Description.** This item consists of furnishing and installing an AC-powered Rectangular Rapid Flashing Beacon (RRFB) at the locations shown on the plans or as directed by the Engineer. Each assembly shall be powered via standard 100-240 VAC and pedestrian activated. All construction and materials shall be in accordance with the Standard Specifications for Highway Construction, Edition of 2014, with applicable supplemental specifications.
2. **Materials.** All work shall comply with the ADA and the MUTCD (latest editions). Each RRFB shall be pedestrian-activated and shall be furnished as a complete assembly in accordance with the following requirements.

(a) **Light Bar.** Each RRFB unit shall include the following:

- i. **Single-Sided RRFB.** One single-sided light bar containing 2 rectangular indications facing traffic and 1 indication on each end of the light bar visible to pedestrians in the crosswalk for each direction.
- ii. **Double-Sided RRFB.** Two single-sided light bars mounted back-to-back, each containing 2 rectangular indications facing traffic and 1 indication on each end visible to pedestrians in the crosswalk for each direction.

Each RRFB unit shall consist of two rapidly flashing rectangular yellow indications, each with an LED-array-based pulsing light source. Each vehicle-facing indication shall be at least 5 inches wide and at least 2 inches high. The 2 vehicle indications for each RRFB light bar shall be aligned horizontally, with the longer dimension horizontal, and with a minimum spacing of 7 inches between the nearest edges of the two indications. The outside edges of the RRFB indications, including housings, shall not project beyond the outside edges of the W11-2, S1-1, or W11-15 sign that the RRFB supplements.

The daylight intensity of the yellow indications shall meet the minimum specifications for Class 1 yellow peak luminous intensity in SAE J595, "Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles".

The light bar housing shall be constructed of minimum 12-gauge aluminum, corrosion-resistant powder-coated aluminum with stainless steel fasteners.

The light bar bracket assembly shall be constructed such that the signal head can be removed or adjusted easily in the field.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

1. **DESCRIPTION.** This item shall consist of furnishing and installing at locations shown on the plans or as directed, **System Local Controller** with communications interface for **IP Addressable Ethernet** and other associated equipment, to operate as part of an existing traffic-responsive, coordinated traffic control system with either closed loop master or centralized server. All requirements of Standard Specifications for Highway Construction, Edition of 2014, **Division 700 Traffic Control Facilities**, and specifically **Section 701 Actuated Controller**, shall apply. Portions of the standard specifications may be superseded by these special provisions.
 - A. **General.** The existing traffic signal system utilizes the **Yunex Traffic TACTICS central traffic management system and Yunex Traffic M60 ATC controllers** operating SEPAC software. Communications between the central system and local controllers are provided through environmentally hardened cellular routers. Furnish a Yunex Traffic M60 ATC, TS-2 Type 2 controller, or approved equivalent, that is fully compatible with the existing TACTICS and SEPAC environment. **Contractor shall verify existing equipment, compatibility, and coordination with City prior to ordering equipment.**
 - B. **Communication Method.** Provide the system communication method(s) as shown in the Contract Documents. Communication media may include fiber optic cable, cellular communications, 5.8 GHz radio, or other technologies specified in the plans.
2. **MATERIALS AND CONSTRUCTION.** (Other Special Provisions in this contract may also apply). The cabinet facilities and installation, in addition to standard requirements for **Section 701 Actuated Controller**, shall incorporate the provisions listed in this special provision in order to accomplish the following:
 - A. **System Local Controller and Conflict Monitor.** Where specified as "TS2-Type 2 E-Net" unit shall utilize SDLC Port and Malfunction Management Unit (MMU) in monitoring for conflict display at the intersection. Where specified as type "TS1" unit shall include SDLC port but be set up in the TS1 mode and utilize a NEMA Standard 12 Channel Monitor. Unit shall have the capability of monitoring intersections utilizing the latest's proposed operation of "Flashing Yellow Arrow" (FYA) display.
 - B. **Expandability.** All traffic controllers (timers) shall be not less than 8 Phases. This does not apply to cabinet facilities and conflict monitor which shall conform to the summary of quantities or other provisions in this contract. Detector wiring harnesses or rack mount detector channel slots shall, as a minimum, be wired for future connection for the number of phases as described in the Summary of Quantities or plan sheets (whichever is greater); for a minimum of 8 system detectors; or as governed by other provisions in this contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

C. Ethernet Patch Cables

1. The Category 6 (Cat 6) Patch Cords shall be furnished and installed as needed to connect the Ethernet Switches with other equipment. Cat 6 Patch Cords shall be considered an incidental component for this project and furnished and installed as needed to provide a functional system. All patch cords shall be from the same manufacturer. The patch cords shall be industrial outdoor rated Ethernet cable. The cable shall be riser rated, 24 A.W.G. solid copper, have Polyolefin insulation (no gels), UV, and oil-resistant PE jacket. The operating temperature shall be from -40° C to +70° C. The cable shall conform to the following standards: ISO/IEC 11801 ed. 2.2 (2011) Class E Patch, NEMA WC 66, and ANSI/TIA-568.2-E compliant. Patch Cords shall be compliant with T568B pin configuration. The cable shall be factory made with factory terminated RJ45 connectors; Contractor or vendor assembled patch cords are not permitted. The patch cords will be certified by the manufacturer for Category 6 performance criteria. The contractor shall obtain the length of the patch cords as needed; excessive slack is not permitted.

D. Cellular Modem. The cellular modem shall meet the following requirements:

1. Model: SEMTECH (formally Sierra Wireless) AirLink RV55 LTE-A PRO Gateway, exact part number as approved by the City, or approved equivalent.
2. Frequency Bands and Cellular Network Interface:
 - a. Compatible with Verizon Wireless Network
 - b. 4G Long Term Evolution (LTE) models:
 - Tri-band support for 700/1900/2100 Megahertz (MHz).
 - Backward compatible with Evolved High Speed Packet Access (HSPA+) and High Speed Pack Access (HSPA).
3. Transfer rate (min.): 300 Mbps down, 50 Mbps up.
4. Minimum of one 10/100/1000 Ethernet Port (RJ-45).
5. Minimum of one RS-232 serial port.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

6. Minimum of one SMA antenna connector.
7. Device Configuration and Management Software via web interface.
8. Communications and Protocols supported:
 - a. Network: TCP/IP, UDP/IP, DNS.
 - b. NAT and DHCP routing with VLAN, VRRP, and Static Routes configurable.
 - c. Includes TELNET, SMTP, SNMP, SMS sessions and services.
 - d. Serial: TCP/UPD PAD Mode, Modbus (ASCII, RTU, Variable).
 - e. GPS: NMEA V3.0, TAIP, RAP.
 - f. Provides VPN security with up to five (5) tunnels.
9. Provide event reporting for GPS/AVL, Network Parameters, Data Usage, Time, Power, and Device Temperature over SMS, SNMP, or email.
10. Antenna:
 - a. Omni-directional
 - b. 50 Ohm SMA male connector.
 - c. Minimum Antenna gain of 2 dBi.
 - d. Right angle swivel connector that allows antenna to be upright when connected to the cellular modem.
 - e. Operating Frequencies of 698-896, 1710-2170 and 2396-2700 MHz
11. Light-emitting diode (LED) indicators for Ethernet, power, cellular link/activity and signal strength.
12. Input Voltage: 7 to 36 VDC.
13. Operating Temperature of -30° C to +70° C / -40° F to +158° F
14. Relative Humidity: 90% @ 60° C.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

15. Ingress protection: IP64 specifications.

16. Warranty. Provide cellular modem with a 5-year manufacturer's warranty, transferable to the City. The cellular modem shall carry a warranty (parts, software and labor) of 5 years from the date of shipment. Furnish warranty and other applicable documents from the manufacturer, and a copy of the invoice showing the date of shipment, to the Engineer prior to final written acceptance.

E. Ethernet Switch, T100 Hardened (8-Port).

- 1.** Equipment shall provide an interface between other Ethernet devices to master site.
- 2.** Fully managed Layer 2 Ethernet Switch.
- 3.** Minimum of 8-Ports.
 - a.** RJ45 Ports – 10/100/1000BASE-T(X)
 - b.** Fiber Ports – 100/1000 Mb/s SFP-modules (when specified)
- 4.** Industrial Hardened.
- 5.** Environmental Conditions.
 - a.** Storage Temperature: -40°C to 85°C
 - b.** Operating Temperature: -40°C to 80°C
 - c.** Operating Humidity: 5% to 95% Non-condensing
- 6.** LED Indicators.
- 7.** Provide a minimum 5-year manufacturer's warranty
- 8.** Power Supply.

F. Ethernet Cable.

- 1.** The CAT-5E shall be industrial outdoor rated Ethernet cable or higher. The cable shall be riser rated, 24 A.W.G. solid copper, have Polyolefin insulation (no gels), UV, and oil-resistant PE jacket. The operating temperature shall be from -40° C

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

to +70° C. The cable shall conform to the following standards: ISO/IEC 11801 Category 5e, NEMA WC 63, and ANSI/TIA/EIA 568-B.2 Category 5e. The cable shall be without splicing or joints for a single run.

2. The contractor shall obtain instructions from the manufacturer about alternate architecture such as fiber, intermediate equipment, or other Engineer-approved solution when length of a single run of CAT 5e cable exceeds 320 feet.
3. The Engineer shall approve the ethernet cable, RJ-45 connectors, and crimping tool/method prior to construction. All manufacturer's instructions or procedures must be followed to ensure proper connection.
4. Compatible Category 6 (Cat 6) or higher cable may be submitted for approval by the Engineer in lieu of 5e. No additional payment or cost will be given for this cable.

G. Wireless Radio Communications Equipment. Local Radio (E-Net 5.8) with Antenna and Local Repeater Radio with Antenna shall meet the following requirements:

1. Contractor shall verify existing equipment, compatibility, and coordination with City prior to ordering equipment.
2. Furnish license-free, industrial-grade 5.8 GHz wireless Ethernet radio equipment, antennas, mounting hardware, surge protection, grounding, cabling, power supplies or power injectors, configuration software, and all other components required to provide complete and operational wireless Ethernet communications links at the locations shown on the plans or as directed by the Engineer.
3. Radio equipment shall operate in the 5.725 GHz to 5.850 GHz frequency band and shall comply with applicable FCC requirements for unlicensed radio frequency devices. Radios shall support TCP/IP Ethernet communications required for traffic signal controllers, Ethernet switches, and the designated traffic management network.
4. Each radio shall provide a minimum over-the-air data rate of 100 Mbps, include a minimum of one 10/100/1000BASE-T Ethernet port, and support secure configuration through a web-based or manufacturer-provided management interface. Wireless communications shall support encryption no less than AES-128, with AES-256 preferred.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

5. Equipment shall be industrial hardened and suitable for the roadside environment. Equipment installed outside the cabinet shall have an outdoor enclosure rating of NEMA 4, NEMA 4X, IP65, or better. Radios and antennas shall operate within a temperature range of at least -40° C to +70° C and relative humidity of 5% to 95% non-condensing.
6. Antennas shall be furnished by the radio manufacturer or approved by the radio manufacturer for use with the supplied equipment. Antenna type, gain, polarization, mounting height, and alignment shall provide the required line-of-sight communications path and comply with applicable FCC effective radiated power limits. Low-loss coaxial cable shall be used where external antenna cabling is required.
7. The Contractor shall furnish and install all brackets, pole mounts, cabinet penetrations, weatherproof fittings, surge suppression, grounding conductors, bonding, Ethernet cable, coaxial cable, power conductors, and appurtenances necessary for a complete installation. Antenna mounting shall provide stable alignment and shall not interfere with signal heads, pedestrian equipment, signs, utilities, or maintenance access.
8. The Contractor shall configure each radio, antenna alignment, network address, security setting, channel/frequency, transmit power, and communications parameter necessary to integrate the wireless Ethernet link with the local controller, Ethernet switch, and traffic operations system. Configuration shall be coordinated with the City's Transportation Department and the Department's Maintenance Division before installation.
9. The Contractor shall provide final IP addressing, login credentials, configuration files, antenna alignment information, test results, and network diagrams for each installed radio link. Equipment shall include a minimum 5-year manufacturer's warranty, transferable to the City upon acceptance of the project.

H. Local Radio (E-Net 5.8) with Antenna. The Local Radio shall be furnished where shown on the plans to provide a wireless Ethernet communications link between a traffic signal cabinet and the designated upstream communications point, repeater radio, or traffic management network. The Local Radio shall operate as an access point, client, bridge, or remote radio as required by the approved communications architecture. See "Wireless Radio Communications Equipment" for additional requirements.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

- I. Local Repeater Radio with Antenna.** The Local Repeater Radio shall be furnished where shown on the plans or where required to extend the wireless Ethernet communications path between Local Radios and the designated communications network. The repeater shall receive and retransmit Ethernet communications without degrading the functional operation of the communications system. See "Wireless Radio Communications Equipment" for additional requirements.
- J. Controller Manuals and Documentation.** All documentation and software shall be provided a minimum of 14 calendar days before commencement of the 30-day trial period. The 30-day trial period will not start until this as well as other requirements for system operation have been met. Controller and/or equipment manuals (software and software manuals) must be provided 14 calendar days prior to placing intersection into operation. Two sets (no photocopies) of controller manuals shall be provided, one copy to the City or County and one copy to the Department's Maintenance Division.
- K. System Timing and Operation Test.** The 30-day performance test shall not commence on any portion of the system until all test have been performed by the contractor to the satisfaction of the Engineer in the presence of the Department. Timing data will be provided by the Department's Maintenance Division. The contractor shall give the Engineer a minimum of 14 calendar days' notice to requiring timing data for testing and setup. Contractor shall be responsible for verification that data provided shall be functional and shall notify the Department's Maintenance Division of any changes necessary prior to installation.

In the event that the contractor is not qualified to perform these test and verification, they will be responsible for seeing that a manufacturer's representative is present on the day of testing.

- 3. METHOD OF MEASUREMENT.** Completed and accepted items will be measured as follows:
 - A.** System Local Controller will be measured by the unit.
 - B.** Cellular Modem of the specified type will be measured by the unit.
 - C.** Ethernet Switch, T100 Hardened (8-Port) will be measured by the unit.
 - D.** E-Net Cable of the specified type will be measured by the linear foot.
 - E.** Local Radio (E-Net 5.8) with Antenna will be measured by the unit.
 - F.** Local Repeater Radio with Antenna will be measured by the unit.

- 4. BASIS OF PAYMENT.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid as follows:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB 061922

SYSTEM LOCAL CONTROLLER (E-NET)

- A. System Local Controller** - Price bid for System Local Controller and associated equipment of the phases specified, shall be full compensation for furnishing all equipment for providing the foundation, and mounting the cabinet; for installing, wiring and testing the controller and communications unit; for excavation and backfilling; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.
- B. Cellular Modem** - Price bid for Cellular Modem of the type specified shall be full compensation for furnishing, installing and testing the modem; and for all equipment, tools, labor, and incidentals necessary to complete the work.
- C. Ethernet Switch, T100 Hardened (8-Port)** - Price bid for Ethernet Switch, T100 Hardened (8 Port) of the type specified shall be full compensation for furnishing, installing and testing the switch; and for all equipment, tools, labor, and incidentals necessary to complete the work.
- D. E-Net Cable (Exterior Cat 5E)** - Price bid for E-Net Cable of the type specified shall be full compensation for furnishing, installing and testing the cable; and for all equipment, tools, labor, and incidentals necessary to complete the work.
- E. Local Radio (E-NET 5.8) with Antenna** - Price bid for Local Radio (E-NET 5.8) with Antenna shall be full compensation for furnishing the radio; antenna, cable and wiring; mounting and testing the system; and for all equipment, tools, labor and incidentals necessary to complete the work.
- F. Local Repeater Radio with Antenna** - Price bid for Local Repeater Radio with Antenna shall be full compensation for furnishing the radio, antenna, cable and wiring; mounting, and testing the system, and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment shall be made under:

Pay Item	Pay Unit
System Local Controller TS 2-Type 2, E-Net (___ Phases)	Each
Cellular Modem	Each
Ethernet Switch, T100 Hardened (8-Port)	Each
E-Net Cable (Exterior Cat 5E)	Linear Foot
Local Radio (E-Net 5.8) with Antenna	Each
Local Repeater Radio with Antenna	Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED BLANK OUT SIGN

1. **DESCRIPTION.** This item consists of furnishing and installing "LED Blank Out Signs" of the type and size called for at the location shown on the plans, or as directed by the Engineer, and shall conform to the following specifications.
2. **MATERIALS.** The blank out signs shall be the Light Emitting Diode (LED) type that is capable of displaying messages in the colors of red, amber, white, or bluish green. The LED lens shall meet the latest requirements of the Institute of Transportation Engineers (ITE) applying to LED road signs. All messages shall be clearly legible, attracting attention under any lighting conditions. At full intensity, the signal face shall be highly visible anywhere within a 15-degree cone centered about the optic axis. The sign shall be completely blanked out when not energized and no phantom words or legend shall be visible under any ambient light conditions. Messages shall be displayed by utilizing one to five rows of LED's to form the legend or symbols. In the event of failure of any individual LED's will not affect the performance of the other LED's to continue to provide a discernable message. The entire sign face shall be a minimum of 0.080-inch aluminum or equivalent, and have the LED assembly mounted to it. The sign face will be protected by a polycarbonate, matte/clear, face plate. The blank out sign shall consist of a weatherproof housing and door, lens, sign face, LED module, solid-state power supplies, and all necessary mounting hardware. Lettering of the sign face shall be a minimum of four (4) inches. The message color will be provided by a tempered LED correct lens color filter in compliance with the Institute of Transportation Engineers specifications. The sign will be capable of continuous operation over a range in temperatures from -35°F to +165°F. The sign displays shall be illuminated by 5mm LED's with an average 100,000-hour life. All LED's shall be high in optical power emitting radiation on the order approximately 2.0 candela's when operated at 20 milliamps DC.

The blank out signs shall be rectangular in shape and provide a Lexan faceplate. Reflectors and housings shall comply with **Section 706 Traffic Signal Head** of Standard Specifications for Highway Construction, Edition of 2014.

3. **MANUFACTURER'S WARRANTY.** The standard contract warranty shall apply with the time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.) who provides electrical service and maintenance of the intersection. Warranty shall provide the following stipulations:

- Isolated Failures Warranty Period not less than 7 Years
- Design Failures Warranty Period not less than 5 Years

Warranty for isolated lens failure shall include replacement LED module at no cost for materials and shipping for a period of 7 years from the date the intersection is considered substantially complete by the engineer. An LED module shall be considered failed when the luminosity drops below the ITE specifications.

A product "Design Failure" is considered to have occurred if, within a period of 5 years or less, a total of ten percent (10%) of the LED modules on a particular Job are considered

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED BLANK OUT SIGN

failed. The supplier shall then "recall" the entire shipment at no cost to the agency maintaining the equipment. This shall include labor and equipment necessary to replace the units.

4. **CONSTRUCTION METHODS.** All LED Blank Out Signs shall be mounted to maintain a 17'-0" minimum, 19'-0" maximum vertical clearance directly under the sign. The LED Blank Out Sign shall be so positioned and adjusted as to provide maximum visibility to vehicles which are to be controlled by the signal controller.
5. **METHOD OF MEASUREMENT.** LED Blank Out Signs will be measured by the unit.
6. **BASIS OF PAYMENT.** Work completed and accepted and measured as provided above, will be paid for at the contract unit price bid for LED Blank Out Signs, which price shall be full compensation for furnishing all materials, fittings, brackets, clamps, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

LED Blank Out Sign

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RETROREFLECTIVE BACKPLATES

Section 706 Traffic Signal Head of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The ninth paragraph of **Subsection 706.02 Materials (c) Housing** is hereby deleted and the following substituted therefore:

Visors and backplates for metal signal sections shall be made from 0.050" (1.25 mm) minimum thickness aluminum alloy sheet.

- The minimum thickness of 0.050" does not include the retroreflective border.
- Backplates shall not be flexible nor of the hinged design.
- The backplate shall be louvered.
- A louvered backplate shall include louvers with no louvers closer than 0.5" from the inner or 2.5" from the outer edge. Sides are defined on how the signal head is oriented in the plans.
- The backplate shall have a 2" wide yellow (non-fluorescent) retroreflective sheeting border, placed flush with the outer edge of the backplate and placed no closer than 0.5" from all louvers. No sheeting is allowed over any louvered area.
- Sheeting shall be applied in such a manner to provide wrinkle and bubble free surfaces. Application of sheeting shall be in accordance with this special provision otherwise will be cause for rejection of materials due to workmanship.
- The sheeting shall be Type VIII, Type IX, or Type XI in accordance with ASTM D4956 or ASTM D4956-05 and listed on ARDOT's qualified product list.
- All applicable brochures containing the design criteria for the retroreflective sheeting border shall be submitted by the Contractor for approval.
- The sheeting shall be applied in the orientation for the maximum angularity according to the manufacturer's recommendations to project rectangular appearance at night.
- All backplates types shall be securely attached to the signal-head as recommended by the manufacture's specifications and methods.

The tenth paragraph of **Subsection 706.02 Materials (c) Housing** is hereby deleted and the following substituted therefore:

Visors and backplates for plastic signal faces shall be either formed from sheet plastic or assembled from one or more injection, rotational, or blow molded plastic sections with a minimum thickness of 0.10" (2.5 mm).

- The minimum thickness of 0.10" does not include the retroreflective border.
- Backplates shall not be flexible nor of the hinged design.
- The backplate shall be non-louvered.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

RETROREFLECTIVE BACKPLATES

- The backplate shall have a 2" wide yellow (non-fluorescent) retroreflective sheeting border, placed flush with the outer edge of the backplate.
- The sheeting shall be Type VIII, Type IX, or Type XI in accordance with ASTM D4956 or ASTM D4956-05 and listed on ARDOT's qualified product list.
- All applicable brochures containing the design criteria for the retroreflective sheeting border shall be submitted by the Contractor for approval.
- The sheeting shall be applied in the orientation for the maximum angularity according to the manufacturer's recommendations to project rectangular appearance at night.
- All backplates types shall be securely attached to the signal-head as recommended by the manufacture's specifications and methods.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

1. **DESCRIPTION.** This item shall consist of furnishing and installing Countdown Pedestrian Signal Heads and components based on Light Emitting Diode (LED) technology according to these specifications as well as **Section 707 Pedestrian Signal Head** of the Standard Specifications for Highway Construction, Edition of 2014, subject to approval of the engineer. The basic configuration consists of the "filled", symbolic single section design. Portions of the standard specifications will be superseded by these special provisions.
2. **MATERIALS.** The LED modules shall be suitable for span wire and mast arm mounted signals. Units must meet the following specifications to be accepted.

(A) **Physical and Mechanical.** LED pedestrian signal modules designed shall not require special tools for installation. Retrofit replacement LED signal modules shall fit into existing pedestrian signal housings built to the VTCSH Standard without modification to the housing. Installation of a retrofit replacement LED signal module into an existing signal housing shall only require the removal of the existing optical unit components, i.e., lens, lamp, and gaskets; shall be weather tight and fit securely in the housing; and shall connect directly to existing electrical wiring utilizing spade connectors. It shall not be necessary to remove reflector or lamp module. Reflector and lamp module is not required where new housings are provided.

The countdown feature will be displayed only during the flashing "Don't Walk" segment of the pedestrian phase. This feature should be able to restart at the correct part of the signal cycle after a power outage or a signal pre-emption has been activated.

(B) **Optical Requirements.** The modules shall be measured per ITE specifications, and are required to meet luminous values that are a minimum of 115 percent greater than the required minimum values in the specifications at the time of production. The YELLOW modules shall be tested for luminous output at 25°C, allowing the modules to achieve thermal equilibrium for 60 minutes, while the modules are energized at nominal operating voltage, at a 8.3% (or 1/12) duty cycle or 5 sec on/55 sec off). The yellow modules shall meet all other ITE specifications.

(C) **Optical Unit.** LED signal modules shall meet the following requirements:

Optical Unit Replacement - The LED module shall be constructed to allow the replacement of the outer lens and/or the light engine when needed.

Lens Surface - The external lens shall be smooth on the outside to prevent excessive dirt/dust buildup.

Chromaticity - The measured coordinates of LED signal modules shall conform to the chromaticity requirements of Section 8.04 and Figure 1 of the VTCSH standard.

Environment - The LED signal module shall be rated for use in the ambient operating temperature range, measured at the exposed rear of the module, of -40° C (-40° F) to +74°C (+165° F). The LED sign module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991, sections 4.7.2.1 and

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

4.7.3.2, for Type 4 enclosures to protect all internal LED, electronic, and electrical components. The LED signal module lens shall be UV Stabilized.

Pre assembly - The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing pedestrian signal housing. The power supply for the LED signal module may be either integral or packaged as a separate module. The power supply may be designed to fit and mount inside the pedestrian signal housing adjacent to the LED signal module. The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

LED Drive Circuitry (parallel) - The individual LED light sources shall be wired so that a catastrophic failure of one LED light source will result in the loss of only that one LED light source, and the loss of no more than 1% of the total LED'S within the LED signal module.

Material Composition - Materials used for the lens and signal module construction shall conform to ASTM specification for the materials where applicable. Enclosures containing either the power supply or electronic components of the signal modules shall be made of UL94VO flame retardant materials. The lens of the signal module is excluded from this requirement.

Identification Markings - Each individual LED signal module shall be identified for warranty purposes. Each LED signal module shall be identified on the backside with the manufacturer's name and serial number. The following operating characteristics shall be identified: nominal operating voltage, power consumption, and Volt-Ampere. Modules shall have a prominent and permanent vertical indexing indicator, i.e. UP ARROW or the word UP or TOP, for correct indexing and orientation inside a signal housing. Modules conforming to this specification may have the following statement: "Manufactured in Conformance with the Interim Purchase Specification of the ITE for LED vehicle Pedestrian signal Modules" on an attached label.

(D) Manufacturer's Warranty. The standard contract warranty shall apply with time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.) who provides electrical service and maintenance of the intersection. Warranty shall provide the following stipulations:

- Isolated Failures Warranty Period not less than 7 Years
- Design Failure Warranty Period not less than 5 Years

Warranty for isolated lens failure shall include replacement LED module at no cost for materials and shipping for a period of 7 years from the date the intersection is considered substantially complete by the engineer. An LED module shall be considered failed when the luminosity drops below the ITE requirements listed above.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED COUNTDOWN PEDESTRIAN SIGNAL HEAD

A product "Design Failure" is considered to have occurred if, within a period of 5 years or less, a total of ten percent (10%) of the LED modules supplied on a particular Job are considered failed as described above. The supplier shall then "recall" the entire shipment at no cost to the agency maintaining the equipment. This shall include labor and equipment necessary to replace the units.

3. **CONSTRUCTION REQUIREMENTS.** Construction shall be in accordance with the standard specifications. No distinction is made for span-wire installations, post mount, mast arm mount, or other mounting methods as described on the plan sheet(s).
4. **METHOD OF MEASUREMENT.**
 - A. **Pedestrian Signal Head, LED.** Work completed and accepted and measured as provided above will be measured by unit.
 - B. **Pedestrian Signal Head, LED Lens Retrofit (Ret).** Work completed and accepted and measured as provided above will be measured by unit.
5. **BASIS OF PAYMENT.**
 - A. **LED Pedestrian Signal Head.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for PEDESTRIAN SIGNAL HEAD LED of the type, display and size specified, which price shall be full compensation for furnishing and installing all materials and signs; and for all labor, equipment, tools, and incidentals necessary to complete the work.
 - B. **LED Pedestrian Signal Lens Ret.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for PEDESTRIAN SIGNAL LED LENS RET of the type, number of sections, color and display specified, which price shall be full compensation for removing existing unnecessary hardware and modifying existing housing; and for furnishing and installing all materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Countdown Pedestrian Signal Head, LED

Pay Unit

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PEDESTRIAN SIGNAL HEAD RELOCATION

DESCRIPTION. This item consists of removing and reinstalling a pedestrian signal head as shown on the plans or as directed by the Engineer.

MATERIALS. Contractor shall furnish all tools, equipment, and hardware necessary for the relocation of the designated pedestrian signal head.

CONSTRUCTION REQUIREMENTS. Contractor shall be allowed to splice signal cable inside signal head, inside raintight junction boxes mounted on pole, or as approved by the Engineer. If junction boxes are required, these shall be furnished and installed by the contractor.

METHOD OF MEASUREMENT. Pedestrian Signal Head Relocation shall be measured by the unit.

BASIS OF PAYMENT. Work completed, accepted and measured as provided above will be paid for at the contract unit price bids for each pedestrian signal head removed and reinstalled; which price shall be full compensation for furnishing signal cable, wiring, equipment tools, and labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Pedestrian Signal Head Relocation

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACCESSIBLE PEDESTRIAN SIGNAL (APS)

1. **DESCRIPTION.** This item shall include furnishing and installing at locations shown on the plans or as directed, an Audible-Tactile Pedestrian Signal System and shall consist of all electronic control equipment, mounting hardware, and push button stations which are designed to provide both a push button with a raised vibrating tactile arrow on the button, along with a variety of audible indications for differing pedestrian signal functions. This work shall be done in accordance with this special provision, the "LED Countdown Pedestrian Signal Head" special provision, and the Standard Specifications for Highway Construction, Edition of 2014, **Section 707 Pedestrian Signal Head.**
2. **MATERIALS AND CONSTRUCTION.**
 - A. **Design Compliance.** The System shall meet the following standards:
 1. Functionality requirements of MUTCD 2023 – 4K.
 2. NEMA TS 2 Section 2.1 Temperature & Humidity requirements.
 3. NEMA TS 2 Section 2.1 Transient Voltage Protection requirements.
 4. NEMA TS 2 Section 2.1 Mechanical Shock and Vibration requirements.
 5. IEC 61000-4-4, IEC 61000-4-5 Transient Suppression requirements.
 6. FCC Title 47, Part 15, Class A Electronic Noise requirements.
 7. The Push Button Station (PBS) Enclosure shall meet NEMA 250 - Type 4X Enclosure requirements.
 8. The Central Control Unit (CCU) & Ped Station Monitor (PSM) Enclosures shall meet NEMA 250 - Type 1 requirements.
 9. The System shall meet NEMA TS 4 - Electrical Reliability requirements (applicable portions of Section 8).
 - B. **Functional Requirements.**
 1. The System shall support from 2-16 PBS's per intersection (maximum of 4 push buttons per channel) controlled by a single base unit located in the traffic control cabinet.
 2. The System shall be able to be set to vibrate a tactile arrow button during the WALK interval following a button push and/or every time the walk comes up.
 3. The System shall have the field-selectable function known as "Locating Tone". This means that during the FLASHING DON'T WALK and the DON'T WALK intervals, the system shall provide a locating tone that emanates from the Pedestrian Push Button Station. The system shall provide at least three different sounds to choose from.
 4. The System shall have the field selectable function known as "Extended Push Activation". This means that the audible WALK message will only be activated and

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACCESSIBLE PEDESTRIAN SIGNAL (APS)

- sound during the WALK interval if the button is depressed for a field selectable minimum period of time (from 0 to 6 seconds). Also, for the following walk phase, the volumes have a separately settable minimum and volume level.
5. The System shall have the field selectable function known as "Informational Message". This means that a custom message giving the location of the street to cross and the intersection (or other information) will be vocalized only when the button is depressed for a minimum field selectable time.
 6. The System shall provide a "Wait" message that plays once the button is activated until the walk cycle goes into effect. This message must have the field selectable option of OFF or playing every 4, 6, 8 or 10 seconds.
 7. The System shall have standard "Travel Direction" options that can be selected at the time of installation.
 8. The System shall have at least five field selectable walk sound options including a cuckoo, a chirp, a rapid tick or custom voice message.
 9. The System shall provide 3 Ped-clearance sound choices including audible countdown (field selectable). The audible countdown shall represent the time remaining during the pedestrian clearance interval. Timing is automatically adjusted to CLEARANCE INTERVAL timing.
 10. The System shall provide two language capabilities, selectable by user (as a custom feature).
 11. The System shall provide Emergency preemption message in conjunction with a preemption system (selectable feature).
 12. LOCATE tone and "Walk," Pedestrian Clearance" audible feature must have independent settable minimum and maximum volume limits.
 13. All sounds for all PBS's must be synchronized.
 14. The system shall have an ambient sensing microphone located in the pedestrian station in a non-visible, environmentally protected housing.
 15. All sounds levels shall adjust automatically in response to ambient noise over a 60-dB range with additional control to have the sound level at ambient, 5dBA or 10dBA over ambient, to a maximum of 100 dBA.
 16. The system shall have an independent ambient adjustment setting for the locate tone that allows the locate tone volume to be set to play below the ambient noise level.
 17. The system shall utilize high quality digital audio technology by using 12-bit samples at a 16k Hz sample rate audio amplifier and must have total harmonic distortion of less than 3%.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACCESSIBLE PEDESTRIAN SIGNAL (APS)

18. The firmware and voice messages shall be updatable via a laptop computer or smart device. There shall be no requirement for the hardware to be changed out to update.
19. The System shall have the option to mute sounds on all crosswalks except activated crosswalk (selectable feature).
20. The System shall have no field replaceable fuses. All fuses shall be self-resetting.
21. The System shall have the ability to have two separate program configurations with all features available that can be turned on through an external input.
22. All programming and adjustments shall be made using a laptop computer or smart device. No additional hardware or equipment shall be required. The system shall be fully compatible with the three latest versions of the Windows operating platform.

C. Central Control Unit (CCU) - The CCU is the power supply and control unit that provides power and data for the Push Button Stations.

1. Shall be installed inside the Traffic Cabinet and powered by the AC supply mains (115 VAC).
2. Shall control up to 16 PBS's in a maximum of 4 channels up to 4 PBS's per channel.
3. Shall control up to four Pedestrian channels, receiving its timing from the Walk and Don't Walk signals.
4. Shall be able to self-test all PBS's and put a channel into recall should a PBS fail the self test.
5. Shall provide optically isolated general-purpose inputs.
6. Shall be provided with a 4-cable interface harness assembly.
7. Shall be provided with an interface connection board.
8. Shall have Ethernet access to PBS's through the CCU to be able to change the settings of PBS as well as monitor the self-test Events of the PBS's and report back to the Central Control Station.
9. Shall have internal memory to store a few hundred events with a date-time stamp for each event.
10. Shall have an internal real-time clock.
11. Firmware for the CCU shall be updated by USB port on the CCU, laptop computer, or smart device.
12. The CCU shall have 2 built in conflict monitoring systems:
 - i. Monitors the PBS and the ped-head lights and powers off the channel upon a conflict.
 - ii. Processors monitor each other and reset the CCU upon loss of internal communication.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACCESSIBLE PEDESTRIAN SIGNAL (APS)

13. Shall meet NEMA 250 – Type 1 enclosures requirements.

D. Pole Mounting Assembly - This equipment is typically mounted on a pole near the start of a crossing. It is commonly referred to as the “Pedestrian Push Button Station” or “PBS”).

- 1.** PBS shall be a single fixture that contains the vibro-tactile 2” ADA-compliant pedestrian push button with directional tactile arrow, a weatherproof speaker, and the appropriate sign for each location.
- 2.** All audible sounds shall emanate from the PBS.
- 3.** The external housing shall not have any polycarbonate or plastic parts.
- 4.** PBS's must require only two wires coming from the traffic control cabinet for each phase / crosswalk.
- 5.** Each PBS shall have a system unique ID.
- 6.** SPEAKER: 8 Ohms, 12-Watt maximum, weatherproof.
- 7.** PUSH BUTTON: ADA compliant with raised arrow on the button plunger. Cast Aluminum, Nickel-plated and powder coated for color contrast. The arrow on the PBS shall be able to be changed to one of four directions.
- 8.** PUSH BUTTON: Uses Piezo switch technology rated to greater than 20 million operations.
- 9.** VIBRATOR POWER: Arrow button shall pulse at 20 Hz with a 0.003-inch displacement against an applied 2 lb force.
- 10.** CONFLICT WALK MONITOR: Circuitry shall have a separate microcontroller that independently monitors the main microcontroller outputs and “Walk Mode” for conflict condition, the PBS is reset in case of conflict detection.
- 11.** The firmware and voice messages shall be updatable by using a laptop computer or smart device. There shall be no requirement for the hardware to be changed out to update.
- 12.** VOLTAGE TRANSIENT PROTECTION: Meets applicable NEMA TS 2 requirements.
- 13.** Meets or exceeds NEMA 250 type 4X enclosure requirements.
- 14.** CONSTRUCTION:
 - i. FRAME: Cast Aluminum, Powder Coated.
 - ii. MESSAGE SIGN: Aluminum, Powder Coated, Ink Markings.
 - iii. PUSH BUTTON: Aluminum, Powder Coated.
- 15.** MESSAGE MARKING: At time of order, the customer may specify the Message Sign Markings to be the **International Walking Person** or the **Informational**

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACCESSIBLE PEDESTRIAN SIGNAL (APS)

Explanations for the three (3) distinct pedestrian displays (WALK, DON'T WALK, and PED CLEAR) that a pedestrian would see on an active pedestrian head.

- 16.** A push button extender shall be supplied and installed on traffic signal poles with mast arms and pedestrian signal poles that are 10 foot or taller. To ensure the push button orientation, height requirements are met, and that side reach from the edge of sidewalk is not more than 10 inches.
- 17.** The APS shall be installed in accordance with the manufacturer's recommendations.
- 18.** A field test of the APS shall be performed in the presence of the Engineer. If a unit fails to pass testing, the Contractor shall replace the unit to ensure a fully operational system at their expense.

E. Programming - The APS shall be programmable and adjustable.

- 1.** Programming and adjustments shall be made using a laptop computer or smart device. No additional hardware or equipment shall be required. The system shall be fully compatible with the three latest versions of the Windows operating platform.
- 2.** Shall be password protected.

3. METHOD OF MEASUREMENT. Completed and accepted items will be measured as follows:

A. Central Control Unit will be measured by the unit.

B. Pole Mounted Assembly will be measured by the unit.

4. BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid as follows:

A. Central Control Unit - Price bid for Central Control Unit and associated equipment specified, shall be full compensation for furnishing all equipment listed above; meeting all functional requirements listed above, for installing, programming, wiring, and testing the unit; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

B. Pole Mounted Assembly - Price bid for Pole Mounted Assembly shall be full compensation for furnishing the Pedestrian Push Button Station with all items including but not restricted to materials, equipment, tools, programming, software, labor, and incidentals necessary to complete the work.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ACCESSIBLE PEDESTRIAN SIGNAL (APS)

Payment shall be made under:

Pay Item	Pay Unit
Central Control Unit	Each
Pole Mounted Assembly	Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN

1. **DESCRIPTION.** This item consists of furnishing and installing a solar powered Embedded Light Emitting Diode (LED) pedestrian activated sign at the location indicated on the plans or where directed by the Engineer. Each assembly shall be solar powered and compatible with the Passive Pedestrian Detection System. All construction and materials shall be in accordance with the Standard Specifications for Highway Construction, Edition of 2014, with applicable supplemental specifications.
2. **MATERIALS.** Each embedded LED pedestrian activated sign will be a complete assembly in accordance with the following specifications to be accepted.
 - (A) **Embedded LED Pedestrian Activated Crosswalk Sign.** Each unit shall be one (1) or two (2) sided mounted back-to-back facing traffic in each direction as indicated in the plans. Each sign shall be of the type and size indicated on the plans and have a series of eight (8) LEDs. All LEDs shall be compliant to MUTCD Section 2A.12 and be the same color as the sign legend, border, or background. Each LED unit when activated shall flash simultaneously at a rate of more than 50 and less than 60 times per minute. The sign shall be constructed of .080 aluminum with stainless steel fasteners. The sign reflective sheeting shall be in compliance with current MUTCD requirements for reflectivity, wording, materials and mounting guidelines. All mounting hardware fasteners shall be theft deterrent where applicable.
 - (B) **Control Circuit.** The control circuit shall have a minimum of four (4) output LED light circuits for use. Each unit when activated shall follow the MUTCD recommended simultaneously flash rate of more than 50 and less than 60 times per minute. Each circuit shall have a flash pattern of 0.5 seconds on and 0.5 seconds off. The circuit shall have a minimum operating temperature range of -40° to 165°F (-40° to 74°C). The control circuit shall be installed in an NEMA rated enclosure, dust proof and waterproof in water up to 3 feet deep for 30 minutes.
 - (C) **Battery.** The battery shall be a 12VDC Absorbed Glass Mat (AMG) sealed lead-acid and maintenance free. The battery shall be rated at 40 AH minimum and conform to Battery Council International (BCI) specifications. The battery shall have a minimum operating temperature range of -40° to 156°F (-40° to 69°C). The battery shall be solar-charged with a capacity up to 30 days of autonomy without sunlight, varying with ambient temperature and number of activations.
 - (D) **Wireless Radio.** Radio control shall operate on a frequency and spectrum compatible with the system controller and the Passive Pedestrian Detection System with a minimum operating range of 900 feet. The radio system shall operate from 3.6 VDC to 15 VDC. The radio shall provide wireless communication between the assemblies to integrate the pushbutton or passive detection activation of indications. The radio shall synchronize all of the remote light indications so they will turn on within 120 msec of each other and remain synchronized through-out the duration of the flashing cycle.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN

- (E) **Solar System Housing.** Shall be a NEMA 4 rated fiberglass cabinet with lockable clasps.
- (F) **Solar Panel.** The solar panel shall provide a maximum of 55 watts at peak total output. It shall be affixed to an aluminum plate and bracket, adjustable at an angle of 45°-60° to facilitate adjustment for maximum solar collection and optimal battery strength. The Solar Panel Assembly (panel, plate, and bracket) shall be mounted on a 360° rotatable pole cap mount, to facilitate adjustment for maximum solar collection and optimal battery strength. The solar panel shall have a minimum operating temperature range of -40° to 185°F (-40° to 85°C).
- (G) **Signs.** One (1) sets of signs will be supplied with each pole. The contractor shall provide all mounting hardware, sign blank, sheeting, tools, equipment and labor necessary to complete installation. Each set of signs will include the signs indicated in the plans.
- (H) **Sign Post.** Shall meet the requirements according to the specifications in **Section 730 Breakaway Sign Support** of the Standard Specifications for Highway Construction, Edition of 2014.
- (I) **Manufacturer's Warranty.** The standard contract warranty shall apply with time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.).
3. **CONSTRUCTION REQUIREMENTS.** Construction shall be in accordance with the standard specifications.
4. **METHOD OF MEASUREMENT.** Work completed and accepted and measured as provided above will be measured by unit.
5. **BASIS OF PAYMENT.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid for Embedded LED Pedestrian Activated Crosswalk Sign which price shall be full compensation for furnishing materials, hardware, tools, equipment, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Embedded LED Pedestrian Activated Crosswalk Sign

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****ELECTRICAL CONDUCTORS FOR LUMINAIRES**

DESCRIPTION. This item consists of furnishing and installing electrical conductors from the pillbox next to the illumination pole to the luminaire as noted on the lighting plans and indicated in the wiring details.

MATERIALS. Electrical conductors shall consist of two-conductor cables with a grounding conductor. Refer to the plans for wire sizes. Conductors shall be solid or stranded copper unless otherwise approved by the Engineer, and shall be USE-2, XHHW-2 or UF with cross-linked polyethylene (XLP) insulation, rated at 600 volts and suitable for installation in underground ducts. Conductors shall be rated for use up to 90°C (194°F) in wet or dry locations.

- Electrical conductors shall be UL listed.
- Solid copper conductors shall comply with ASTM B3.
- Concentric Stranded copper conductors shall comply with ASTM B3 and B8.
- Nineteen (19)-wire combination unilay-stranded copper conductors shall comply with ASTM B3, B8, and B787.
- Multiple single-conductor cables shall not be twisted together.

CONSTRUCTION REQUIREMENTS. Splices are allowed at pull boxes, pole bases or as approved by the Engineer. All splices shall be waterproof, and UL Listed for continuous use in submersible installations.

Splices in pull boxes shall be made with a Bus connector, such as "Homac RXL," "NSI Polaris Edge," "Utica Safetysub," or equivalent and approved by the Engineer.

Splices in light poles shall be made with a fused breakaway disconnect.

Drip loops are required at pole base installations. No direct connection from copper to aluminum shall be allowed without a connector rated for the application. Slack cable (3 ft. min.) shall remain at each splice location to allow reconnection.

METHOD OF MEASUREMENT. Electrical Conductors for Luminaires will be measured by the linear foot. Multiple conductors shall be measured together, not measured singularly.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot for Electrical Conductors for Luminaires of the type and size called for on the plans, which price shall be full compensation for furnishing materials, splicing and connections and for all tools, equipment, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Electrical Conductors for Luminaires

Pay Unit

Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ELECTRICAL CONDUCTORS-IN-CONDUIT

DESCRIPTION. This item consists of furnishing, installing, replacing and testing copper electrical conductors from point to point as indicated on the plan sheets. The electrical conductors shall be suitable for installation in duct mounted on structures or buried in the ground.

MATERIALS. Electrical conductors shall consist of cables of the gauge and number of conductors specified on the plan sheets and shall be type USE-2 or UF with cross-linked polyethylene (XLP) insulation, and 600-volt rated.

- Electrical conductors shall be UL Listed and UL Standard 854.
- Solid copper conductors shall comply with ASTM B3.
- Concentric Stranded copper conductors shall comply with ASTM B3 and B8.
- Nineteen (19)-wire combination unilay-stranded copper conductors shall comply with ASTM B3, B8, and B787.
- Multiple single conductor cables shall not be twisted.
- Electrical conductors shall be solid or stranded copper unless otherwise approved by the Engineer.

Where specified "With Ground" (WG), included shall be a copper safety ground of either bare copper or green insulated; of not less than two sizes of the load carrying conductors, whichever is greater.

Where specified Electrical Conductor (E.G.C.), one additional EGC, bare or insulated, also be supplied of the size and quantity shown.

CONSTRUCTION REQUIREMENTS. The electrical conductors shall be continuously running directly from service points to electrical devices, pull boxes and/or junction boxes without splices being made in the conduits. In addition, the electrical conductors shall pass both MEG Test and Leakage Current Test after installation in the presence of the field inspector. The contractor shall perform tests utilizing test equipment acceptable to the job engineer, and submit reports to the job engineer for validation. The Contractor shall be responsible for all damages caused by improper MEG Test and Leakage Current Test. Any conductor not meeting the minimum acceptable value shall be replaced at Contractor's expense using new conductor. Sample test pages are included in this item. The 30-day test on the system shall not commence until all conductors have been tested with specification and accepted by the job engineer.

All conduit terminations shall be provided with UL Listed bushings or bell end fittings. All conduit installed in pull boxes shall be provided with 90-degree elbows with conduit opening facing skyward. All conduit butt splices shall be UL Listed couplings. All conduit used for directional boring shall be UL Listed for that purpose. Non-metallic conduit shall be stamped, "Dir. Bore" or "Directional Bore".

All conduit joints shall be connected by using UL approved methods only. No internal and external obstructions, such as rivets, screws, and/or any other puncturing method of

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ELECTRICAL CONDUCTORS-IN-CONDUIT

connections are allowed. The Contractor shall not use a torch for bending or shaping non-metallic conduits.

Splices are allowed at pull boxes, pole bases, or as approved by the Engineer. All splices shall be waterproof, and UL Listed for continuous use in submersible installations. Splices in pull boxes shall be made with a Bus connector, such as "Homac RXL," "NSI Polaris Edge", "Utilco Safetysub," "Burndy Unitap," or equivalent and approved by the job engineer. Drip loops are required at pole base installations. No direct connection from copper to aluminum shall be allowed without a connector rated for the application. Slack cable (3 ft. min.) shall remain at each splice location to allow reconnection.

Extend green equipment grounding conductor (E.G.C.) from ground bar at main breaker to control panel and to first pole. Solidly bond E.G.C. to ground lug of control cabinet and to pole ground. Ensure that only one neutral-to-ground bond exists in the system and that it is at the main breaker. E.G.C. Shall be exothermically bonded to ground rod.

METHOD OF MEASUREMENT. Electrical Conductors-in-Conduit will be measured by the linear foot of circuit. Multiple conductors for a circuit shall not be measured singularly and added together.

BASIS OF PAYMENT. Work completed and accepted under this item, measured and tested as provided above will be paid for at the contract unit price bid per linear foot for Electrical Conductors-in-Conduit of the "number of conductors" and "size" called for on the plans, which price shall be full compensation for furnishing and installing the electrical conductors in all conduits, junction boxes and pole bases including making all necessary taps and connections to complete the circuits as shown on the plans and as directed by the Engineer, testing along with all equipment, tools, labor, and incidentals required to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Electrical Conductors-in-Conduit (__ C/ __ A.W.G., __ .)

Linear Foot

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ELECTRICAL CONDUCTORS-IN-CONDUIT

Insulation Resistance Test (MEG Test)

DESCRIPTION. This item describes a testing method for the Insulation Resistance Test ("Test"), also known as, MEG test as called for on the plans. All tests and data recordings must be done in the presence of, and signed by the field inspector. Any deviation from these procedures shall require approval by the Engineer.

MATERIALS. A digital insulation resistance tester ("Tester") is required to perform the test. The Tester shall be able to provide DC test voltage of 500 volts and perform short-time test.

Definitions

Circuit: A circuit is the entire run of conductors from the service point to the end, including splices.

Circuit No.: This is typically the number in a circle on the plans. If no circuit number is present, the Engineer will provide one.

Section: A section is a segment of conductors placed between two poles.

Section No.: This is typically the number in a rectangle on the plans. If no section number is present, the Engineer will provide one.

TESTING PROCEDURE.

Before starting the measurement:

- Do not connect the cable to service. Disconnect all other circuits or devices, as well as any cable accessories and protective end caps, and open the cable at both ends and ensure conductors are isolated from each other.
- Contractor shall be responsible for all damages caused by MEG testing while devices or accessories are still connected. Any conductor not meeting the minimum acceptable value shall be replaced at Contractor's expense using new conductor.
- Only test a cable if the temperature of the conductor is above the dew point. Otherwise, moisture will form on the surface of the insulation and could be absorbed by the cable causing the test to fail.
- Make sure that the conductor surface is free of any material that may be conductive.
- Do not exceed the recommended test voltage of the cable. Otherwise, the conductor insulation can be overstressed, or even damaged. The Contractor shall be responsible for damages caused by improper MEG Test.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ELECTRICAL CONDUCTORS-IN-CONDUIT

Short-time Test. This test lasts 60 seconds.

For each conductor that is to be tested:

1. Record the following:
 - a. Conductor length
 - b. Ambient temperature
2. Strip back the conductor at each end, as if it were to be connected to the supply and load equipment (remove the jacket, separate the conductors, and strip the end of the conductors of any insulation). The cable must be disconnected from any equipment at both ends. This includes roadway lighting, disconnects, service point, and any other kind of device that may be connected to the conductors.
3. Separate the conductors from each other, and from any ground conductors.
4. Thoroughly clean the exposed conductor ends to remove any dirt or debris. They should also be completely dry at the time of measurement.
5. Apply 500 volts DC for 60 seconds per conductor. Each insulated conductor should be tested separately, and record the reading of resistance in megohms at 60 seconds.

Minimum acceptable insulation resistance for cables rated for 600 volts with respect to length is the following:

Length of Cable (ft)	Min. Acceptable Insulation Resistance (MΩ)
100	16
200	8
300	5.3
400	4
500	3.2
600	2.7
700	2.3
800	2
900	1.8
1000	1.6
1100	1.5
1200	1.3
1300	1.2
1400	1.14
1500	1.07
1600 or greater	1

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ELECTRICAL CONDUCTORS-IN-CONDUIT

Results.

Table 1. MEG Test on sections within a circuit.

Section Insulation Resistance Test	
Circuit No. ()	
Ambient Temperature ()°F	
	Resistance (MΩ)
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Section No. ()	
Inspector's Initials	

Note:

1. Any conductor not meeting the minimum acceptable value shall be replaced at the Contractor's expense using new conductor.
2. Circuit No. This is typically the number in a circle on the plans. If no circuit number is present, the engineer will provide one.
3. Section No. This is typically the number in a rectangle on the plans. If no section number is present, the engineer will provide one. A section is considered to be a single section of conductor with no splices. See Figure 2.

ELECTRICAL CONDUCTORS-IN-CONDUIT

[illegible]

1. Any conductor not meeting the minimum acceptable value shall be replaced at the Contractor's expense using new conductor.
2. This is measuring the insulation resistance on the entire run of a circuit with the inclusion of the splices. See Figure 1.
3. Circuit No. This is typically the number in a circle on the plans. If no circuit number is present, the engineer will provide one.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

ELECTRICAL CONDUCTORS-IN-CONDUIT

Leakage Current Test

DESCRIPTION. This item describes a testing method for the Leakage Current Test as called for on the plans. All tests and data recordings must be done in the presence of, and signed by the field inspector. Any deviation from these procedures shall require approval by the Engineer. Contractor shall be responsible for all damages caused by improper Leakage Current Test. Any conductor not meeting zero leakage current shall be replaced at Contractor's expense using new conductor.

MATERIALS. A digital current clamp meter ("Meter") is required to perform the test.

TESTING PROCEDURE.

Before starting the measurement:

- Connect the conductors to service. Connect all circuits.
- If circuit includes High-Mast— place High-Mast disconnect in the "off" position.
- If circuit includes Roadway Poles— disconnect breakaway fusible links. Leave EGC grounded. Make safe any exposed ends. Do not allow ends to make contact with anything.
- Lastly, turn on service point.

At the service point—place the Meter, measure, and record whether the leakage current is detected on each conductor on the circuit. Make sure the mating faces of the jaws are protected from damage, kept clean, and closed completely together without an air gap when testing. Avoid twisting the jaws of the Meter.

Minimum acceptable leakage current shall be zero. There is no minimal acceptable leakage current. The presence of leakage current indicates a fault in the wiring. The contractor shall be responsible for location and replacing damaged conductors. A circuit shall not be deemed acceptable until passing the leakage current test.

ELECTRICAL CONDUCTORS-IN-CONDUIT

[illegible]

3. Section No. This is typically the number in a rectangle on the plans. If no section number is present, the engineer will provide one. A section is considered to be a single section of conductor with no splices.

11-04-2016 04-11-2019 Rev.
 01-20-2017 Rev. 01-02-2020 Rev.
 11-16-2017 Rev. 04-15-2024 Rev.
 09-25-2018 Rev. 07-22-2025 Rev.
 12-09-2018 Rev. 09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

DESCRIPTION. This work consists of constructing and furnishing all materials to ensure a properly operating roadway lighting system according to these specifications and the plans, or as directed by the Engineer.

LIGHTING SYSTEM DESIGN CRITERIA. Roadway/Rest Area lighting system shall meet the illuminance design values, Table 3-5a, in AASHTO *Roadway Lighting Design Guide*, current edition, and ANSI/IES RP-8-22 Recommended Practice: Lighting Roadway and Parking Facilities, current edition.

MATERIALS. (A) Luminaire. Luminaire assemblies with accessories shall be supplied in one style or model number from one manufacturer only each for variable and fixed intensity lighting as equivalent to the luminaire used in the basis of design. Luminaire's driver shall be mounted inside the luminaire housing. The driver shall have voltage/current overload and short circuit protection.

In addition, luminaire(s) shall meet the following requirements:

- Light Source: Shall be LED. Refer to plan set for more information related to the number of lumens, mounted height, mast arm length, and orientation for each light source.
- Light Distribution: Per Plans Basis of Design
- Correlated Color Temperature: 4000K +/- 200K
- Color Rendering Index: No less than 70. Mesopic multipliers (i.e., effective luminance factors) shall not be used. All values shall assume photopic visual adaptation.
- Refractor or Lens: UV stabilized optical grade acrylic -or- high-translucent, high-strength heat/shock resistant glass, borosilicate glass (hardened or tempered).
- Operating Temperature Range: -40°C (-40°F) to +40°C (+104°F)

11-04-2016
01-20-2017 Rev.
11-16-2017 Rev.
09-25-2018 Rev.
12-09-2018 Rev.

04-11-2019 Rev.
01-02-2020 Rev.
04-15-2024 Rev.
07-22-2025 Rev.
09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

- BUG Rating: U0, in accordance with Arkansas Shielded Outdoor Lighting Act.
- RoHS: Compliant
- IP Rating: IP66 or better
- Surge Protection: Minimum 10kV/5kA per ANSI C136.2
- Input Voltage: 120V-277V or 347V-480V
- Power Factor: 90% or higher
- Design Life: 100,000 hours to L90, tested in accordance with IES TM21-11
- Warranty: Minimum 5 years. LED driver and LED arrays shall be included in the warranty.
- Accessories: House-side shield shall be included for residential areas. See plans.
- Receptacle: ANSI C136.41 7-pin twist-lock photocell or shorting cap. See plans.
- Luminaire Housing: Die-cast aluminum with tool-less entry and fully gasketed. All internal components shall be assembled and pre-wired using quick disconnect or modular electrical connections. Internal components shall be replaceable without special tools.
- Paint: Luminaires shall be factory painted to match poles

11-04-2016	04-11-2019 Rev.
01-20-2017 Rev.	01-02-2020 Rev.
11-16-2017 Rev.	04-15-2024 Rev.
09-25-2018 Rev.	07-22-2025 Rev.
12-09-2018 Rev.	09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

- **Variable Intensity:** The Luminaire shall be capable of variable intensity lighting as shown on the plans basis of design. This functionality shall be able to capable of being controlled through the passive or pushbutton actuation as shown in the plans.

(B) Conductors. Conductors for roadway luminaires shall be solid or stranded copper, UL Listed, XHHW-2, manufactured in accordance with ASTM B3, B-8, and B-787. Rated voltage for conductors shall be 600V. Temperature rating shall be 90°C/194°F for wet or dry locations.

(C) Luminaire Poles. Poles and mast arms, if used, shall be hot-dipped galvanized steel. All poles and arms within continuous systems shall be of similar shape, dimension, materials, and color. If top of the pole is exposed, a pole cap shall be provided.

Luminaire poles and hardware, unless superseded by this special provision or the detail sheet(s), shall meet the minimum requirements under the current edition of Standard Specifications for Highway Construction (Standard Specifications), Arkansas Department of Transportation.

- Section 714. "Traffic Signal Mast Arm and Pole with Foundation" of the Standard Specifications shall apply to all units of steel design as well as hardware and foundation requirements for units of other material. With exception to reinforcing steel in the drilled shafts, which shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.
- Section 724. "Overhead, Bridge Mount, and Cantilever Sign Structure" of the Standard Specifications shall apply to poles and mast arms for units of aluminum design.

In addition, all luminaire poles shall meet the following minimum structural requirements:

- Design Specification: AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (1st Edition), 2015 with current interim revisions.
- Minimum Structural Requirements: As a minimum, the diameter of the lower end of the shaft shall not be less than 8.0 inches with taper to a diameter of at least 3.4 inches at the top, or as shown on the plans. Pole shafts shall be a single-piece. Two-pieces, slip-fitted pole shafts will not be allowed.
- Nut Covers: Required for "shoe base" only.

11-04-2016
01-20-2017 Rev.
11-16-2017 Rev.
09-25-2018 Rev.
12-09-2018 Rev.

04-11-2019 Rev.
01-02-2020 Rev.
04-15-2024 Rev.
07-22-2025 Rev.
09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

- Hand Hole: Size (Inside Dimension) – 4 inches width x 6 inches height.
- Anchor Bolts: Anchor bolts shall be of sufficient size and strength and meet the requirements of Section 714 of the Standard Specifications.
- Construction Specifications: Standard Specifications for Highway Construction (current edition) with applicable Supplemental Specifications and Special Provisions.
- Basic Wind Speed = 120 mph
- Mean Recurrence Interval (MRI) = 1700 yrs

CONSTRUCTION. (A) **General.** Prior to construction, the Contractor shall provide documentation to the Project Engineer, to ensure Arkansas State Codes (§17-28-101 et seq. and §20-31-101 et seq.) are met. The documentation shall include:

- (1) Electricians' license information and expiration date.
- (2) The ratio of licensed-electrician-to-apprentice-electricians.
- (3) Printed search result of licensed electricians from Arkansas Department of Labor Electrician Licensee Directory (<https://www.ark.org/labor/electrician/search.php>).

All licenses shall be valid and current.

The Contractor shall contact the local utility companies and/or Arkansas One Call to determine the location of underground utilities in areas where new foundations are to be constructed. The Contractor shall maintain the utility location markings until they are no longer necessary.

The Contractor shall be responsible for all incidental damages during construction at no additional cost to the Department.

If existing underground conduit is to be incorporated into a new system, clean it with a mandrel or cylindrical wire brush and clean with compressed air.

Splices are allowed only at pull boxes and pole bases. All splices shall be made by using UL Listed or UL Certified products. All splices shall be watertight.

Degrees of tilt for luminaires shall be zero (0) to comply with BUG rating of U0 and Arkansas Shielded Outdoor Lighting Act.

11-04-2016 04-11-2019 Rev.
 01-20-2017 Rev. 01-02-2020 Rev.
 11-16-2017 Rev. 04-15-2024 Rev.
 09-25-2018 Rev. 07-22-2025 Rev.
 12-09-2018 Rev. 09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

(B) Luminaire Poles. All luminaire poles shall be placed according to pole orientations shown on the plans, or as directed by the Engineer.

Aluminum alloy surfaces contacting concrete foundations and steel surfaces shall be coated with or bedded in an aluminum caulking compound, such as aluminastic or other suitable material approved by the Engineer.

Hand holes shall be on the opposite side of the traveled lanes. Mast arms, if used, shall be included with the poles.

Cost of painting, powder coating, or anodization will not be paid for directly, and shall be considered subsidiary to the unit price bid for LED Roadway Illumination Pole. Subsequent to erection, any damaged galvanized coating or paint shall be repaired according to Standard Specification Section 807.88 or Section 638, as appropriate.

(C) Breakaway Transformer Base. Where designated in the Unit Item as a "T-Base", a breakaway transformer base shall be furnished and installed as per manufacturer's recommendation. Transformer base shall be permanent mold casting of Aluminum Alloy 356-T6 or equal as specified by the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. Bases shall be a minimum of 16-inches high and square in cross section. The dimensions shall be approximately those dimensions shown on the plans. Any change in dimension, approved by the Engineer, shall not lessen the design load strength of the base.

A detail sheet illustrating the proper installation of the T-Base shall be supplied to the Department.

A written certification shall be supplied to the Department that the T-Base meets the minimum requirements for AASHTO breakaway specifications.

In lieu of T-Base, breakaway couplings are allowed with the Engineer's approval.

(D) Pole foundations. Pole foundations for luminaire poles shall be constructed in firm earth to the minimum size and depth shown on the plans. The location of foundations shall be as shown on the plans, or as directed by the Engineer. Foundations shall be placed monolithically and have 1" chamfer at the top. Concrete shall be constructed according to Standard Specifications, Section 802.

(E) Luminaire Wind Loading. Design shall support the maximum luminaire properties for the pole type specified for attachment of the following luminaire(s):

11-04-2016 04-11-2019 Rev.
 01-20-2017 Rev. 01-02-2020 Rev.
 11-16-2017 Rev. 04-15-2024 Rev.
 09-25-2018 Rev. 07-22-2025 Rev.
 12-09-2018 Rev. 09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

LED Cobra Head

- Effective Projected Area (EPA): less than or equal to 1.5 sq. ft.
- Weight: less than or equal to 35lbs.

Luminaire Arm (where required)

- All arms shall be single member (no truss)
- Length: variable, see plans

(F) Wiring. Two (2) 12 AWG copper with one (1) 12 AWG EGC conductors shall be used for luminaires. Conductors shall run through the shaft to the pole base. Approved watertight breakaway disconnect, dual rated for copper and aluminum connections, shall be used to terminate the wires in the pole base, and from the pole base to the splices in the pull box. The current carrying conductor shall be fused. The EGC shall be neutral/dummy fused. All in-line disconnects shall be located in the pole base.

Waterproof breakaways disconnect and URD multi-port connectors shall be a mechanical "Homac Flood-seal", "Eaton Bussmann," or approved equivalent.

All conductors for luminaire and wiring requirements for poles with luminaires shall be considered subsidiary to the special provision LED Roadway Illumination Pole.

(G) Miscellaneous. A detail sheet illustrating the proper installation of the transformer base shall be supplied to the Department.

A written certification shall be supplied to the Department that the transformer base meets the minimum requirements for AASHTO breakaway specifications.

Poles not requiring T-Base, or non-breakaway base shall be designated in the Unit Item as "Shoe Base".

Barrier mounted poles shall be designated in the Unit Item as "Barrier Mounted".

(H) Test Requirements and Quality Assurance.

A. Meg and Leakage Test.

Where specified in the contract, contractor shall perform the Meg Test and Leakage Test in accordance contract specifications. This will be paid for the Electrical Conductors in Conduit pay item.

B. 14-Day Burn-Out Test.

11-04-2016 04-11-2019 Rev.
 01-20-2017 Rev. 01-02-2020 Rev.
 11-16-2017 Rev. 04-15-2024 Rev.
 09-25-2018 Rev. 07-22-2025 Rev.
 12-09-2018 Rev. 09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

Contractor shall conduct minimum 14-day burn-out test for the complete lighting system. The Contractor shall be responsible to correct, and if needed, replace any malfunctioning equipment during the 14-day burn out test at no cost to the Department. The 14-day burn-out test shall be restarted in the event of any malfunctioning equipment.

C. 30-Day Performance Test.

Contractor shall perform 30-day performance test of the lighting system. The lighting system shall be functioning as the normal operations it intended for the system.

The Contractor shall be responsible to correct, and if needed, replace any malfunctioning equipment during the 30-day performance test at no cost to the Department. The 30-day performance test shall be restarted in the event of any malfunctioning equipment. The 30-day performance test shall not start prior to the completion and approval of the 14-day burn-out test.

D. 6-Month Guarantee period.

Contractor shall guarantee satisfactory in-service operation of the mechanical and electrical equipment and related components for a period of 6 months following completion of the 30-day performance test. Contractor to maintain the lighting system for the 6-month guarantee period. The Contractor shall be responsible to correct, and if needed, replace any malfunctioning equipment during performing test at no cost to the Department. The 6-month guarantee period shall be restarted in the event of any malfunctioning equipment. The 6-month guarantee period shall not start prior to the completion and approval of the 30-day performance test.

E. Warranty documents.

The contractor shall provide and transfer 5-year manufacturer's warranty to the maintenance authority (e.g., County, or City) at the end of the 6-month guarantee period.

SUBMITTALS. The Contractor shall submit all manufacturers' parts list, specification sheets, ordering information, shop drawings, IES file of luminaire, luminaire reports: LM-79, LM-80, and LM-21 (L70), released within the last five years, information on all manufacturers' warranty and guarantee information, and certifications. All submittals shall be legible. The Contractor shall clearly state and highlight all requirements mentioned in this Special Provision.

METHOD OF MEASUREMENT. Work completed and accepted under this item shall be measured by the unit. One unit shall consist of luminaire; mast arm, where required; illumination pole; pole foundation; conductors; breakaway disconnect; fuses; and all other hardware required for installing the roadway illumination pole.

"Lumen" shall refer to the lumen output of luminaire, "Luminaire" shall refer to the shape of luminaire used (e.g., cobra head, shoebox, or acorn). "Base" refers to T-Base, or Shoe Base

11-04-2016
 01-20-2017 Rev.
 11-16-2017 Rev.
 09-25-2018 Rev.
 12-09-2018 Rev.

04-11-2019 Rev.
 01-02-2020 Rev.
 04-15-2024 Rev.
 07-22-2025 Rev.
 09-10-2026 Rev.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED ROADWAY ILLUMINATION POLE

meeting the requirements of this Special Provision. Height shall refer to the mounting height of the luminaire including base.

BASIS OF PAYMENT. Work completed, accepted, and measured as provided above will be paid for at the contract unit price bid per each for LED Roadway Illumination Pole, which price shall be full compensation for erecting, furnishing, and installing the luminaire, mast arm (where required), pole, T-Base (where required), pole foundation and ground rod with grounding electrode; for connection of electrical components, including waterproof breakaway disconnect; for excavation, backfill, compaction, and removal of surplus material; and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
LED Roadway Illumination Pole (___ Lumens, ___, ___, ___')	Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)

1. **DESCRIPTION.** This work shall consist of furnishing and installing LED luminaire assemblies on traffic signal poles, including the accessories, in accordance with these specifications and at the locations shown on the plans or as directed.
2. **MATERIALS AND CONSTRUCTION REQUIREMENTS.**

A. Luminaire. Each luminaire assembly shall consist of a "Cobra Head", power door style; Light Emitting Diode (LED) light source capable of outputting at least minimum of 12,000 lumens and a maximum of 14,000 lumens, and optics to produce an IESNA Type-III light distribution with a BUG rating of U0. The rated Correlated Color Temperature (CCT) shall be 4000° K +/- 200°K, and the Color Rendering Index (CRI) shall be no less than 60. As a minimum, 40% of Light Flux values shall be maintained on the downward street side; with greater than 0.002 foot-candles per 1000 lamp lumens at a point of "1 x 4" mounting heights on the downward street side. Mesopic multipliers (i.e., effective luminance factors) shall not be used. All values shall assume photopic visual adaptation. Luminaires with a Light Loss Factor using the L70 Method shall have a minimum rating of 50,000 hours, and a minimum 5-year warranty. The warranty shall provide for the repair or replacement of defective electrical parts (including light source and power supplies/drivers) for a minimum of five (5) years from the date of purchase. Luminaire shall be able to operate normally in temperatures from -40° C to +40° C. LED light source(s) and driver(s) shall be RoHS compliant.

The luminaires shall be all aluminum die cast hinged construction. Each luminaire assembly shall have a photocell and receptacle in the top of the luminaire housing and shall meet the requirements of the local utility company. The luminaires shall be rated IP-66 or better and shall employ the use of borosilicate glass lenses. All luminaire internal components shall be assembled and pre-wired using modular electrical connections and shall be designed for ease of component replacement and end-of-life disassembly.

All luminaires shall contain built-in drivers with power door assembly and be of an approved streamlined design. Drivers shall be wired for line voltage as indicated on the plan sheets (plus or minus 10%-line voltage, variation), 60-cycle, single phase, multiple circuit operation, with high power factor (90% or higher). The driver shall be suitable for the proper operation of the LED array inclusive to the luminaire assembly, with a minimum open circuit voltage as specified on the plan sheets and shall be an easily replaceable part of the luminaire assembly. The luminaire shall be listed for wet locations by a U.S. Occupational Safety Health Administration (OSHA) Nationally Recognized Testing Laboratory (NRTL). The luminaire shall have lightning suppression equipment

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED LUMINAIRE ASSEMBLY (BUG U0 TYPE)

capable of meeting the performance requirements for electrical immunity as specified in ANSI C136.2, using a combination wave test level of at least 10kV/5kA.

Luminaire assemblies (with accessories) shall be supplied in one style or model number from one manufacturer only. The contractor shall submit manufacturer's brochures with illustrations and data in addition to LM-79, LM-80 and TM-21 reports to the Arkansas Department of Transportation for approval of luminaires, accessories and installation details. All submitted luminaires shall be listed on the Department of Energy's LED Lighting Facts website, and all supporting calculations and test data from the LM-79, LM-80 and TM-21 reports must be in accordance with LED Lighting Facts guidance.

B. Photocell. Each luminaire assembly shall have a solid-state photocell and receptacle in the top of the luminaire housing. Photocells shall have a locking-type photoelectric control with a rating of 5,000 operations minimum (13 years) on loads of 1800VA. The photocell shall operate at the same voltage rating as the luminaire driver.

C. Additional Requirements. This LED luminaire assembly shall also perform in accordance with Materials Section (A) Luminaire and Construction Section (H) Test Requirements and Quality Assurances found in the LED ROADWAY ILLUMINATION POLE Special Provision. Any conflicts between the LED ROADWAY ILLUMINATION POLE Special Provision and what is included above in this Special Provision shall be resolved in favor of the LED ROADWAY ILLUMINATION POLE Special Provision.

3. METHOD OF MEASUREMENT. Completed and accepted LED Luminaire Assembly will be measured by the unit.

4. BASIS OF PAYMENT. Work completed and accepted under this item and measured as provided above shall be paid for at the contract unit price bid for each LED Luminaire Assembly, which price shall be full compensation for furnishing, installing, and testing the luminaires, lamps of the type described herein, driver, photocell, and all materials, equipment, tools, labor, warranties, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

LED Luminaire Assembly

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED TRAFFIC SIGNAL HEAD

1. **DESCRIPTION.** This item shall consist of furnishing and installing 300 mm (12") diameter Traffic Signal Heads and components based on Light Emitting Diode (LED) technology according to these specifications as well as **Section 706 Traffic Signal Head** of the Standard Specifications for Highway Construction, Edition of 2014, to approval of the engineer. Portions of the standard specifications will be superseded by these special provisions.
2. **MATERIALS.** The LED modules shall be suitable for span wire and mast arm mounted signals. Units must meet the following specifications to be accepted.
 - (A) **Physical and Mechanical.** LED traffic signal modules designed shall not require special tools for installation. Retrofit replacement LED signal modules shall fit into existing traffic signal housings built to the VTCSH Standard without modification to the housing. Installation of a retrofit replacement LED signal module into an existing signal housing shall only require the removal of the existing optical unit components, i.e., lens, lamp, and gaskets; shall be weather tight and fit securely in the housing; and shall connect directly to existing electrical wiring utilizing spade connectors. It shall not be necessary to remove reflector or lamp module. Reflector and lamp module is not required where new housings are provided.
 - (B) **Optical Requirements.** The RED and GREEN modules shall be measured per ITE specifications and are required to meet luminous values that are a minimum of 115 percent greater than the required minimum values in the specifications at the time of production. The YELLOW modules shall be tested for luminous output at 25°C, allowing the modules to achieve thermal equilibrium for 60 minutes, while the modules are energized at nominal operating voltage, at a 8.3% (or 1/12) duty cycle or 5 sec on/55 sec off). The yellow modules shall meet all other ITE specifications.
 - (C) **Optical Unit.** LED signal modules shall meet the following requirements:
 - Optical unit replacement** - The LED module shall be constructed to allow the replacement of the outer lens and/or the light engine when needed.
 - Lens Surface** - The external lens shall be smooth on the outside to prevent excessive dirt/dust buildup.
 - Tinting** - The RED, YELLOW and optionally on GREEN lens shall be tinted or shall use transparent film or materials with similar characteristics.
 - Chromaticity** - The measured coordinates of LED signal modules shall conform to the chromaticity requirements of Section 8.04 and Figure 1 of the VTCSH standard.
 - Environment** - The LED signal module shall be rated for use in the ambient operating temperature range, measured at the exposed rear of the module, of -40° C (-40° F) to +74°C (+165° F). The LED sign module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991, sections 4.7.2.1 and

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED TRAFFIC SIGNAL HEAD

4.7.3.2, for Type 4 enclosures to protect all internal LED, electronic, and electrical components. The LED signal module lens shall be UV Stabilized.

Preassembly - The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing traffic signal housing. The power supply for the LED signal module may be either integral or packaged as a separate module. The power supply may be designed to fit and mount inside the traffic signal housing adjacent to the LED signal module. The assembly and manufacturing process for the LED signal assembly shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

LED Drive Circuitry (parallel) - The individual LED light sources shall be wired so that a catastrophic failure of one LED light source will result in the loss of only that one LED light source, and the loss of no more than 1% of the total LED'S within the LED signal module.

Material Composition - Materials used for the lens and signal module construction shall conform to ASTM specification for the materials where applicable. Enclosures containing either the power supply or electronic components of the signal modules shall be made of UL94VO flame retardant materials. The lens of the signal module is excluded from this requirement.

Identification Markings - Each individual LED signal module shall be identified for warranty purposes. Each LED signal module shall be identified on the backside with the manufacturer's name and serial number. The following operating characteristics shall be identified: nominal operating voltage, power consumption, and Volt-Ampere. Modules shall have a prominent and permanent vertical indexing indicator, i.e. UP ARROW or the word UP or TOP, for correct indexing and orientation inside a signal housing. Modules conforming to this specification may have the following statement: "Manufactured in Conformance with the Interim Purchase Specification of the ITE for LED vehicle Traffic Signal Modules" on an attached label.

The first sentence of Subsection 706.02, Materials. (d) is deleted and the following substituted therefore:

The Contractor shall furnish and install the proper signs adjacent to signal heads controlling an exclusive left turn lane:

- Traffic Signal Head (3 Sec., 1-Way) (Red Arrow, Yellow Arrow, and Green Arrow) for protect only shall include a MUTCD R10-10 sign (30" x 36") (LEFT TURN SIGNAL).
- Traffic Signal Head (3 Sec., 1-Way) (Red Arrow, Yellow Arrow, and Flashing Yellow Arrow) for permitted only shall include a MUTCD R10-12a sign (30" x 36") (LEFT TURN YIELD ON FLASHING YELLOW ARROW).

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED TRAFFIC SIGNAL HEAD

- Traffic Signal Head (4 Sec., 1-Way) (Red Arrow, Yellow Arrow, Flashing Yellow Arrow, and Green Arrow) for protected-permitted shall include a MUTCD R10-12a sign (30" x 36") (LEFT TURN YIELD ON FLASHING YELLOW ARROW).
- Traffic Signal Head (5 Sec., 1-Way) (Red Ball, Yellow Ball, Green Ball, Yellow Arrow, and Green Arrow) for protected-permitted shall include a MUTCD R10-12 sign (30" x 36") (LEFT TURN YIELD ON GREEN (symbolic green ball)).

The sign type, size, and layout for any additional signs shall be furnished and installed as shown in the plans. All signs shall comply with Section 723. Unless otherwise specified, the sheeting shall be by Type III or IV.

(E) Manufacturer's Warranty. The standard contract warranty shall apply with time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.) who provides electrical service and maintenance of the intersection. Warranty shall provide the following stipulations:

- Isolated Failures Warranty Period not less than 7 Years
- Design Failure Warranty Period not less than 5 Years

Warranty for isolated lens failure shall include replacement LED module at no cost for materials and shipping for a period of 7 years from the date the intersection is considered substantially complete by the engineer. An LED module shall be considered failed when the luminosity drops below the ITE requirements listed above.

A product "Design Failure" is considered to have occurred if, within a period of 5 years or less, a total of ten percent (10%) of the LED modules supplied on a particular Job are considered failed as described above. The supplier shall then "recall" the entire shipment at no cost to the agency maintaining the equipment. This shall include labor and equipment necessary to replace the units.

3. CONSTRUCTION REQUIREMENTS. Construction shall be in accordance with the standard specifications. No distinction is made for span-wire installations, post mount, mast arm mount, or other mounting methods as described on the plan sheet(s).

Whether complete head assembly is replaced, or existing head is retrofitted with new lenses, contractor shall be responsible for aligning head properly with approach lanes. This does not include relocating head and bracket but adjusting the alignment of the head to achieve maximum visibility to motorists.

4. METHOD OF MEASUREMENT. Units are bid as "3 Section", "4 Section" or "5 Section". A 3 Section unit consists of one each: Red Ball, Yellow Ball, and Green Ball or Red Arrow, Yellow Arrow, and Green Arrow or Red Arrow, Yellow Arrow, and Flashing Yellow Arrow. A 4 Section unit consists of one each: Red Ball, Yellow Ball, Green Ball, and Green Arrow or

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

LED TRAFFIC SIGNAL HEAD

Red Arrow, Yellow Ball, Flashing Yellow Arrow, and Green Arrow. A 5 Section unit consists of one each: Red Ball, Yellow Ball, Green Ball, Yellow Arrow, and Green Arrow. No distinction shall be made in the unit based on the orientation of the arrow indications.

- A. Traffic Signal Head, LED.** Work completed and accepted and measured as provided above will be measured by unit.
- B. Traffic Signal Head, LED Lens, Retrofit (Ret).** Work completed and accepted and measured as provided above will be measured by unit.

5. BASIS OF PAYMENT.

- A. LED Traffic Signal Head.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Traffic Signal Head, LED of the type, display and size specified, which price shall be full compensation for furnishing and installing all materials and signs; and for all labor, equipment, tools, and incidentals necessary to complete the work.
- B. LED Traffic Signal Lens Ret.** Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Traffic Signal Head, LED Lens, Retrofit of the type, number of sections, color and display specified, which price shall be full compensation for removing existing unnecessary hardware and modifying existing housing; and for furnishing and installing all materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Traffic Signal Head, LED, (___Section, 1 Way)	Each
Traffic Signal Head, LED Lens, Retrofit (___Section, 1 Way)	Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

REMOVAL OF TRAFFIC SIGNAL EQUIPMENT

DESCRIPTION. Under this item, the contractor shall remove traffic signal heads, traffic signal poles – which includes, but is not limited to, poles associated with street lighting, rectangular rapid flashing beacons, pedestrian hybrid beacons (PHBs) and pedestrian pushbuttons, traffic signal pole foundations, span wire assemblies, traffic controllers and all other existing signal equipment at locations shown on the plans or as ordered by the Engineer.

MATERIALS. The contractor shall provide all equipment and tools necessary to remove the signal equipment at locations shown on the plans or as designated by the Engineer.

CONSTRUCTION REQUIREMENTS. The contractor shall maintain the existing signal operations as much as possible throughout construction until the completion of the contract. Control of the intersection shall be by police officers, flagmen, or as determined by the Engineer at anytime that the signals are not in operation.

The contractor shall remove the traffic signal pole foundations and all appurtenances such as reinforcing steel, conduit, anchor bolts and cable to a depth of 18 inches below grade. The concrete foundations shall be broken up and the material disposed of outside of the limits of the project by the contractor. The contractor shall fill with earth all holes where concrete foundations or wooden span wire poles have been removed under this item. The earth in the hole shall be thoroughly compacted until it is as firm and unyielding as the surrounding material. Concrete or asphalt surfaces shall be restored to existing conditions.

All equipment shall remain the property of the City or County and the contractor shall notify the City or County 24 hours in advance of the removal. All removed equipment shall be stored by the contractor at the construction site. The contractor shall provide a secure, weather-tight enclosure to store all electric components until they can be removed from the construction site.

METHOD OF MEASUREMENT. Removal of traffic signal equipment will be measured by the lump sum.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract lump sum price bid for Removal of Traffic Signal Equipment, which price shall be full compensation for furnishing all materials, equipment, tools, labor, and incidentals necessary to complete the work as described herein.

Payment will be made under:

Pay Item

Pay Unit

Removal of Traffic Signal Equipment

Lump Sum

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)

DESCRIPTION. This item consists of furnishing and installing a distribution panel, circuit breaker, lightning arrestor, weatherhead, clamps, wiring, ground rod, and miscellaneous fittings at locations designated on the plans and in accordance with the latest version of the National Electrical Code.

Lightning arrestor shall be SPD Type 2 (load side) per NEC and UL Code 1449.

All construction and wiring shall be in compliance with local electrical codes. The Contractor shall perform all necessary liaisons with local power companies in order to ascertain such specific requirements as the power company may apply to each location.

MATERIALS AND CONSTRUCTION REQUIREMENTS. Height of the service riser weatherhead shall be 20 feet or greater depending on street crossings or other obstructions, unless otherwise approved by the Engineer.

The required weatherhead, conduit nipples, couplings, clamps and other fittings exposed to the weather shall be hot dipped galvanized steel and shall be attached to the pole in such a manner as to facilitate the final steel conduit connecting weatherhead. Service disconnect, distribution cabinet and tie to underground circuits is paid for by Service Point Assembly. Galvanized steel conduit for riser shall be paid as a separate item.

The Contractor shall furnish and install service feeder wire from the distribution cabinet to the main breaker and from the main breaker past the weatherhead. Tie-in and splicing of the service feeder wire to the secondaries supplied by the local utility will be performed by others and shall not be considered a part of this contract. Grounding shall be as shown on the Standard Drawing SD-9 (Service Point).

Mounted at the service location shall be NEMA 3R enclosure(s), circuit breaker, distribution panel and main breaker of a design and model number suitable to the local power company and as approved by the Engineer. The circuit breaker shall be magnetic trip only and sized in accordance with the plans. If required, a meter base provided by the utility company shall be installed above the distribution panel. All enclosures and circuit breakers shall be rated for 240 V.A.C. or greater, unless otherwise designated on the plan sheets. A 30 amp breaker shall be provided.

Where lighting is included in the signal installation for intersection lighting, a 20 amp breaker shall be provided.

The Contractor shall submit to the Engineer two (2) printed copies of the applicable brochures containing the design criteria for the equipment which the Contractor proposes to install for approval. The specific items that are proposed for use shall be clearly marked in the applicable

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

**SERVICE POINT ASSEMBLY
(TRAFFIC CONTROL DEVICES)**

brochures. A list shall be attached to identify the item and contain the manufacturer, quantity, model, and identifying descriptions of each item. The items to be submitted: load centers and enclosures, lightning arrestor, and all circuit breakers.

METHOD OF MEASUREMENT. Completed and accepted Service Point Assembly will be measured by the unit.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid each for Service Point Assembly for the number of circuits specified, which price shall be full compensation for furnishing and installing a treated wood pole, enclosure(s), circuit breaker(s), main breaker, distribution panel, steel conduit, conduit fittings, wiring and ground rod; for testing the service point assembly; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Service Point Assembly (____ Circuit(s))

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PEDESTAL TYPE SERVICE POINT ASSEMBLY

DESCRIPTION. This item consists of furnishing and installing a pedestal type service point assembly, pedestal concrete foundations, ground rods, breakers, photoelectric cell switch, wire, and miscellaneous fittings at locations designated on the plans and in accordance with the latest version of the National Electrical Code.

All construction and wiring shall be in compliance with local electrical codes per NEC, current edition. The Contractor shall perform all necessary liaison with local power companies in order to ascertain such specific requirements as the power company may apply to each location.

MATERIAL and CONSTRUCTION REQUIREMENTS

The pedestal type service point shall be constructed as shown in the construction plans and details. The enclosure shall be NEMA 3R construction with expandable load centers to allow for future expansion). If required by the local utility it is the contractor s responsibility to install the conduit from the pedestal type service point to the location required by the utility to connect to the local utility. The pedestal type service point and secondary disconnect shall meet EUSERC 308 utility standards. All external hardware such as (screws, bolts, hinges, handles, hasps and sealing screws) shall be stainless steel. The unit shall be UL listed as an industrial control panel (UL 508).

If the service point is more than 10 feet from controller cabinet, the Contractor shall provide and install a breaker enclosure on controller cabinet and shall install conduit, electrical service wire with ground as specified on the plans and perform wiring to connect into ARDOT's main service point as part of this contract. Conduit and wire are covered as separate pay items under this contract. Secondary local breaker shall be subsidiary to the service point assembly pay item.

Amperage - The service point assembly shall be rated for minimum of 100 Amps and be supplied with a minimum of 100 Amp 2-pole or 3 pole, main breaker depends on electrical system voltage.

System Voltage: 240 and/or 480, single phase and/or three phase as indicated on the plan.

Distribution interior - The distribution interiors shall consist of a switched panel board with five (5) circuits. The circuit breaker shall be magnetic trip only and sized in accordance with the plans.

- a. For 240 V.A.C. system, the enclosures and circuit breakers shall be rated for 240 V.A.C. or greater.
- b. For 480 V.A.C. system, the enclosures and circuit breakers shall be rated for 480 V.A.C. or greater.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PEDESTAL TYPE SERVICE POINT ASSEMBLY

The contactor amperage shall be rated at a minimum of 100 amps. The service point shall have a photoelectric cell for controlled loads. The unit shall have 22K ampere interrupting capacity. The pedestal type service point assembly shall have a H.O.A. (Hand Off Auto) switch. The distribution interior shall include lighting arrestors of a type approved by the Engineer.

Finish - The pedestal type service point assembly cabinet finish shall be anodized aluminum.

Size 100 Amp Service Pedestal - The enclosure size shall be 16" x 17" x 48" with ringless meter socket or the meter socket required by the utility (Milbank SL series, Tesco Tescoflex series, Eaton CMP series, or approved equal).

Base - The pedestal shall be installed on a concrete pad with anchor bolt kit installed as recommended by the manufacture with a minimum height of 18" above ground level at a location as shown in the plans. The pad shall be of the dimensions as shown in the detail sheet.

Contractor shall install a 5/8" x 10' copper clad ground rod in the first and last pull box and are subsidiary to pay item service point assembly.

Conductors shall continuously run directly from service point to electrical devices and/or pull boxes without splices being made in the conduit.

Electrical service shall be provided by the local utility city/county to a service pole with external raintight breaker (main breaker), galvanized steel service riser, meter loop (if required), and weatherhead at a mutually acceptable point within the right-of-way. If the service point is over 10 feet from the controller, the Contractor shall provide and install a separate two circuit external breaker (breaker enclosure) on or near the traffic signal controller cabinet and shall install conduit, electrical service wire, and perform wiring to connect into ARDOT's main breaker as part of this contract. Conduit is paid for as a separate item of this contract. Two circuit breakers, considered subsidiary to the control equipment, are needed where street lighting is included. As part of the signal installation, street lighting circuit shall be separate from the circuit serving the traffic signal control equipment from the point of tie-in at the secondary breaker provided by the Contractor.

METHOD OF MEASUREMENTS. Work completed and accepted items will be measured by the unit.

BASIS OF PAYMENT. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid each for Pedestal Type Service Point Assembly for the number of circuits, size and amperage specified which price shall be full compensation for

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PEDESTAL TYPE SERVICE POINT ASSEMBLY

furnishing and installing enclosures(s), circuit breakers(s), main breaker, distribution panel, conduit, concrete pad with anchor bolts, conduit fittings, wire and ground rod; for testing the service point assembly; and for all materials, equipment, tools labor and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Pedestal Type Service Point Assembly (_____)

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****IMPRINTED AGGREGATE REINFORCED PREFORMED THERMOPLASTIC
PAVEMENT MARKING SYSTEM**

1. Use: A durable imprinted aggregate reinforced preformed thermoplastic pavement marking system (herein "System") that provides a textured, highly attractive and durable topical treatment to the surface of asphalt pavement. Typically the system replicates, in relief, the grout lines common to brick or other types of unit pavers, but may also be used to create other patterns. It is intended for use on asphalt pavements to create traffic calming solutions and decorative crosswalks, medians, intersections and through areas in parking lots. It provides a seamless, aesthetic look without the trip hazards and ongoing maintenance often associated with pavers and stamped concrete.

1.1 The aggregate reinforced preformed thermoplastic is typically supplied in panels measuring 2 ft. x 2 ft. [$\pm\frac{1}{8}$ in.] (.61m x .61m [± 3 mm])

1.2 The System must be able to be applied to asphalt surfaces without preheating the application surface to a specific temperature.

1.3 The System must be able to be applied in temperatures down to 45°F (7°C) without any special storage, preheating or treatment of the material before application.

1.4 The System is applied to asphalt pavement using proprietary reciprocating infrared heating equipment. A two-part epoxy sealer specified by the manufacturer must be applied to the substrate prior to preformed thermoplastic application to ensure proper adhesion, and to provide reinforcement for larger volumes of material. Immediately following sealer application, panels of aggregate reinforced preformed thermoplastic are positioned properly on the asphalt substrate. The preformed thermoplastic is then heated to the required melting temperature. Additional aggregate may be applied to the preformed thermoplastic surface as needed following the melting process, to achieve added friction properties and a uniform surface appearance. As the material is cooling, it is imprinted with a vibratory plate compactor and a template made from 3/8 in. (9.5 mm) flexible wire rope in the required design to create crisp, clean lines which define the pattern. For crosswalks, it is typically demarcated by applying white preformed thermoplastic transverse lines on both sides of the installation.

1.5 The System is available in a variety of standard colors and patterns. Color can be used to create patterns within the crosswalk area to reflect the typical white "continental" crosswalk bars for additional visibility and awareness. Within certain limitations, custom patterns and colors are available upon request.

1.6 The System shall utilize a resilient, aggregate reinforced preformed thermoplastic product which contains a minimum of thirty percent (30%) intermixed anti-skid/anti-slip elements and where the top surface contains anti-skid/anti-slip elements. These anti-skid/anti-slip elements must have a minimum hardness of 6 (Mohs scale).

1.7 The System must be resistant to the detrimental effects of motor fuels, antifreeze, lubricants, hydraulic fluids, etc.

2. MANUFACTURING CONTROL AND ISO CERTIFICATION: The System manufacturer must be ISO 9001:2015 certified for design, development and manufacturing of preformed thermoplastic, and provide proof of current certification.

3. PREFORMED THERMOPLASTIC MATERIAL: Must be composed of an ester modified rosin impervious to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements. Pigments and anti-skid/anti-slip elements must be uniformly distributed throughout the material. The material conforms to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state, being non-reflective, and potentially being of a color different from white or yellow.

3.1 Pigments:

3.1.1 White: The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

3.1.2 Other Colors: The pigment system must not contain heavy metals nor any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

3.2 Skid Resistance: The surface of the material shall contain factory applied anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale). Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303.

3.3 Slip Resistance: The surface of the material shall contain factory applied anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale). Upon application the material shall provide a minimum static friction of coefficient of 0.6 when tested according to ASTM C 1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM D 2047.

3.4 Thickness: The material must be supplied at a minimum thickness of 150 mil (3.8mm).

3.5 Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

3.6 Storage Life: The material may be stored for 12 months, if stored indoors and protected from the elements.

3.7 Transverse Lines to Supplement System Application: Supplied as white, retroreflective preformed thermoplastic line stripe material in 90 mil (2.3 mm) or 125 mil (3.2 mm) thicknesses, material is available in 6 in. (.15m), 8 in. (.20m) or 12 in. (.30m) widths. This preformed thermoplastic material may be supplied and applied by the certified applicator in conjunction with the System, and is available from the System manufacturer. (Consult the manufacturer's published application instructions for the preformed thermoplastic line stripe material selected, for proper application methods.)

4. SPECIALIZED APPLICATION EQUIPMENT:

4.1 Stamping Templates: A wire rope template is required in the execution of the System. The template is used for imprinting the defined pattern once the preformed thermoplastic has been applied. The wire rope diameter for the imprinting template used for the specified pattern is 3/8 in. (9.5mm). The stamping templates are distributed by the System manufacturer.

4.2 Heating Equipment: The System manufacturer shall distribute reciprocating infrared heating equipment designed specifically to elevate the temperature of the preformed thermoplastic material and asphalt pavement without adversely affecting it. The primary heating unit must employ a bank of propane-fired infrared heaters, mounted on a track device that allows the heater bank to reciprocate back and forth over a designated area, thereby allowing the operator to monitor the temperature of the preformed thermoplastic at all times during the pavement heating process.

4.2.1 A smaller, mobile infrared heater distributed by the System manufacturer is designed specifically to heat areas such as borders and narrow areas that are inaccessible to the primary heaters. This secondary heater also allows the operator to monitor the temperature of the preformed thermoplastic at all times during the heating process.

4.2.2 An approved hand-held propane heat torch distributed by the System manufacturer shall be used to heat isolated areas of the preformed thermoplastic.

4.3 Sealer: A two-part epoxy sealer specified and distributed by the System manufacturer must be applied to the substrate prior to material application to ensure proper adhesion, and to provide reinforcement for larger volumes of material.

4.4 Specialized Sealer Dispensing Gun: Used to dispense the required two-part epoxy sealer onto the substrate. The sealer dispensing guns are distributed by the System manufacturer.

4.5 Hand Held Finishing Tool: Enables the applicator to complete the imprinting of the thermoplastic in areas around permanent structures, such as curbs and manholes covers, which may be inaccessible to the stamping template. The hand held finishing tools are distributed by the System manufacturer.

4.6 Aggregate: Supplemental anti-skid/anti-slip elements to be applied to the surface of the molten thermoplastic as needed, if the factory applied anti-skid/anti-slip elements embed too deeply into the surface of the molten thermoplastic material during the heating process. (Embedded aggregate is exposed upon wear for extended skid resistance.) The aggregate is distributed by the System manufacturer.

4.7 Air Powered Spray Hopper: Used to spray supplemental anti-skid/anti-slip elements (aggregate) on the surface of the molten preformed thermoplastic in a uniform manner. The air powered spray hoppers are distributed by the System manufacturer.

4.8 Vibratory Plate Compactor (700-900 lb.): Shall be used for pressing the 3/8" (9.5mm) wire rope stamping templates into the thermoplastic to create the specified pattern in both the thermoplastic and asphalt substrate. The System manufacturer does not supply vibratory plate compactors.

5. APPLICATION (Asphalt Substrate Only):

5.1 Manufacturer Certified Applicator Requirement: The System shall be supplied and applied only by an applicator certified by the System manufacturer. The applicator shall provide proof of current certification before commencing work. The Certified Applicator shall follow the System manufacturer's current published application procedures.

5.2 Substrate Condition: The System must only be applied to a stable, high quality asphalt pavement substrate over a stable base that is free of defects, as per the manufacturer published Substrate Guide. The asphalt pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

5.3 Procedure: The System is applied to asphalt pavement using proprietary reciprocating infrared heating equipment. The material must be able to be applied at ambient and road temperatures down to 45°F (7°C) without any preheating of the pavement to a specific temperature. A two-part epoxy sealer specified by the manufacturer must be applied to the substrate prior to preformed thermoplastic application. Immediately following sealer application, the panels of aggregate reinforced preformed thermoplastic are positioned properly on the asphalt substrate with the aggregate side facing up. The preformed thermoplastic is then heated to the required melting temperature. Additional aggregate may be applied to the preformed thermoplastic surface as needed following the melting process. As the material is cooling, it is imprinted with a stamping template made from 3/8 in. (9.5 mm) flexible wire rope in the required design using a vibratory plate compactor. The preformed thermoplastic material is then allowed to cool thoroughly before being opened to vehicle or pedestrian traffic. (Consult the manufacturer's published application procedures for complete information.)

5.4 The System shall not be applied to Portland Cement Concrete.

6. PACKAGING: The preformed thermoplastic material shall be packaged in cardboard cartons with a plastic sheet between each layer of preformed thermoplastic. The cartons in which packed shall be non-returnable and shall not exceed 25 in. (.64m) in length and 25 in. (.64m) in width. The cartons shall be labeled for ease of identification. The weight of the individual carton must not exceed seventy (70) pounds (32 kg). A protective film around the carton must be applied in order to protect the material from rain or premature aging.

7. TECHNICAL SERVICES: The successful bidder shall provide technical services as required.

8. PERFORMANCE: Where applicable, the preformed thermoplastic pavement overlay material shall meet state specifications and be approved for use by the appropriate state agency.

9. BASIS OF PAYMENT:

Payment for all labor and materials will be made under:

Pay Item	Pay Unit
Preformed Thermoplastic Pavement Marking System	SQ. YD.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTOR ROTATION

DESCRIPTION. This item consists of rotating the existing video detectors to aim at new video zones at various locations as shown on the plans and directed by the Engineer.

MATERIALS. No additional materials should be needed for the rotation.

METHOD OF MEASUREMENT. Video detector rotation shall be measured by the unit.

BASIS OF PAYMENT. Work completed, accepted and measured as provided above will be paid for at the contract unit price bids for each video detector rotated; which price shall be full compensation for equipment tools, and labor and incidentals necessary to complete the work.

Payment will be made under:

Pay item

Pay Unit

Video Detector Rotation

Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

Section 733 Video Detector with Radio Interface of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 733.01, Description. is deleted and the following substituted therefore:

This item consists of furnishing and installing a Video Detection System utilizing 360-Degree Cameras, Advance Detection Cameras, Shelf Mounted Processor, Video Cable, Video Monitor, Communication Interface, 8-Port SDLC Hub, any hardware or accessories required, and software in accordance with these specifications, at the locations shown on the plans for the purpose of providing actuation to a traffic signal controller and for live video monitoring of traffic conditions at the site.

The Video Detection System shall utilize two different types of cameras to detect and track vehicles, 360-Degree Cameras and Advance Detection Cameras, a Shelf Mounted Processor, Video Cable, and other associated equipment and shall detect vehicle information from the cameras to provide highly accurate and precise detection for simultaneous stop line presence, advanced, and special detection by the means described, process the information and provide vehicle actuation to the actuated controller, system local controller, or other device as outlined in the plans or Contract. In addition, live video shall be transmitted back to a central site by means of communication. Video Detection equipment and its associated components shall also meet the environmental and electrical requirements in Section 701.

Subsection 733.02, Materials is hereby amended by **adding** the following:

(i) **360-Degree Camera.** The 360-Degree Camera shall meet the following:

- Must provide 360 degrees of visibility from the point of installation.
- Must be powered via Power over Ethernet (PoE) and be IEEE802.3af compliant.
- Must NOT require any fiber optic connections from the processor to the camera.
- Must support configuration in both spherical “fisheye” configuration, and rectangular “quad view”.
- Must support at least 9-megapixel (MP) capture.
- Must support ability to capture 4K video.
- Must provide H.264 and MJPEG image compression.
- Must support H.265
- Must support RTSP streaming.
- Must support third-party integration of RTSP video streams into Video Management System (VMS) platforms.
- Must support maximum aperture ratio of 1:1.9.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

- Must support focal length of 1.38mm
- Must include a clear polycarbonate resin-based dome.
- Must be rated to IP66 (NEMA 4X compliant)
- Must include an electronic de-humidification device for use in various weather conditions.
- Must support the ability for users to zoom in and out, rotate and pan the video feed.
- Must allow direct connection of Cat 5e cable from camera to traffic cabinet to limit number of connections.
- Must include lens defrost functionality with total camera power operation not exceeding standard PoE.
- Must operate satisfactorily in a temperature range from -29° F to +165° F (-34°C to +74° C) and a humidity range for 5% to 100% non-condensing.
- Must utilize a NEMA temperature rated shielded PoE cable with drain wire.
- Must support in-line ethernet repeaters for long distance cable runs.
- Must include all mounting hardware with device for vertical and horizontal mounting.
- Mounting fixture must be constructed of weatherproof painted aluminum or stainless steel.
- Mounting hardware must support 6ft' vertical pole installation, horizontal pole installation, or attachment via a 1.5" threaded fitting.
- Mounting fixture (including camera, 40ft cable) must not exceed 540mm x 460mm x 205mm in size, and 6kg in weight (not including 6 ft extension).
- See Passive Pedestrian Detection System Special Provision for additional performance and compatibility requirements when the camera is being used for passive pedestrian detection.

(j) Advanced Detection Camera. The Advance Detection Camera shall meet the following:

- Must be powered via Power over Ethernet (PoE) and be IEEE802.3af compliant.
- Must support optical zoom of 2.3x
- Must support automatic focus.
- Must support aperture ratio of 1:1.7 - 1.3.0.
- Must include internal de-humidification features for various weather conditions.
- Must provide H.264 and MJPEG image compression.
- Must support H.265.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

- Must be shock resistant.
- Must be mounted on mast arm or pole per manufacturer requirements.
- Must be able to detect up to 500ft from camera placement.
- Must operate satisfactorily in a temperature range from -29° F to +165° F (-34°C to +74° C) and a humidity range for 5% to 100% non-condensing.
- Must utilize a NEMA temperature rated shielded PoE cable with drain wire.
- Must support in-line ethernet repeaters for long distance cable runs.
- Must include a clear polycarbonate resin-based front panel.
- Must be rated to IP66 (NEMA 4X compliant).

(j) POE Switch. The POE Switch Camera shall meet the following:

- Vendor must have a recommended switch available to support up to 4 Advance Detection Cameras in addition to 360-Degree Camera.
- System must be able to support 360-degree camera and 2 Advance Detection Cameras without use of PoE Switch.

(k) Shelf Mounted Processor. The Shelf Mounted Processor shall meet the following:

1. Communications:

- Must support 4G LTE cellular connectivity with MiMo and diversity (Bands B2/B4/B5/B12/B13/B14/B66/B71), UMTS/HSPA+ and GSM/GPRS/EDGE with peak downlink of 150Mbps and peak uplink of 50Mbps.
- Must support 802.11 a/b/g/n with MiMo and Diversity antennas with security of at least 64/128 bits WEP, WPA, WPA2.
- Must support GPS and GLONASS.
- Must support communication of Telemetry Data, Video Data, Alert Data, and Vehicle Identification Data to the server via the Communication Service.
- Must support direct communication between the server and the devices connected to Controller Interface Hardware.

2. Antenna:

- Must provide an externally mounted antenna for supporting functionality of Communications Interface.
- Must contain the following fully-enclosed antenna elements and quantities in a single enclosure:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

- LTE MIMO (quantity: 2)
 - 2.4GHz/5GHz WIFI MIMO (quantity: 2)
 - GPS/GLONASS/BEIDOU (quantity: 1)
 - Must have labeled antenna terminations for easy installation.
 - Must not exceed 35mm in height.
 - Must be colored Pantone 427 U for blend with traffic cabinet construction.
 - Must be IP67 rated and mounted on the cabinet with a water-tight seal made of a closed cell rubber type foam and medium-firm acrylic adhesive with bonding features including a high initial adhesion and excellent high/low temperature holding power with excellent peel strength.
- 3. Processor:**
- Must support up to two 360-Degree Cameras for coverage of larger or irregular intersections.
 - Must support up to four Advance Detection Cameras in addition to two 360-Degree Cameras with the use of vendor recommended POE Switch.
 - Must support the addition of an optional module for detection and counting computation.
 - Must have an integrated TFT color display which provides diagnostic information such as the status of all phases and detectors, as well as diagnostics on the camera IP and operational status.
 - Must display status of detection channel on a front panel display.
 - Must display Transmit/Receive status of SDLC bus.
 - Must support 1 x USB 2.0 device ports.
 - Must support 1 x 10/100/1000 Ethernet WAN port.
 - Must support 2 x 10/100/1000 Ethernet LAN ports.
 - Must support 3 x 10/100/1000 Ethernet LAN ports with PoE (support for 802.3af PoE and 802.3at PoE+ to a maximum of 50W across all three ports).
 - Must include onboard processing capabilities to perform video-based vehicle detection and generation of traffic analytics.
 - Must be able to handle a minimum of 16 detection inputs and outputs.
 - Must provide light-emitting diode (LED) indicators for heartbeat, server connectivity, ethernet link/activity, power, cellular link/activity and device state.
 - Must support 2 x EIA RS-232 over RJ45 interface (cable included).

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

- Must provide 4 x General Purpose I/Os pins (200mA sinking each), digital input, 0~30V,
- Must support one SDLC port that meets the following criteria:
 - Must provide all necessary cabling to connect to a cabinet's existing Port 1/SDLC bus.
 - Must support reading terminal and facility input & outputs at a frequency of at least 10 times per second.
 - Must support reading channel state at a frequency of at least 10 times per second.
 - Must support acquisition of MMU fault status including conflict, red failure and clearance failure.
 - Must support reading information from all detectors wired into the cabinet supporting up to 100 ms resolution between detection events.
 - Must detect failure of a detector in either always high, or always low, mode.
 - Must support capturing and reporting Controller Faults based on MMU status bits of 'in conflict', 'red failure', 'diagnostic failure', 'in failure state', and 'local flash'.
- Must support configuration as an integrated layer 2 ethernet switch to support cabinet device interconnectivity.
- All ethernet ports must feature in-line, auto-resetting surge protection compliant to IEC 61000-4-5 Class 4.
- Processor must utilize dual NVIDIA GPU's.
- Must be fully NEMA tested and compliant, including shock, vibration, voltage, and thermal articles 2.2.7-2.2.11.
- Must support NEMA operating temperature specification -34 °C to 74 °C (-29 °F to 165 °F).
- Must support NEMA storage temperature specification -34 °C to 74 °C (-29 °F to 165 °F).
- Must support humidity operating requirements of 5% - 95% RH non-condensing.
- External power supplies must be UL and c-UL compliant.
- Must be FCC tested and compliant.
- Must be ROHS compliant.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

(l) Video Monitor (CLR) – Where called for in the plans, a video monitor meeting the following shall be provided:

- Display –Color (CLR)
- Light Source - LED
- Size – 10" Diagonal
- HDMI – 2 Inputs
- VGA Input
- USB Input
- Video Input/Output
- Input Power – 12V DC

(m) Video Cable (Exterior Cat 5E). The Ethernet Cable shall meet the following:

- The Ethernet cable shall be environmentally hardened, include a drain wire, outdoor rated 350 MHz Category 5e cable. The cable shall be riser rated, 26 AWG stranded tinned copper, have high density polyethylene insulation, UV and oil resistant polyurethane jacket. Pair 1 shall be Blue, White/Blue, Pair 2 shall be Orange, White/Orange, Pair 3 shall be Green, White/Green and Pair 4 shall be Brown, White/Brown. The operating temperature shall be from -40° C to +75° C. The cable shall conform to the following standards: ISO/IEC 11801 Category 5e, NEMA WC 63, and ANSI/TIA/EIA 568-C.2 Category 5e. The cable shall be without splicing or joints for a single run. The contractor shall obtain instructions from the manufacturer about alternate architecture when length of a single run of CAT 5e cable exceeds 320 feet.
- The RJ-45 plug connectors shall be used at both the camera and cabinet ends. The supplier of the video detection systems shall approve the Category 5e cable, RJ-45 connectors and crimping tool and the manufacturer's instructions must be followed to insure proper connection.

(n) 8 Port SDLC Hub. An 8 port SDLC hub shall be provided to support all needs of the system. The 8 port SDLC hub as be compatible with TS-2 NEMA cabinets. The 8 port SDLC hub shall be supplied from the same manufacturer as the detectors.

(o) Manufacturer's Warranty. The following shall be provided:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

- a. The supplier shall provide a limited three-year warranty and shall apply with time extensions applied to materials. The contractor shall provide a written manufacturer's guarantee to the Agency (City, County or etc.) who provides electrical service and maintenance of the intersection.
- b. During the warranty period, technical support shall be available from the supplier via telephone with 4 business hours of the time a call is made by the user, and this support shall be available from factory-certified personnel or factory-certified installers.
- c. The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the detection system.
- d. During the warranty period, updates to the system software shall be available from the supplier without charge.

(p) Training. The following shall be provided:

- a. Vendor must provide onsite training, training videos and webinars for installation of all devices, configuration, operation, and troubleshooting.

Subsection 733.03 Construction Requirements (C) Software is hereby **deleted** and the following substituted therefore: Subsection 733.03 Construction Requirements (C) Software is hereby deleted and the following substituted:

(C) Software. Software required for monitoring, setup, and programming of the system shall be supplied from the manufacturer and is subsidiary to this special provision for the item "Shelf Mounted Processor", of the number of channels specified.

Subsection 733.04 Method of Measurement is hereby amended by **adding** the following:

- (i)** 360-Degree Camera shall be measured by the unit.
- (j)** Advanced Detection Camera shall be measured by the unit.
- (k)** Shelf Mounted Processor shall be measured by the unit.
- (l)** Video Monitor (CLR) shall be measured by the unit.
- (m)** Video Cable (Exterior Cat 5E) of the type specified shall be measured by the linear foot.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

(n) 8 Port SDLC Hub is included in other items of the contract.

(o) Video Detection Equipment Relocation shall be measured by the unit.

Subsection 733.05 Basis of Payment. is hereby amended by **adding** the following:

- (i) **360-Degree Camera.** Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price for 360-Degree Camera; which price shall be full compensation for providing and installing of the device, mounting, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.
- (j) **Advanced Detection Camera.** Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price for Advanced Detection Camera; which price shall be full compensation for providing and installing of the device, mounting, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.
- (k) **Shelf Mounted Processor –** Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price Shelf Mounted Processor; which price shall be full compensation for providing and installing the device, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.
- (l) **Video Monitor (CLR) –** Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price Video Monitor (CLR); which price shall be full compensation for providing and installing the device, wiring, configuring, and testing the device; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.
- (m) **Video Cable (Exterior Cat 5E) –** Price bid for Video Cable (Exterior Cat 5E) of the type specified shall be full compensation for furnishing, installing, and testing the cable; and shall also be for all labor, equipment, tools, and incidentals necessary to complete the work.
- (n) **8 Port SDLC Hub -** Work completed and accepted under this item will not be paid separately but shall be included in the cost of other items in the contract.
- (o) **Video Detection Equipment Relocation -** Work completed and accepted under this item and measured as provided above, shall be paid for at the contract unit price bid for each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

VIDEO DETECTION SYSTEM

piece of video detection equipment (cameras, processors, monitors); which price shall be full compensation for removing the devices from the present site, installing the devices at the new locations, and for furnishing and installing brackets and extensions, wiring and testing; and for all labor, equipment, tools and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
360-Degree Camera	Each
Advanced Detection Camera	Each
Shelf Mounted Processor	Each
Video Monitor (CLR)	Each
Video Cable (Exterior Cat 5E)	Linear Foot
Video Detection Equipment Relocation	Each

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

SHORING FOR CULVERTS

DESCRIPTION: Work under this item shall consist of the design, construction, and removal of a shoring or bracing system that may be required to retain the existing, temporary, or new roadway embankment and to maintain traffic during construction of culverts. The shoring system shall provide sufficient clearance for excavation and construction work and shall ensure the safety of the traveling public and workmen at all times.

WORK TO BE PERFORMED: Prior to construction of the shoring system, the Contractor shall submit the design and details of the system to the Engineer for informational and record purposes. Such submission shall include the design calculations, the kind and condition of materials to be used, working drawings showing all dimensions, and the procedure for installation of the system. The design and details submitted shall be prepared and/or approved by a Professional Engineer registered in Arkansas.

The Contractor shall be responsible for the adequacy of the temporary shoring during the entire period of construction. The Contractor shall be responsible for any and all damages and/or claims, including injury or death, arising out of the construction and use of temporary shoring.

The Contractor shall construct the shoring in accordance with the details submitted to the Engineer for informational purposes. Unless otherwise permitted by the Engineer, all components of the shoring system shall be removed upon completion of their use and shall remain the property of the Contractor.

PAYMENT: No direct payment will be made for work described in this special provision (which includes preparation of necessary design details and drawings, construction and removal of shoring, and for all materials, labor, tools, equipment, and incidentals necessary to complete the work) but shall be considered subsidiary to other pay items in the contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****JOB NO. 061922****AIRPORT CLEARANCE REQUIREMENTS**

Project 061922 is in the vicinity of the Hot Springs Memorial Field Airport. The project meets F.A.A. clearance requirements for all equipment that does not extend over nearby trees, buildings, and overhead utilities, within the entire right-of-way of Job 061922.

The Contractor is encouraged to contact the Airport Manager at (501) 321-6750 before any construction takes place on the project to resolve any possible conflicts with aircraft operations and coordinate with a possible issuance of "Notice to Airmen" statements.

The Contractor for this project shall not use any equipment that extends above the roadway more than the height of nearby trees, buildings, and overhead utilities within the 061922 limits without the permission of the F.A.A.

Should the Contractor decide to use equipment that exceeds height restrictions, they shall file a Notice of Proposed Construction with the F.A.A. a minimum of 45 days prior to the use of the equipment.

The Contractor shall follow the instructions of the Airport Managers to identify any equipment that will exceed the height restrictions within the limits listed with appropriate warning devices to ensure aircraft safety.

Please contact Keith Goff, District Construction Engineer, at (501) 569-2169 with questions regarding the information addressed in this Special Provision.

No direct payment will be made for fulfilling the requirements of this Special Provision, but payment will be considered included in the other contract items.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PRIME CONTRACTOR PERFORMANCE EVALUATION

All projects with a contract bid amount of \$10 million or greater will be evaluated in accordance with the Prime Contractor Performance Report Manual (PCPRM) adopted by the Department on September 30, 2025.

The manual is located on the Construction Contractor Information page on the ARDOT.gov website.

The Engineer will evaluate the contractor using the metrics and at intervals identified in the PCPRM. The evaluation ratings will be used to provide constructive feedback and as a tool to identify areas for improvement. The contractor shall be given opportunity to review and comment on the evaluation as well as the opportunity to appeal the Engineer's rating.

No direct payment will be made for inclusion of the PCPRM in the contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

PARTNERING REQUIREMENTS

Section 104 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added to **subsection 104.01**:

The Department encourages on this project the establishment and use of a voluntary cohesive partnership agreement between the Department and its Prime Contractor and subcontractors. Toward this end, a partnership may be structured between these parties to draw on the strengths of each to identify and achieve their mutual goals. The objectives of this are:

- Effective contract performance,
- Efficient contract performance,
- Completion of the project within budget,
- Completion of the project on schedule, and
- Construction of the project in accordance with the contract.

This partnership will be shared equally between the Department and the Prime contractor and subcontractors. Participation in this "partnering" concept is voluntary on this project. The Prime Contractor and approved subcontractors shall bear the costs associated with their personnel's time while participating in seminars, workshops, and meetings for successful "partnering" on this project.

In order to obtain a successful partnering relationship and agreement, the Department shall arrange for a partnership development/team building workshop prior to the preconstruction conference. Persons required to attend this workshop are:

- Contractor and approved Subcontractor President, Vice President, or General Superintendent,
- Contractor and approved Subcontractor project Superintendent,
- Department District Engineer,
- Department Resident Engineer,
- Appropriate Department Design personnel,
- Department Staff Construction Engineer, and
- Department Area Materials Engineer.

The Federal Highway Administration and other interested parties shall be invited to attend and participate, but their attendance will not be required.

The Department and/or the Contractor may bring other personnel at their option.

Follow-up meetings shall be held periodically throughout the duration of the contract. The establishment of a partnership charter on this project will not change the legal relationship of the Department and the other participating parties to the contract nor relieve either party from any of the terms of the contract.

The partnership agreement shall NOT constitute authority to change the contract, plans, or Specifications.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS

GENERAL: This special provision limits the temporary construction operations in Special Flood Hazard Areas (SFHA) as required by the National Flood Insurance Program (NFIP).

Temporary construction operations include all work and material necessary to access and construct the permanent bridge(s), culvert(s) and roadway embankment within the SFHA. These operations may include work ramps, haul roads, temporary crossings, detour roads, levees, diversion channels, retaining walls, cofferdams, forms, storage of materials, storage of large equipment, and other related work.

This project crosses a regulatory floodway, regulatory floodplain, or SFHA as shown on the community's Flood Insurance Rate Map published by the FEMA. The regulatory floodway, regulatory floodplain, or SFHA limits are shown on the plan and profile drawings.

The project is designed to comply with the NFIP's regulations set forth in Title 44, Chapter 1, Parts 59-77, of the United States Code of Federal Regulations (CFR).

The following special conditions must be complied with:

- Temporary operations are to be used during the low flow season when possible.
- Temporary operations shall be designed and constructed so as not to result in a significant increase in flood elevations within the community during passage of a major flood.
- Temporary operations shall not obstruct a significant portion of an existing or proposed waterway opening.
- All temporary operations shall meet the requirements of the Corps of Engineers' Section 404 Permit issued for this project.
- All temporary fills and temporary obstructions to the existing or proposed bridge(s) or box culvert(s) must be removed in their entirety, and the affected areas returned to their preconstruction or designed elevation and condition.
- The contractor is responsible for preventing equipment and materials within the floodplain from becoming buoyant and floating downstream during a significant flood event. In the event this flood starts to occur, the contractor shall remove and/or anchor materials and equipment by means approved by the Engineer at the Preconstruction Conference.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT: All work, including labor, materials, tools, and equipment necessary to complete the requirements of this special provision shall not be paid for directly, but will be considered subsidiary to other items in the contract.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
VALUE ENGINEERING

Section 104 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added as a new subsection:

104.08 Value Engineering Change Proposals (VECP).

(a) General. The Contractor may submit a Value Engineering Change Proposal at any time after execution of the Contract by the Department. Any VECP submitted before this date shall be deemed to have been submitted on the date the Contract was executed by the Department and the time allowed for consideration of the VECP shall begin on that date. Any cost savings generated to the Contract as a result of a VECP submitted by the Contractor and approved by the Department shall be shared equally between the Contractor and the Department.

The Contractor may submit a VECP for an approved subcontractor. Subcontractors may not submit a VECP except through the Contractor.

Bid prices shall not be based on the anticipated approval of a VECP. If a VECP is rejected, the Contract shall be completed at the Contract bid prices.

If the Department determines that the time for response indicated in the submittal is insufficient for review, the Contractor will be promptly notified. Based on the additional time needed by the Department for review and the effect on the Contractor's schedule occasioned by the added time, the Department will evaluate the need for a time extension.

The Contractor shall have no claim against the Department for any delay to the Contract based on the failure to respond within the time indicated in the submittal if additional information is needed to complete the review.

VECPs contemplated are those that could produce a savings to the Department without impairing essential functions and characteristics of the facility; including but not limited to, service life, economy of operation, ease of maintenance, desired appearance, and safety.

The Contractor may submit for review a "VECP Concept" provided that it contains enough information to clearly define the work involved and the benefits to be realized. Written notification by the Department that the review has been completed and that the "VECP Concept" appears to be favorable merely indicates that the engineering and plan development may continue for submittal of the VE Change Proposal and is not authorization for any construction work to begin. Should the final design not reflect the expected benefits, the Department may reject the "VECP Concept" and the VE Change Proposal without recourse by the Contractor.

(b) Submittal of Proposal. The following materials and information shall be submitted with each proposal:

1. A statement that the proposal is submitted as a VECP.
2. A description of the difference between the existing Contract and the proposed change, and the cooperative advantages and disadvantages of each, including effects on service life, economy of operations, ease of maintenance, desired appearance, and safety.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
VALUE ENGINEERING

3. A complete set of plans and specifications showing the proposed revisions relative to the original Contract features and requirements.
4. A complete analysis indicating the final estimate costs and quantities to be replaced by the Proposal compared to the new costs and quantities generated by the Proposal.
5. A statement specifying the date by which a Change Order adopting the Proposal must be executed to obtain the maximum cost reduction during the remainder of the Contract. This is the review time.
6. A statement detailing the effect the Proposal will have on the Contract time for completing the Contract.
7. A description of any previous use or testing of the Proposal and the conditions and results. If the Proposal was previously submitted on another Department project, indicate the date, Contract number, and the action taken by the Department.

(c) Conditions. VECPs will be considered only when all the following conditions are met:

1. VECPs, approved or not approved by the Department, apply only to the ongoing Contract(s) referenced in the Proposal and become the property of the Department. The Proposal(s) shall contain no restrictions imposed by the Contractor on their use or disclosure. The Department has the right to use, duplicate, and disclose in whole or in part any data necessary for the utilization of the Proposal. The Department retains the right to utilize any accepted Proposal or part thereof on other projects without obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.
2. If the Department is already considering certain revisions to the Contract or has approved certain changes in the Contract for general use that are subsequently incorporated in a VECP, the Department will reject the Proposal and may proceed without obligation to the Contractor.
3. The Contractor shall have no claim against the Department for additional costs or delays resulting from the rejection of a VECP, including but not limited to, "VECP Concept" acceptance, engineering and development costs, loss of anticipated profits, increased material or labor costs.
4. The Department will determine if a Proposal qualifies for consideration and evaluation. It may reject any Proposal that requires excessive time or costs for review, evaluation, and/or investigations, or that is not consistent with the Department's design policies and criteria for the project.
5. The Engineer will reject all or any portion of work performed under an approved VECP if unsatisfactory results are obtained. The Engineer will direct the removal of such rejected work and require construction to proceed under the original Contract requirements without reimbursement for work performed under the proposal, or for its removal. Where modifications to the VECP, other than changes to the estimated quantities, are approved to adjust to field or other conditions, reimbursement will be

ARKANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
JOB NO. 061922
VALUE ENGINEERING

limited to the total amount payable for the work at the Contract bid prices as if it were constructed under the original contract requirements. The rejection or limitation of reimbursement shall not constitute the basis of any claim against the Department for delay or for other costs.

6. The proposed work shall not contain experimental features but shall be proven features that have been used under similar or acceptable conditions on other projects or locations acceptable to the Department.

7. Proposals will not be considered if equivalent options are already provided in the Contract.

8. The savings generated by the Proposal must be sufficient to warrant a review and processing.

9. A Proposal changing the type and/or thickness of the pavement structure or revising quantities simply by adjusting grades will not be considered.

10. Additional information needed to evaluate Proposals, shall be provided in a timely manner. Untimely submittals of additional information will result in rejection of the Proposal. Where design changes are proposed, the additional information could include results of field investigations and surveys, design computations, and field change sheets. The review time shall be extended by the number of days between the request by the Department for additional information and the delivery of such additional information.

(d) Payment. If the VECP is accepted, the changes and payment will be authorized by Change Order.

Reimbursement will be made as follows:

1. The changes will be incorporated into the Contract by changes in quantities or unit prices of existing pay items, by the addition of new pay items, or any combination of these methods, as appropriate. Existing pay items are the original Contract pay items and any pay items that have been added to the Contract by Supplemental Agreement on or before the date the VECP is submitted.

2. The cost of the revised work as determined from the changes will be paid as specified in the Change Order. In addition, the Department will pay the Contractor 50 percent of the actual savings to the Department as reflected by the difference between the cost of the revised work and the cost of the related construction required by the original Contract computed at Contract bid prices. This payment will be made upon satisfactory completion of all work under the VECP.

3. Costs for "VECP Concept" acceptance, engineering and development, design, and implementation associated with the VECP are not eligible for reimbursement.

4. Payments as designated above will be made to the Contractor. If the VECP was originated by a subcontractor, the Contractor shall be responsible for any and all payments to the subcontractor arising from the approval of the VECP.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

JOB NO. 061922

UTILITY ADJUSTMENTS

There are no known utility conflicts or adjustments needed for this project. Any underground utility facilities should be lower than the required construction. The Contractor is required to make every effort to locate buried utilities including, but not limited to, calling Arkansas One Call Center (800) 482-8998.

In accordance with Subsection 105.07, Cooperation with Utilities, of the Standard Specifications, Edition of 2014, the Contractor is forewarned that utility facilities may be present within the limits of the project.

1. Owner – AT&T Arkansas
Contact Bryan Williams, 479-249-5194, 1133 E. Harold St., Fayetteville, AR 72703.
2. Owner – Windstream
Contact Jim Stuart, 501-580-3864, 5150 Northshore Ln., North Little Rock, AR 72118.
3. Owner – Entergy Arkansas, LLC
Contact Jonathan Loyless, 501-620-5712, 425 W Capitol, Little Rock, AR 72201.
4. Owner – City of Hot Springs Water / Sewer
Contact Bobby Harris, 501-651-7730, 780 Adams St., Hot Springs, AR 71901.
5. Owner – Ripple Fiber
Contact Jonathan Watts, 501-799-3691, 1506 Prickett Rd., Bryant, AR 72022.
6. Owner – Resort Cable / Cablelynx Internet
Contact Chuck Launius, 501-781-3724, P.O. Box 2770, Hot Springs, AR 71913.
7. Owner – Ritter Communications
Contact Rich Busby, 870-336-3471, 30 Elm St., Marked Tree, AR 72365.
8. Owner – Summit Utilities
Contact David Burnett, 501-231-2478, 1400 Centerview Dr., Little Rock, AR 72211.

In case there is a delay beyond the information as set forth above, and should such delay necessarily cause a delay in the Contractor's prosecution of the work, an equitable extension

of contract time will be granted to the Contractor. No claim for extra compensation will be allowed, however, because of such delay.

The Contractor is required to make every effort to locate buried utilities including, but not limited to, calling Arkansas One Call Center (800) 482-8998.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LIQUIDATED DAMAGES

As specified in the Contract, liquidated damages for this project will be as shown in the following table:

WORKING DAY PROJECTS

ORIGINAL CONTRACT AMOUNT		
FROM MORE THAN	TO AND INCLUDING	RATE
\$ 0	\$ 100,000	\$ 140
100,000	500,000	400
500,000	1,000,000	660
1,000,000	2,000,000	800
2,000,000	5,000,000	1,380
5,000,000	10,000,000	1,800
10,000,000	15,000,000	2,620
15,000,000	20,000,000	2,720
20,000,000	30,000,000	2,940
30,000,000	-----	3,500

FIXED DATE PROJECTS

ORIGINAL CONTRACT AMOUNT		
FROM MORE THAN	TO AND INCLUDING	RATE
\$ 0	\$ 100,000	\$ 60
100,000	500,000	80
500,000	1,000,000	220
1,000,000	2,000,000	300
2,000,000	5,000,000	420
5,000,000	10,000,000	1,000
10,000,000	15,000,000	1,200
15,000,000	20,000,000	1,300
20,000,000	30,000,000	1,400
30,000,000	-----	1,520

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONTRACTOR'S LICENSE

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The third paragraph of **Subsection 102.01, Prequalification of Bidders**, is hereby deleted and the following substituted thereof:

The attention of prospective bidders is directed to Ark. Code Ann. §17-25-101 et seq., Act 150 of the 1965 Acts of Arkansas, being an "Act Regulating the Practice of Contracting in the State of Arkansas", and any subsequent amendments made thereto. When the work offered is financed in whole with State funds and is estimated to cost \$50,000 or more, the prospective bidder must show evidence of its license and evidence of registration or license of its subcontractors with the Contractors Licensing Board for the State of Arkansas before being furnished with a proposal form.

The third paragraph of **Subsection 108.01, Subletting of Contract**, is hereby deleted and the following substituted thereof:

It shall be the responsibility of the Contractor to determine that all parties performing work amounting to \$50,000 or more are currently licensed or registered by the Contractors Licensing Board for the State of Arkansas.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
DEPARTMENT NAME CHANGE

All references to the Arkansas State Highway and Transportation Department contained within the Standard Specifications for Highway Construction (Edition of 2014), the Qualified Products List, the Manual of Field Sampling and Testing Procedures, plan sheets, Supplemental Specifications, and all Special Provisions contained in this proposal are hereby deleted and replaced with the title of Arkansas Department of Transportation.

All references to AHTD contained within the Standard Specifications for Highway Construction (Edition of 2014), the Qualified Products List, the Manual of Field Sampling and Testing Procedures, plan sheets, Supplemental Specifications, and all Special Provisions contained in this proposal are hereby deleted and replaced with the abbreviation ARDOT.

All references to the Arkansas State Highway Commission contained within the Standard Specifications for Highway Construction (Edition of 2014), the Qualified Products List, the Manual of Field Sampling and Testing Procedures, the Standard Drawings, plan sheets, Supplemental Specifications, and all Special Provisions contained in this proposal remain in effect.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ISSUANCE OF PROPOSALS

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 102.04(j) is hereby deleted and the following is substituted therefore:

(j) If the prospective bidder is the Contractor on a current Contract with the Commission on which Liquidated Damages are being assessed, and there are no pending time extensions warranted to remove the project from Liquidated Damages.

Subsection 102.04(k) is hereby deleted and the following is substituted therefore:

(k) If the prospective bidder has a current Contract in default.

Subsection 102.04(n) is hereby added:

(n) If the prospective bidder has an individual, as an officer/owner/partner of any firm, partnerships or corporation, that has entered into a previous or current contract with the Commission that in the Department's sole discretion, is subject to any of the reasons listed in Subsection 102.04(a)-(m).

**ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PREQUALIFICATION OF BIDDERS**

Section 102 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following paragraph has been added to **Subsection 102.01**:

A contractor with common officers/owners/partners of any firm, partnerships, joint ventures, or corporations that is seeking prequalification, has been prequalified, or has entered into a previous or current contract with the Commission may have the prequalification denied, limited, or revoked for the reasons listed in Subsection 102.04(a)-(m).

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS

Section 103, AWARD AND EXECUTION OF CONTRACT, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added as the fourth paragraph of **Subsection 103.05(b), Liability Insurance**:

Prior to beginning construction, the Contractor shall provide the Engineer with the name, phone number and e-mail address for the individual within their organization responsible for submission of claims for damages to motorists' vehicles inside the work zones. This information shall be updated annually or whenever this responsibility changes within the Contractor's organization. The information will be made available to the public on the Department's webpage.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
MAINTENANCE DURING CONSTRUCTION

Division 100 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 105.15 is hereby modified as follows:

The first paragraph of **Subsection 105.15** is hereby deleted and the following substituted therefor:

105.15 Maintenance During Construction. The Contractor shall maintain the work during construction and until the project is accepted. For contracts containing a Flexible Beginning of Work special provision, the responsibility for maintenance by the Contractor will begin at the earlier date of the following:

- when the Contractor begins work, or
- on the date of the beginning of time charges in accordance with the Work Order if the Contractor has not commenced work.

This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces, to the end that the roadway or structures are kept in satisfactory condition at all times.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
RESTRAINING CONDITIONS

Section 107 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added after the first bullet of the first paragraph of **Subsection 107.10 Restraining Conditions (a), General**:

- Human remains, burials, and/or associated burial artifacts

The following is hereby added after the second paragraph of **Subsection 107.10 (b), Restraining Conditions Within the Right-of-Way**:

When restraining conditions under (1) and (2) below are encountered, the following provisions should be executed.

(1) If archeological sites and/or historically significant cultural resources are unexpectedly impacted or subsequently discovered during construction, the Contractor shall stop work with no ground-disturbing activities occurring within a two hundred (200)-foot radius of the location of the discovery. The Engineer shall be notified immediately, who will then notify the Environmental Division. A Department staff archeologist will inspect the discovery and determine if the established buffer radius is appropriate. The radius may be decreased or increased based on the nature of the discovery at the discretion of the archeologist. Work in the buffer radius shall not resume until the Environmental Division has provided written notification to the Engineer that construction activities can proceed.

(2) If human remains, burials, and/or associated burial artifacts are encountered during construction, the Contractor shall stop work with no ground-disturbing activities occurring within a two hundred (200)-foot radius of the location of the discovery and the location secured and protected by flagging or fencing. The human remains shall be covered with a canvas tarp and shall not be removed or collected. The Engineer shall be notified immediately, who then will notify the Environmental Division. A Department staff archeologist will inspect the remains and determine if the established buffer is appropriate. The radius may be decreased or increased based on the nature of the discovery at the discretion of the archeologist. The local law enforcement and Chief Medical Examiner will be notified by the Environmental Division. Work in the buffer radius shall not resume until the Environmental Division has provided written notification to the Engineer that construction activities can proceed.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
RESTRAINING CONDITIONS

The following is hereby added after the third sentence of the first paragraph of **Subsection 107.10 (c), Restraining Conditions Outside the Right-of-Way, (2) Non-commercially Operated Site:**

The Contractor shall limit the amount of acres submitted for an off-site location to no more than 10 acres, except for commercial areas, previously approved locations, or where previous ground disturbance exists. If a Contractor requires more than 10 acres for a proposed off-site location, the Contractor may, at no cost to the Department, acquire approval for use of the site from the State Historic Preservation Officer and a qualified archeological consultant.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER

Section 108 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 108.02(b)(2) is hereby deleted and the following is substituted therefore:

(2) The delivery to the Department for execution of the Contract and bonds properly executed on behalf of the Contractor and surety and the minimum 72 hours advance notice as required above shall constitute the Contractor's authority to begin the following items of work:

- Mobilization;
- Preparation of shop drawings and other required submissions;
- Ordering, fabrication, assembly, and/or stockpiling of materials;
- Driving Test Piling; and
- Contract surveying, when Roadway and/or Bridge Construction Control is included in the Contract.
- Erection of advance warning signs.
- Installation of netting on structures to prevent nesting of migratory birds in accordance with applicable Special Provisions (if included in the Contract).
- Set up, installation, and testing of Automated Work Zone Information Systems (if included in the Contract).
- Off-site area approval process per Section 107.10(c).

Such advance work shall be subject to the Contractor's assumption of the risk of cancellation of the award and the following:

- The Contractor shall, on commencing such operations, take all precautions required for public safety and shall observe all the provisions in the Contract;
- In the event of cancellation of the award, the Contractor shall at Contractor expense do such work as necessary to leave the site in a neat condition to the satisfaction of the Engineer;
- In the event of cancellation of the award, all work performed shall be deemed to be at the Contractor's expense; and
- All work done under this subsection in accordance with the Contract before its execution by the Commission will, when the Contract is executed, be considered authorized work and will be paid for as provided in the Contract.

Unless otherwise notified in writing, no time will be assessed for work performed prior to the effective date of a Work Order.

No payments will be made prior to the date established by the Engineer under Subsection 109.07, which date will be after the effective date of a Work Order.

The Contractor shall not be entitled to any additional compensation or an extension of time for any delay, hindrance, or interference caused by or attributable to commencement of work before the effective date of a Work Order.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****UNCLASSIFIED EXCAVATION**

Section 200 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added after the first paragraph of **Subsection 210.08, Excavation Operations**:

When performing excavation to construct cut slopes, the Contractor shall not excavate material below the finished slope grade. If excavation is performed more than 8 inches below the finished cut slope grade, overcut material shall be removed at no cost to the Department and replaced with clean durable stone. The stone source and gradation shall be approved by the engineer before placement. There shall be no payment for this work.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

QUALITY CONTROL AND ACCEPTANCE

Division 300 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first sentence of the third paragraph **Subsection 306.03 Acceptance Testing** is hereby deleted and the following substituted therefor:

If the material being furnished is crushed stone the Department will furnish the PL, LL, and PI for the material, further tests for PL, LL, and PI are waived.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
TACK COATS

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 401, Prime and Tack Coats and Emulsified Asphalt in Base Course, is hereby modified as follows:

The first sentence of **Subsection 401.03(a)** is hereby deleted and the following substituted therefore:

The surface to be treated with prime or tack coat shall be cleaned of dust, dirt, and loose or foreign material by sweeping with mechanical brooms immediately preceding the application of the prime or tack coat.

Third sentence of **Subsection 401.03(c)** is hereby deleted and the following is substituted therefore:

No dilution beyond that which is part of the emulsification process is permitted. The tack coat shall not be diluted, cut, or otherwise thinned after receipt from the manufacturer's facility.

The fifth sentence of **Subsection 401.03(c)** is hereby deleted and the following substituted therefore:

The rate of application shall be from 0.03 gallon to 0.05 gallon per square yard of residual asphalt as designated by the Engineer.

Section 410, Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses, is hereby modified as follows:

The sixth paragraph of **Subsection 410.05** is hereby deleted and the following substituted therefore:

For foreign material, or when the time lapse between courses is more than 8 hours, the earlier course shall be cleaned and given a tack coat before placing the succeeding course. When directed, the tack coat shall be applied and paid for under Section 401. If directed by the Engineer, a tack coat shall be used even though the elapsed time has been less than 8 hours.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 404, QUALITY CONTROL OF ASPHALT MIXTURES, is hereby modified as follows:

The fifth sentence of the second paragraph of **Subsection 404.01, Design of Asphalt Mixtures, (a) General**, is hereby deleted and the following substituted therefor:

A mix design that has not been produced on an ARDOT project in the last two years is inactive. The Contractor may submit a passing field verification test for the inactive asphalt mix design to the Materials Division to be reactivated. Asphalt mix designs with an expiration date may remain in production if they are not inactive.

The third through fifth paragraphs of **Subsection 404.04, Quality Control of Asphalt Mixtures**, are hereby deleted and the following substituted therefor:

The accepted mix design shall be field verified by the Contractor at the start of mix production or after an interruption of more than 120 calendar days. Production of Department approved mix designs for placement on non-ARDOT projects may be used for mix verification. The Contractor shall be allowed two attempts to verify the mix design if being placed on an ARDOT project and three attempts to verify the mix design if being placed on a non-ARDOT project. The Contractor shall notify the Engineer sufficiently in advance for Department personnel to witness all testing of this production and shall provide copies of all test results to the Department.

Verification will begin with testing the plant produced mix using the aggregate proportions and asphalt binder content shown on the accepted mix design. After the first attempt of verification of the initial design, the Contractor may elect to adjust aggregate proportions to vary the accepted mix design gradations and bring the mix properties near the center of the compliance limits. If the mix is in subplot rejection, all future attempts will only be allowed on non-ARDOT projects.

The mix will be verified if the test values for air voids, asphalt binder content, and VMA are within the compliance limits shown in Table 410-1, and when the accepted mix design has been produced within the gradation tolerances according to Subsection 404.04.

The Contractor may request a one-time field mix design be accepted by the Engineer of Materials. The Contractor will be notified in writing if the field mix design is accepted. A field mix design allows the Contractor to use the adjusted aggregate proportions for future verification of the mix design. Cold feed adjustments will be allowed to both the initial mix design and field mix design if they do not exceed more than 10% for any single cold feed or 20% overall from the initial mix design. No individual cold feed will be allowed to be eliminated by such changes. Gradation tolerances will be based off the initial job mix formula. All cold feed adjustments exceeding the limits outlined above will require a new mix design.

Once verified, the asphalt binder content shall be adjusted at the plant to obtain the optimum asphalt binder content shown on the mix design during production based on the lot average. At no time shall the asphalt binder content be adjusted in a manner to produce an asphalt binder content lower

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES

than the design value. Adjustments to the asphalt binder content are not allowed for control of any volumetric property. All changes to be made to the asphalt binder content must first be reported to the Engineer. If adjustments do not give the intended result, production shall be stopped, and the asphalt plant and equipment shall be recalibrated and adjusted so the asphalt binder content can be successfully obtained.

The test method ARDOT 461, (NOTE 3), and (NOTE 4) in the table of the tenth paragraph of **Subsection 404.04, Quality Control of Asphalt Mixtures**, are hereby deleted.

The thirteenth and fourteenth paragraphs of **Subsection 404.04, Quality Control of Asphalt Mixtures, NOTE 3 and NOTE 4** are hereby deleted.

The eighteenth paragraph of **Subsection 404.04, Quality Control of Asphalt Mixtures**, is hereby deleted.

The fourth and fifth sentences in the nineteenth paragraph of **Subsection 404.04, Quality Control of Asphalt Mixtures**, are hereby deleted and the following substituted therefor:

Individual aggregate cold feeds should be adjusted to bring the mix design properties near the center of compliance limits. If excessive changes are required, production will be suspended, and a new mix design shall be developed according to the applicable specifications. Excessive changes are cold feed adjustments that exceed more than 10% for any single cold feed change or 20% overall from the initial mix design. No individual cold feed will be allowed to be eliminated by such changes. All cold feed adjustments exceeding the limits outlined above will require a new mix design.

Section 410, CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES, is hereby modified as follows:

The first through third sentences in the first paragraph of **Subsection 410.09(a), General**, are hereby deleted and the following is substituted therefor:

The accepted mix design shall be verified by the Contractor at the start of mix production for that design or after an interruption of more than 120 calendar days. A maximum of 200 tons (200 metric tons) of materials may be placed on the roadway during the verification process. If the mix produced does not verify the mix design, the material placed on the roadway shall be declared a partial lot. If all verification attempts have been exhausted, a new mix design shall be required.

Section 411, ASPHALT CONCRETE COLD PLANT MIX, is hereby modified as follows:

The third sentence of **Subsection 411.05 (b), Acceptance**, is hereby amended and the following is substituted therefor:

The accepted mix design shall be field verified by the Contractor at the start of mix production or after an interruption of more than 120 calendar days.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth sentence of the first paragraph of **Subsection 404.01(b), Design Requirements**, is hereby deleted and the following substituted therefor:

The optimum asphalt content is the asphalt binder content at 3.5% air voids for all asphalt mixtures.

The first bullet of the first paragraph of **Subsection 404.01(b), Design Requirements**, is hereby deleted and the following substituted therefor:

- All binder grades for all asphalt mixtures will be designed using 3.5% air voids.

The second paragraph of **Subsection 404.01(b), Design Requirements**, is hereby deleted and substituted therefor:

All Asphalt Base and Binder Courses will be designed at a Ndes of 75 gyrations. All Asphalt Surface Courses will be designed at a Ndes of 60 gyrations.

The second sentence of the second paragraph of **Subsection 404.04, Quality Control of Asphalt Mixtures**, is hereby deleted and the following substituted therefor:

Adjustments to the accepted mix design to conform to actual production values without redesign of the mixture shall be based on production of the mixture at a target value of 3.5% air voids in all asphalt mixture specimens and an asphalt binder content not less than that specified in the accepted mix design.

The table in the tenth paragraph of **Subsection 404.04, Quality Control of Asphalt Mixture**, is hereby amended by deleting the test method ARDOT 449/449A, AASHTO T 308, and Note 4 for asphalt binder content determination and substituting ARDOT TM 483, "Test Method for Determination of Binder Content and Development of Binder and Aggregate Correction Factors by Ignition Method."

The following is hereby added after the tenth paragraph of **Subsection 404.04, Quality Control of Asphalt Mixtures**:

Ignition Ovens (Single, Multiple, and Replacement). A single ignition oven shall be used for all ignition-oven determinations performed for Acceptance on a project unless otherwise approved in writing by the Engineer.

Ignition oven requirements apply only to mixtures for which asphalt binder content or gradation is determined using ignition methods for Acceptance.

A correction factor for determining asphalt binder content and gradation using the ignition oven shall be established in accordance with ARDOT TM 483. A separate correction factor shall be developed for each JMF and for each ignition oven used. The correction factor shall be reestablished at a minimum frequency of once every 12 months.

Documentation of the established correction factor shall be submitted to the Engineer prior to the start of production. The Engineer shall be given the opportunity to witness the correction factor determination process.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

When the mass of a sample exceeds the capacity of the ignition oven or basket, the sample shall be reduced into multiple test portions using approved splitting procedures and tested in separate ignition-oven determinations using the same approved ignition oven. Asphalt binder content results shall be combined on a mass-weighted basis, and aggregate shall be recombined for gradation determinations.

Use of More than One Ignition Oven (Prior Approval). The use of more than one ignition oven may be approved in writing by the Engineer prior to the start of production for projects with high production rates, extended paving durations, or multiple simultaneous production operations. When more than one ignition oven is approved, the following shall apply:

1. Each ignition oven shall be identified and approved in writing by the Engineer prior to use.
2. A separate correction factor shall be established and documented for each approved ignition oven in accordance with ARDOT TM 483 prior to use for project testing.
3. Each approved ignition oven shall be assigned to a specific plant, production line, or testing stream and shall not be alternated based on test results.
4. Acceptance testing shall be performed using the assigned ignition oven for the applicable production stream.
5. Selection between approved ignition ovens based on test results shall not be permitted.
6. Changes to approved ignition oven assignments shall be made only with prior written approval from the Engineer.

Replacement Ignition Oven During Production. The use of a replacement ignition oven during production may be approved in writing by the Engineer only in the event of equipment failure or other unavoidable circumstances. When a replacement ignition oven is approved, the following shall apply:

1. Ignition-oven determinations intended for Acceptance shall be suspended until a correction factor is established for the replacement ignition oven.
2. A correction factor shall be established and documented for the replacement ignition oven in accordance with ARDOT TM 483 before results from the replacement ignition oven are used for Acceptance or for Department testing.
3. Once approved, the replacement ignition oven shall be used for the remainder of the project unless otherwise approved in writing by the Engineer.

Bulk Specific Gravity. When AASHTO T 166 is determined by the Department to be unsuitable, bulk specific gravity shall be determined using an automatic vacuum sealing system in accordance with AASHTO T 331. Use of AASHTO T 331 shall be permitted only when directed by the Department. Suitability shall be based on the ability to obtain reliable results in accordance with the applicable test method requirements. The vacuum sealing system shall be approved by the Engineer prior to use.

AASHTO T 275, Bulk Specific Gravity of Compacted Asphalt Mixtures Using Paraffin-Coated Specimens, shall not be permitted for use in mixture design or Acceptance testing.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

The Contractor shall furnish the Department with access to a compliant vacuum sealing system for testing when bulk specific gravity is required to be determined in accordance with AASHTO T 331, when specified by the Department. This requirement may be satisfied through the Contractor's primary laboratory or by providing additional approved equipment as necessary to ensure that testing is performed in accordance with the specified method. The Department may also perform testing using Department-owned or independently furnished equipment.

Table 405-1 of **Subsection 405.03, Materials** is hereby deleted and the following substituted therefor:

Table 405-1
Design Requirements for Asphalt Concrete Hot/Warm Mix Base Course (1½")

Control Points							
Sieve	Percent Passing (%)						
1½"	100						
1"	90 - 100						
¾"	90 max.						
No. 4	-						
No. 8	15 - 41						
No. 16	-						
No. 30	-						
No. 50	-						
No. 200	0 - 6						
Asphalt Binder Content	Design Value						
% Air Voids	3.5						
% VMA	11.5 - 13.0						
Minimum Water Sensitivity Ratio	80						
% Anti-strip	As Required						
Fines to Asphalt Ratio*	0.6 - 1.4						
Wheel Tracking Test (8000 cycles, 100 psi, 64°C)	<table> <tr> <th><u>Design PG Grade</u></th><th><u>Maximum Rut</u></th></tr> <tr> <td>64-22 or 67-22</td><td>0.315 in. (8.000 mm)</td></tr> <tr> <td>70-22 or 76-22</td><td>0.197 in. (5.000 mm)</td></tr> </table>	<u>Design PG Grade</u>	<u>Maximum Rut</u>	64-22 or 67-22	0.315 in. (8.000 mm)	70-22 or 76-22	0.197 in. (5.000 mm)
<u>Design PG Grade</u>	<u>Maximum Rut</u>						
64-22 or 67-22	0.315 in. (8.000 mm)						
70-22 or 76-22	0.197 in. (5.000 mm)						

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Table 406-1 of **Subsection 406.04, Construction Requirements and Acceptance**, is hereby deleted and the following substituted therefor:

Table 406-1
Design Requirements for Asphalt Concrete Hot/Warm Mix Binder Course (1")

Control Points	
Sieve	Percent Passing (%)
1½"	100
1"	90 - 100
¾"	90 max.
No. 4	-
No. 8	19 - 45
No. 16	-
No. 30	-
No. 50	-
No. 200	1 - 7
Asphalt Binder Content	Design Value
% Air Voids	3.5
% VMA	12.5 - 14.0
Minimum Water Sensitivity Ratio	80
% Anti-strip	As Required
Fines to Asphalt Ratio*	0.6 - 1.4
Wheel Tracking Test	<u>Design PG Grade</u> <u>Maximum Rut</u>
(8000 cycles, 100 psi, 64°C)	64-22 or 67-22 0.315 in. (8.000 mm)
	70-22 or 76-22 0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Table 407-1 and Table 407-2 of **Subsection 407.04, Construction Requirements and Acceptance**, are hereby deleted and the following substituted therefor:

Table 407-1
Design Requirements for Asphalt Concrete Hot/Warm Mix Surface Course (1/2")

Control Points	
Sieve	Percent Passing (%)
3/4"	100
1/2"	90 - 100
3/8"	90 max.
No. 8	28 - 58
No. 16	-
No. 30	-
No. 50	-
No. 200	3 - 7
Asphalt Binder Content	Design Value
% Air Voids	3.5
% VMA	14.5 - 16.0
Minimum Water Sensitivity Ratio	80.0
% Anti-strip	As Required
Fines to Asphalt Ratio*	0.6 - 1.2
Wheel Tracking Test	<u>Design PG Grade</u>
(8000 cycles, 100 psi, 64°C)	64-22 or 67-22
	70-22 or 76-22
	<u>Maximum Rut</u>
	0.315 in. (8.000 mm)
	0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

Table 407-2

Design Requirements for Asphalt Concrete Hot Mix Surface Course (3/8")

Control Points		
Sieve	Percent Passing (%)	
1/2"	100	
3/8"	90 - 100	
No. 4	90 max.	
No. 8	32 - 67	
No. 16	-	
No. 30	-	
No. 50	-	
No. 200	3 - 7	
Asphalt Binder Content	Design Value	
% Air Voids	3.5	
% VMA	15.5 - 17.0	
Minimum Water Sensitivity Ratio	80.0	
% Anti-strip	As Required	
Fines to Asphalt Ratio*	0.6 - 1.4	
Wheel Tracking Test	<u>Design PG Grade</u>	<u>Maximum Rut</u>
(8000 cycles, 100 psi, 64°C)	64-22 or 67-22	0.315 in. (8.000 mm)
	70-22 or 76-22	0.197 in. (5.000 mm)

*Fines to asphalt ratio shall be defined as the percent materials passing the No. 200 sieve (expressed as a percent of total aggregate weight) divided by the effective asphalt binder content.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PERCENT AIR VOIDS FOR ACHM MIX DESIGNS

The Table 410-1 in **Subsection 410.09(b), Acceptance of the Pavement**, is hereby amended as follows:

TABLE 410-1
COMPLIANCE, PRICE REDUCTION AND REJECTION LIMITS FOR ASPHALT COURSES

Property	Compliance Limits	Price Reduction Limits	Lot Rejection Limits	Sublot Rejection Limits
Asphalt Binder Content	±0.3 from mix design value	more than ±0.3 from mix design value	more than ±0.6 from mix design value	±0.8 from mix design value
Air voids (AV)	2.5% to 4.5%	1.9% to 2.4% 4.6% to 5.0%	1.8% or less 5.1% or more	1.4% or less 5.6% or more
Voids in Mineral Aggregate (VMA)*				
Asphalt Base Course (1½")	11.0% to 13.5%	10.5% to 10.9% 13.6% to 14.0%	10.4% or less 14.1% or more	9.9% or less 14.6% or more
Asphalt Binder Course (1")	12.0% to 14.5%	11.5% to 11.9% 14.6% to 15.0%	11.4% to less 15.1 or more	10.9% or less 15.6% or more
Asphalt Surface Course (1/2")	14.0% to 16.5%	13.5% to 13.9% 16.6% to 17.0%	13.4% or less 17.1% or more	12.9% or less 17.6% or more
Asphalt Surface Course (3/8")	15.0% to 17.5%	14.5% to 14.9% 17.6% to 18.0%	14.4% or less 18.1% or more	13.9% or less 18.6% or more
Density (% of theoretical)	92.0% to 97.0%	91.0% to 91.9% 97.1 to 98.0%	90.9% or less 98.1% or more	89.9% or less** 99.1% or more
Density (% of theoretical) where minimum specified is 90.0%	90.0% to 97.0%	89.0% to 89.9% 97.1% to 98.0%	88.9% or less 98.1% or more	87.9% or less** 99.1% or more

*The values for VMA_(actual) shall be determined by calculating the VMA_(effective) and reducing it by the correction factor shown on the mix design.

**Subject to further evaluation, see text.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

LIQUID ANTI-STRIP ADDITIVE

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 404, DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES, is hereby modified as follows:

The following is added as the last bullet following the first paragraph of **Subsection 404.01(b), Design Requirements**:

- All ACHM mixes must contain a liquid, anti-strip additive.

Section 409, MATERIALS AND EQUIPMENT FOR ASPHALT CONCRETE PLANT MIX COURSES, is hereby modified as follows:

The second paragraph of **Subsection 409.02 Asphalt Binder** is hereby deleted and the following substituted therefor:

The asphalt binder for all Asphalt Concrete Hot Mixes shall contain a heat-stable, liquid anti-strip additive. The additive shall be furnished from the Qualified Products List. The additive shall not harm the completed bituminous concrete mixture and must be compatible with the aggregate and asphalt binder supplied for the project. The anti-strip additive shall be added either by an in-line blending process just before introduction of the asphalt binder to the mixer or by blending with the asphalt binder at the asphalt binder terminal. If blended at the terminal, the bill of lading accompanying the load being delivered to the hot mix asphalt plant shall include the anti-strip manufacturer's name, product name, and quantity of all anti-strip additive included in the load.

The liquid anti-strip additive shall be added at rates as indicated below:

- For ACHM mixes where the use of an anti-strip additive is required as determined by the laboratory analysis and mix design procedures, the anti-strip additive shall be added at the rate of 0.5% to 0.75% (0.05% to 0.10% for organosilane based materials) by weight of asphalt binder as determined by the laboratory analysis and laboratory mix design procedures.
- For all other mixes, the manufacturer's recommended dosage of the additive shall be used, but the rate of liquid anti-strip additive shall not be less than 0.25% (0.05% for organosilane based materials) by weight of the asphalt binder.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRACKLESS TACK

Sections 401 and 403 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is hereby added after the second sentence of **Subsection 401.02 Materials:**

Trackless Tack meeting the requirements of this supplemental specification may be used as Tack Coat at no additional cost to the Department.

The following is hereby added after the fifth sentence of **Subsection 401.03(c), Application of Tack Coat:**

When Trackless Tack is used, the Contractor shall follow the manufacturer's recommendations for storage, application temperature, and application rate.

The following is hereby added as the second paragraph of **Subsection 401.06, Basis of Payment:**

If the Contractor elects to use Trackless Tack in lieu of Tack Coat, the application and payment for the material used will be measured and paid for at the contract unit price bid for Tack Coat per gallon (liter).

The following is hereby added after the second sentence of the first paragraph **Subsection 403.03, Asphalt Materials:**

The manufacturer shall submit certified test results for Trackless Tack to the Engineer.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****TRACKLESS TACK**

The following is hereby added as **Subsection 403.03 (g), Trackless Tack:**

Trackless tack shall be an anionic or cationic asphalt emulsion conforming to the requirements below:

	Test Method	Min	Max
Viscosity, Saybolt Furol at 25°C SFS	AASHTO T59	20	150
Storage stability test, 24-h, %	AASHTO T59		1
Sieve test, %	AASHTO T59		0.3
Residue by distillation, %	AASHTO T59	50	
Tests on residue from distillation:			
Penetration, 25°C, 100 g, 5 s	AASHTO T59		20
*Solubility %	AASHTO T44	97.5	
*Ash Content	AASHTO T111		1
Softening Point °C	AASHTO T53	65	

*Ash Content or Solubility may be used for testing purposes of the residue from distillation.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****DESIGN OF ASPHALT MIXTURES**

Section 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added after the first sentence of paragraph 3 **Subsection 404.01 Design of Asphalt Mixtures. (b) Design Requirements:**

Any use of recycled engine oil bottoms (REOB) or other engine oil derivatives in the manufacture or modification of a binder are strictly prohibited. Ground Tire Rubber (GTR) may be added to asphalt binder with blending of GTR into asphalt occurring only at the asphalt terminal. GTR shall be Class 80-1 ground tire rubber as defined by ASTM D5603.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ASPHALT LABORATORY FACILITY

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 409.03(h), Plant Inspection, is hereby deleted and the following substituted therefor:

(h) Plant Inspection. The Engineer shall have access to all parts of the plant.

The Contractor shall provide and maintain a laboratory facility for the exclusive use of the Engineer. This facility shall be located at the plant site. The dimensions and other requirements specified herein are minimums. The facility may be built by the Contractor for the specific purposes stated. Portable structures used as lab facilities must be anchored to the ground and have adequate reinforcement to the floor to provide stability for lab equipment. It is not intended, however, to preclude the use of commercially built trailers or prefabricated buildings that may deviate in minor dimension or detail from the requirements listed but may in some features exceed these requirements and in all major respects be entirely suitable for the purpose intended. The Contractor may furnish, in lieu of a separate building, a facility having sufficient space in a building, parts of which are used for other purposes, provided that the facility furnished meets all other requirements of this subsection; is physically separated from the remainder of the building; and has an outside entrance with unrestricted access allowed and reserved for the exclusive use of the Engineer. Adequate space shall be provided for parking of at least three Department vehicles in the vicinity of the facility. The Engineer will determine the suitability of any facility furnished.

General requirements for the laboratory facility are:

- Minimum working laboratory space of 380 square feet (35.3 sq m) for building widths between 8' to 12' (2.4 to 3.7 m) or 208 square feet (19.3 sq m) with a width of 12' (3.7 m) or greater.
- Minimum designated office space of 30 square feet (2.8 sq m) shall be included in addition to the laboratory square footage.
- A ceiling height of 8' (2.4 m) or greater.
- A desk or table approximately 24" x 36" (600 mm x 900 mm), with at least two drawers, each approximately 13" x 13" x 18" (330 mm x 330 mm x 450 mm) for storing records and at least three office style rolling chairs.
- At least one door with a substantial lock and all keys placed in the possession of the Engineer. The door must be a minimum of 36" (900 mm) wide. A second entry door at the end of trailers that are greater than 30' (9.1 m) in length will be required for safety reasons.
- Access to a well-maintained restroom, with a functioning sink, within reasonable proximity to the Department laboratory facility. Portable restrooms are not acceptable.
- Floored, weatherproof, and reasonably dustproof.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ASPHALT LABORATORY FACILITY

- Level and stable with substantial/durable structure capable of supporting required laboratory equipment. Movement in the lab shall not affect testing operations such as scale readings, etc.
- At least two glazed screened windows capable of being opened and locked only from the inside.
- Basic utility services shall be provided year-round as long as the plant is listed on the QPL. If utility services to the Department lab are voluntarily suspended at any time, the plant may be removed from the QPL.
- Equip the lab with heating and air conditioning units that maintain the ambient air temperature between 65 °F and 80 °F (18 °C and 27°C). The lab must be climate-controlled year-round.
- A work counter approximately 30" to 36" (760 to 900 mm) high with a minimum depth of 30" (760 mm). The countertop shall be metal capped with a rolled back edge of 2" (50 mm) if adjacent to the wall or other comparable durable surface. Total length of the work counter shall be approximately 35' (10.7 m) with a minimum of 12' (3.7 m) of counter length 36" (900 mm) deep.
- A minimum of 54" (1370 mm) width between parallel work counters.
- Adequate electric lights suitable for the purposes intended. At least one power outlet per every four feet of counter. At least two power outlets shall provide 220 VAC.
- An exhaust outlet with at least 3" (76 mm) inside diameter no farther than 8' (2.4 m) from the ignition oven shall be included near one of the 220 VAC outlets. Provide a surface for the ignition oven that is level, sturdy, and fireproof with at least 6" (152 mm) of clearance between the furnace and other vertical surfaces. The exhaust fumes exiting the furnace exhaust port may reach 270 °C (518 °F).
- An exhaust fan shall be installed over the equipment clean up area. The exhaust fan shall be equipped with a rheostat control and capable of exhausting in one minute a volume of air equal to the volume of the entire laboratory. The exhaust fan shall be maintained operational.
- A sink, approximately 24" (610 mm) square with a minimum depth of 9" (230 mm) with an outside drain.
- A clean water supply providing a minimum of 50 gallons (200 liters) storage capacity (or connected to a public or private water system), discharging through a faucet above the sink. A thermostat controlled hot water supply shall be provided to the laboratory sink.
- Adequate shelves and/or cabinets for storage of testing equipment that do not impede the operation of testing equipment.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
ASPHALT LABORATORY FACILITY

- A storage area for storing nuclear equipment, complete with a substantial lock and all keys to this area placed in the possession of the Engineer.
- At least one Type ABC fire extinguisher (10-pound size minimum) with up-to-date inspection tag per 300 square feet of building.
- A local access touchtone telephone line (with access to toll free telephone numbers but otherwise blocked for outgoing long-distance calls), with a landline modular jack and touchtone telephone, shall be provided in the laboratory facility for use by Department personnel.
- Reliable Broadband Internet Service shall be provided.

The Broadband Internet Service shall be provided with an Internet Protocol (IP) address which is reachable on the global Internet (public) and which is permanently assigned (static). The Contractor is not required to provide this service if an IP address which is both static and public is not available.

If this service is not available at the beginning of a project but becomes available during the life of the project, the Contractor shall provide the service immediately from the date of availability.

The data transfer rate shall be 3 megabits per second (Mbps) download and 500 kilobits per second (kbps) upload, or higher, with latency not to exceed 150 milliseconds. If the Broadband Internet Service meets all of the requirements of this specification except for the data transfer rate and/or latency, then the best performing available connection shall be provided. The Broadband Internet Service shall be provided with equipment providing a minimum of one Ethernet port.

Prior to the selection of the Broadband Internet Service provider, the Contractor shall submit to the Resident Engineer, in writing, the proposed method for providing Broadband Internet Service. The Resident Engineer shall review this submittal and respond in writing regarding the acceptability of the proposed method.

Adequate maintenance of the laboratory facility shall be required for plant inclusion on the QPL and will be included as part of the annual ACHM plant inspection. Maintenance shall include, but is not limited to, HVAC and electrical systems, and plumbing. The Resident Engineer may determine a lab is in reasonable compliance with this specification if all required testing can be accomplished with reasonable ease by the Construction Materials Inspector.

The requirements of this Supplemental Specification shall be implemented to receive the next scheduled ACHM Plant Certification. If the requirements are not met and the Resident Engineer determines the laboratory is not within reasonable compliance an ACHM Plant Certification will not be provided until all requirements are fulfilled and/or the Resident Engineer is satisfied with the conditions of the facilities.

The field laboratory for asphalt mixing plants and the utility services provided will not be paid for directly but will be considered a part of the asphalt mixing plant.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

**CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF
ASPHALT CONCRETE PLANT MIX COURSES**

Section 410, Construction Requirements and Acceptance of Asphalt Concrete Plant Mix Courses, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby modified as follows:

Subsection 410.10 Incentives is hereby deleted.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS

Section 410 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth sentence of the first paragraph of **Subsection 410.08, Rolling and Density Requirements and Joints**, is hereby deleted and the following substituted therefor:

The Engineer will observe the Contractor's use of an electromagnetic surface contact device that meets ASTM D7113/D7113M or the use of a nuclear density gauge to verify that the maximum densities possible are obtained.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL

Section 410 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following shall be added to the second to the last paragraph of **Subsection 410.09 (a)**
General:

If the material used to replace unacceptable material is a different mix design from what was originally placed, the remaining material in the lot and the replacement material shall both be evaluated as separate partial lots.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
RECYCLED ASPHALT PAVEMENT

Division 400 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth paragraph of **Subsection 416.03, Materials and Composition**, is hereby deleted and the following substituted therefor:

To ensure the “production” stockpile is distinguishable to anyone involved in the production of asphalt at the plant and no “unprocessed” materials are introduced into the process of ACHM mix manufacturing, the following shall be required for the use of Recycled Asphalt Pavement (RAP):

- RAP stockpiles should have only binder covered aggregates and therefore, there shall be no virgin aggregate or deleterious materials present in any RAP stockpile. Uncoated aggregate from asphalt plant produced material shall not be considered virgin aggregate as it applies to RAP. Plant startup and shut down materials will be considered binder covered and are allowed.
- Unprocessed RAP and processed RAP stockpiles shall be separated by distance and each stockpile signed accordingly.
- Only processed RAP shall be introduced into asphalt mixes. Processed is defined as efforts to create a uniform stockpile of material and may include, but is not limited to, crushing and/or fractionating. Use of the scalper screen on the plant does not define processed RAP.
- Processed RAP stockpiles shall be of adequate size for multiple operational days of asphalt mix production at the plant’s maximum production rate. Processed RAP must be stockpiled before use in plant production. Processed RAP may not be taken from underneath the crusher and placed directly into the cold feed bins. If the crusher is feeding the processed stockpile, the loader must load the cold feed bins from the opposite end of the processed stockpile.

Quality control testing for asphalt binder content and gradation of RAP shall be the contractor’s responsibility and conducted as follows:

- Tested as part of the field verification process. Field verification test results may be transferred from another ARDOT job given they are from the same mix design and were completed within 120 days of the current job’s field verification process.
- Minimum of one set of tests per job for jobs that contain at least 1,000 tons of ACHM.
- One set of tests for every 10,000 tons of ACHM produced.
- The first tests on the job must be performed within the first 3 days of production on the job.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
RECYCLED ASPHALT PAVEMENT

The Contractor has the option of quality control testing while the processed stockpile is being built in lieu of testing during production. Quality control testing for asphalt binder content and gradation of RAP shall be the Contractor's responsibility and conducted as follows:

- Tested as part of the field verification process. Field verification test results may be transferred from another ARDOT job given they are from the same mix design and were completed within 120 days of the current job's field verification process.
- One set of tests for every 1,500 tons of RAP produced for each stockpile.
- The quantity of RAP being placed in the processed stockpile must be tracked.

The Contractor shall pick only one option of quality control method per processed RAP stockpile. The Engineer shall be given the opportunity to witness all testing. Test results shall be submitted to the Engineer by the next business day. The Contractor shall keep a logbook to track the consistency of the asphalt binder content and gradation.

If testing determines the properties of the RAP have deviated significantly from the mix design, as determined by the Engineer, changes to virgin binder content and/or aggregate proportions will be required before production of the ACHM continues. Once adjustments are made and the plant produced mix has the desired properties, the Contractor may request that a field mix design be accepted by the Engineer.

To create uniform, repeatable testing for RAP binder content, asphalt binder content of the RAP shall be determined using AASHTO T 308 with the specific requirements as follows:

- Sample shall be dried to a constant mass as per AASHTO T 329 using a drying temperature of $230^{\circ}\text{F} \pm 9^{\circ}\text{F}$.
- The ignition oven burn temperature used during the mix design process must be used for quality control. The burn temperature shall be reported on the mix design submittal.
- Asphalt Binder Content = % loss – Aggregate Correction Factor (ACF)
- An ACF for each processed RAP stockpile shall be submitted with the mix design if used. An ACF for the job mix formula shall be submitted on the mix design if used. If multiple ignition ovens are used, an ACF for each oven shall be submitted.
- Determination of the ACF may be based on regional historical data at the time of the change. This will ensure all parties involved are aware of the correction factor and therefore avoiding disagreements pertaining to manipulation/fluctuation in aggregate correction factors that could be used to adjust binder content data.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PORTLAND CEMENT CONCRETE PAVEMENT

Division 500 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first and second paragraph of **Subsection 501.02(a), Cement**, are hereby deleted and the following substituted therefor:

(a) Cement. Portland cement, blended cement, fly ash, and slag cement shall be from sources that are listed on the Department's Qualified Products List (QPL) in Division 500 and that have executed a certification agreement with the Department.

The first and second sentence of the third paragraph of **Subsection 501.02(a), Cement**, are hereby deleted and the following substituted therefor:

The total alkalis in the Portland cement or blended cement ($\text{Na}_2\text{O} + 0.658 \text{ K}_2\text{O}$) shall not exceed 0.60%. The total alkali content in the cementitious material shall not exceed 5 lb/cu yd (2.4 kg/cu m).

The fifth paragraph of **Subsection 501.02(b), Fine Aggregate**, is hereby deleted.

The sixth paragraph of **Subsection 501.02(c), Coarse Aggregate**, is hereby deleted.

Subsection 501.02(f), Cement Replacements, (1) Fly Ash, is hereby deleted and the following substituted therefor:

(1) Fly Ash. Fly ash for use with Portland cement or blended cement shall comply with the requirements of AASHTO M 295, Class C or Class F. Mixing of Class C or Class F fly ashes will not be permitted.

The sixth through thirteenth paragraphs of **Subsection 501.03 Mix Design. (a), General**, are hereby deleted and the following substituted therefor:

Fly ash may be used as a partial replacement for Portland or blended cement, not exceeding 25% by weight. Substitution shall be made at the rate of one pound (kilogram) of fly ash for each pound (kilogram) of cement replaced. Fly ash will not be allowed as a substitute for high early strength cements.

Slag cement may be used as a partial replacement for Portland or blended cement, not exceeding 25% by weight. Substitution shall be made at a rate of one kilogram (pound) of slag cement for each pound (kilogram) of cement replaced. Slag cement will not be allowed as a substitute for high early strength cements. Ternary mixes (cement, fly ash, and slag cement) are not allowed.

The minimum 28-day compressive strength shall be 4000 psi (28.0 MPa) when tested according to AASHTO T 22. Test specimens will be made and cured according to AASHTO T 23 or T 126 as applicable.

The mixed concrete shall have a uniform consistency with a slump, as determined by AASHTO T 119, not exceeding the tolerances as listed on the mix design. All admixtures shall comply with Subsection 501.02(e).

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
PORTLAND CEMENT CONCRETE PAVEMENT

Fine and coarse aggregate shall be added only in such proportion that satisfactory plasticity, workability, and consistency of the mix are maintained, with the further provision that the ratio of the fine aggregate to cement, based on dry and rodded measure, shall be not less than 1.5 nor more than 2.5.

The specified water/cement ratio shall not be exceeded, and the minimum compressive strength shall be met.

A minimum of 15 working days prior to the commencement of paving operations, the contractor shall submit to the Engineer of Materials for review and approval the following:

- Certification for the low alkali cement proposed for use OR the results of fine and coarse aggregates Potential Alkali Reactivity test (AASHTO T 303) in accordance with Options 1 or 2 of Subsection 501.02.
- A Job Mix Formula (JMF) that contains sources of all aggregates proposed for use, a composite gradation of all aggregates, and proportions of each aggregate. Individual gradations of each aggregate shall be included. The JMF may only be changed upon written approval of the Engineer. Composite gradations will be calculated using ARDOT Test Method 558.
- A completed ARDOT Concrete Mix Design Submittal form. This form is located on the Materials Division website for download.

The last sentence of the third paragraph of **Subsection 501.05(c), Measuring Materials, (1) General**, is hereby deleted and the following substituted therefor:

The load ticket shall show the following information:

1. Unique ticket number.
2. Identification of the truck.
3. Date and time of batching.
4. Total weights and/or volumes of each component.
5. Total volume of mix.
6. Total quantity of water added after batching.
7. Time of discharge.
8. ARDOT Mix Design ID

The first sentence of **Subsection 501.08, High Early Strength Concrete Pavement**, is hereby deleted and the following substituted therefor:

Cement used in High Early Strength Concrete shall conform to AASHTO M 85, Type III, AASHTO M 240, Table 3, or a Rapid Hardening Hydraulic Cement in compliance with ASTM C1600.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

WELDED WIRE REINFORCEMENT

Section 502 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The fourth paragraph of **Subsection 502.02** is hereby deleted and the following substituted therefor:

Welded Wire Reinforcement shall comply with AASHTO M 336.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

PORTLAND CEMENT CONCRETE DRIVEWAY

Division 500, RIGID PAVEMENT, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 505, PORTLAND CEMENT CONCRETE DRIVEWAY, is hereby modified as follows:

The first paragraph of **Subsection 505.02(b) Joint Filler** is hereby deleted and the following substituted therefore:

Material for joint filler shall comply with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certificates in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

INCIDENTAL CONSTRUCTION

Sections 609, 611, 617, and 618 of the Standard Specifications for Highway Construction, Edition of 2014, are hereby amended as follows:

Subsection 609.02(c), Materials for Drop Inlets and Junction Boxes, is hereby deleted and the following is substituted therefor:

- (c) Steel for welded steel grates and frames shall comply with ASTM A709, Grade 36 (250).

Subsection 611.02(a)(2), Materials for Pipe Underdrains, Outlet Protectors, and Covers, is hereby deleted and the following is substituted therefor:

- (2) **Corrugated Polyethylene Tubing.** The tubing shall be the heavy duty type and shall comply with AASHTO M 252. The tubing shall have a minimum pipe stiffness of 46 psi (3.23 kg/cm²) at 5% deflection and shall be capable of 60 percent vertical deflection in parallel plate loading without splitting or cracking when tested in accordance with ASTM D 2412.

The second sentence of **Subsection 617.02(a)(2), Materials for Steel Posts**, is hereby deleted and the following is substituted therefor:

- (2) **Steel Posts.** The steel shall comply with ASTM A709, Grade 36 (250).

Subsection 617.02(b)(3), Materials for Terminal Anchor Posts, is hereby deleted and the following is substituted therefor:

- (3) The steel anchor posts shall consist of structural shapes of the section shown on the plans, or as otherwise specified, and shall comply with ASTM A709, Grade 36 (250). The upper 15" (380 mm) of the anchor assembly shall be galvanized according to AASHTO M 111.

The third sentence of the third paragraph **Subsection 618.02(a), Posts for Guard Cable**, is hereby deleted and the following is substituted therefor:

The steel shall comply with ASTM A709, Grade 36 (250).

Subsection 618.02(d), Materials for Bolts, Nuts, and Washers, is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****INCIDENTAL CONSTRUCTION**

(d) Bolts, Nuts, and Washers. Bolts, nuts, and washers shall conform to the plans and shall be steel complying with ASTM A 307, ASTM F3125, Grade A325, Heavy Hex, Type 1, or ASTM A449 (Heavy Hex), galvanized according to AASHTO M 232. Threads on bolts and nuts shall conform to Unified Coarse Thread Series Class 2A, ANSI B 1.1 (Metric Coarse Thread Series, ANSI B 1.13M, 6g tolerance).

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****LANE CLOSURE NOTIFICATION**

Division 600 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 603, Maintenance of Traffic and Temporary Structures, is hereby modified as follows:

The first sentence of the third paragraph **Subsection 603.02 (d)** is hereby deleted and the following substituted therefor:

The Contractor shall provide the Engineer with a minimum of five full business days advance, written notification of any nonemergency lane closure or lane width restriction. The first full business day shall commence at midnight on the first business day following written notification to the Engineer. This advanced notification is required to allow adequate notice for the issuance of over width load permits by the Department.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
RETROREFLECTIVE SHEETING FOR
TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES

Section 604 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is inserted after the first paragraph of Subsection 604.02(b):

Retroreflective sheeting used on traffic drums shall meet the requirements of ASTM D4956 for Type III or IV with the additional requirements for Reboundable Sheeting. Retroreflective sheeting for delineators shall comply with section 728.

Retroreflective sheeting shall be applied to a properly treated substrate with mechanical equipment and in a manner specified by the sheeting manufacturer. Sign material (substrate) shall be of sufficient thickness and stability to maintain a substantial, effective sign for the duration of the project. One splice will be allowed in retroreflective sheeting on sign blanks. "Left", "Right", "Distances", and "Ahead" will be allowed on signs as inserts. All letters and numerals on inserts shall be of the same size and series as those on the sign face.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)

Section 604 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first paragraph of **Subsection 604.02 Materials (a) General** is hereby deleted and the following substituted therefor:

All work zone traffic control devices used on the project, including sign supports, barricades, traffic drums equipped with flashing lights, crash cushions, and impact attenuators, manufactured after December 31, 2019, shall comply with the requirements of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before December 31, 2019, and successfully tested to the requirements of National Cooperative Highway Research Program (NCHRP) Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. The Contractor shall furnish a certification of such compliance from the manufacturer or supplier of all work zone traffic control devices prior to using the devices on the project. The certification shall state the device meets the requirements of MASH, or in the case that the device was manufactured on or before December 31, 2019, the certification shall state the device meets the requirements of NCHRP 350 or MASH. The certification shall include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments for each device. Devices shall be fabricated and installed in accordance with the plans and with the crash testing documentation provided in the FHWA approval letter which is available at:

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
Mulch Cover

Section 620 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection **620.02 Materials (d)** is hereby deleted and the following substituted therefore:

(d) Mulch cover. Shall be a mulch cover system as listed on the Department's Qualified Products List (QPL) or shall consist of straw from threshed rice, oats, wheat, barley, or rye; of wood excelsior; or of hay obtained from various legumes or grasses, such as lespedeza, clover, vetch, soybeans, bermuda, carpet sedge, bahia, fescue, or other legumes or grasses; or a combination thereof. Mulch shall be dry and reasonably free from Johnson grass or other noxious weeds, and shall not be excessively brittle or in an advanced state of decomposition. All material will be inspected and approved prior to use.

The following is inserted after Subsection **620.03 Construction Requirements (c) Seeding (3) Hydro-seeding**:

(4) Mulch Cover. If a mulch cover system listed on the Department's Qualified Products List (QPL) is used then the mulch cover and the seed may be incorporated into one operation.

Subsection **620.03 Construction Requirements (d)** is hereby deleted and the following substituted therefore:

(d) Mulch Cover. If a Mulch Cover system listed on the Department's Qualified Products List (QPL) is used then refer to the application rate listed in the QPL otherwise the mulch cover shall be applied at the rate of 4000 pounds per acre (4500 kg/ha). If the mulch cover and seed are not incorporated into one operation then apply the mulch cover immediately after seeding and spread the mulch cover uniformly over the entire area by approved power mulching equipment. When approved by the Engineer, the Contractor may use hand methods to apply mulch cover to small or inaccessible areas. If the Contractor so elects, an approved mulching machine may be used, whereby the application of mulch cover and tackifier may be combined into one operation. If this method is used, no change in application rates will be allowed. In its final position, the anchored mulch shall be loose enough to allow air to circulate, but compact enough to partially shade the ground and reduce the impact of rainfall on the surface of the soil. Care shall be taken to prevent tackifier materials from discoloring or marking structures, pavements, utilities, or other plant growth. Removal of any objectionable discoloration shall be at no cost to the Department.

**ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION**

Mulch Cover

The first paragraph of subsection **620.03 Construction Requirements (e)** is hereby deleted and the following substituted therefore:

(e) Mulch Anchoring. If a mulch cover system is selected from the Department's Qualified Products List (QPL) then no additional anchoring is needed. If a mulch cover system is not used then immediately following or during the application of mulch cover on seeded areas, the mulch shall be anchored by one of the following methods.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
FILTER SOCKS

Section 621 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following is added to **Subsection 621.01**:

(p) Filter Socks. This item shall consist of furnishing, installing, maintaining, and removing filter socks at locations indicated on the plans or as otherwise directed by the Engineer. Filter socks consist of filter media (compost or non-treated wood) encased in a three-dimensional fabric tube for the purposes of filtering silt, sediment, and other pollutants out of stormwater.

The following is added to **Subsection 621.02**:

(o) Compost or non-treated wood used for filter sock filter media shall be weed, disease, and pathogen free and derived from a clean source of woody organic matter. The media shall be free of any refuse, contaminants, or other materials toxic to plant growth. Test methods for the parameters shown in Table 621-2 should follow the recommendations provided in the AASHTO Standard Practice for Compost for Erosion and Sediment Control (R 51). Compost products must be supplied with a Seal of Testing Assurance (STA) by the U.S. Composting Council from the manufacturer. The Engineer may request a sample for approval prior to being used and materials must comply with all local, state, and federal regulations.

Table 621-2
Filter Sock Media Parameters

Parameters	Reported as (units of measure)	Test Method	Required Value
pH	pH Units	AASHTO R 51	5.0-8.5
Moisture Content	%, wet weight basis	AASHTO R 51	<60%
Organic Matter Content	%, dry weight basis	AASHTO R 51	>30%
Particle Size	% passing a selected mesh size, dry weight basis	AASHTO R 51	99% passing a 2" sieve <40% passing a 3/8" sieve
Physical Contaminates (man-made inert material)	%, dry weight basis	N/A	<1%

Filter sock containment shall be produced from 5-mil-thick continuous high density polyethylene (HDPE) filament or multi-filament polypropylene (MFPP), woven or knitted into a tubular mesh netting. Openings in the mesh shall range from 1/8th to 3/8th inch. This tube shall then be filled to the specified diameter of the sock with filter media which meets the specifications outlined in Table 621-2. Filter sock fabric shall have a minimum functional longevity of 9 months.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
FILTER SOCKS

Furnish filter socks with a diameter of 8-9, 12, 18, or 24 inches in diameter in variable lengths as directed by the Engineer.

Use 2" by 2" hardwood stakes of a length which will allow them to be driven at least one foot into the soil while leaving at least 3" projecting above the sock after installation. In rocky or other difficult locations steel stakes may be used if directed by the Engineer. Sandbags may be used as necessary to anchor the filter sock for installation on paved surfaces. Placement shall be as directed by the Engineer.

The following is added to **Subsection 621.03**:

(q) Trenching of filter socks is not required but woody vegetation shall be cut at ground level or otherwise removed, and uneven or rocky surfaces shall be graded or raked to ensure the socks uniformly contact the ground. The socks shall be secured with stakes driven through the center of the devices or installed as recommended by the manufacturer. For perimeter control or on slopes, stakes shall be installed on a maximum of 10 foot centers and the ends of the socks shall be directed upslope to prevent storm water from running around the end of the sock. For ditch checks and drop inlets, stakes shall be installed on a maximum of 4 foot centers. Additional stakes may be necessary as directed by the Engineer. Filter socks may be laid end to end or overlapped according to the manufacturer's directions.

Routinely maintain the socks in good condition (including staking, anchoring, etc.) Accumulated sediment shall be removed when the sediment reaches one-half the height of the sock or as directed by the Engineer. Sediment removed shall be deposited and stabilized as described in Section 110 of the Standard Specifications for Highway Construction, Edition of 2014. Repair of or complete replacement of torn or damaged socks shall be performed as required or as directed by the Engineer. Filter socks shall be carefully removed and replaced as required to facilitate construction operations.

When the required work has been completed, the area has been stabilized, and the filter socks are no longer required as approved by the Engineer, the containment material shall be cut and the core material shall be evenly distributed on the surrounding ground area. Containment shall be removed and disposed of.

The following is added to **Subsection 621.04**:

(q) Filter Socks will be measured by the linear foot (meter) complete in place; measurement will be made along the centerline of the top of the filter sock. No payment will be made for overlap. No payment will be made for additional length beyond that approved by the Engineer.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
FILTER SOCKS

The following is added to **Subsection 621.05**:

(q) Filter Socks completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot (meter) for Filter Socks, which price shall be full compensation for furnishing all materials; for installation and maintenance of filter socks; for temporarily removing and replacing filter socks as required to facilitate construction operation; for removal and disposal of the filter socks as directed; and for all labor, equipment, tools, and incidentals necessary to complete the work.

The following is added as the last Pay Item in **Subsection 621.05**:

Pay Item	Pay Unit
Filter Sock (____")	Linear Foot (Meter)

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONCRETE ISLAND

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 632, CONCRETE ISLAND, is hereby modified as follows:

The last sentence of the fifth paragraph of **Subsection 632.03 Construction Requirements** is hereby deleted and the following substituted therefor:

The space shall be filled with approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 633, Concrete Walks, Concrete Steps, and Hand Railing, is hereby modified as follows:

Subsection 633.02(E) Expansion Joints is hereby deleted and the following substituted therefor:

A space not less than ½" (12mm) wide shall be left between the sidewalks and adjacent structures. This space shall be filled with approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project. No space or joint filler is required between the sides of the walks and adjacent curbs.

Transverse expansion joints shall be placed at a maximum interval of 45' (13.7m). Transverse joints shall be constructed using approved joint filler complying with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

CURBING

Division 600, INCIDENTAL CONSTRUCTION, of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Section 634, Curbing, is hereby modified as follows:

The last paragraph **of Subsection 634.02 Materials** is hereby deleted and the following substituted therefor:

Material for the joint filler shall comply with AASHTO M 213 or a Semi-Rigid Closed-Cell Polypropylene Foam, Preformed Expansion joint filler that meets ASTM D8139. Materials meeting ASTM D8139 shall be accepted on the basis of the manufacturer's certification in accordance with these specifications and acceptable performance on the project.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****TRAFFIC CONTROL FACILITIES**

Sections 712, 713, 714, 715, 728 and 730 of the Standard Specifications for Highway Construction, Edition of 2014, are hereby amended as follows:

Subsection 712.02(a) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(a) Pole shafts shall comply with ASTM A 1011, SS, Grade 50 (345), ASTM A709, Grade 50 (345), ASTM A 595 Grade A, or ASTM A 572, Grade 50 or Grade 65. Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 712.02(c) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(c) Anchor base plates shall comply with ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 712.02(e) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(e) Hex nuts shall comply with AASHTO M 292 Grade 2H or ASTM A653 Grade 2H or ASTM A653 Grade DH or DH3 (Grade 10S or 10S3). The thread series shall correspond with that of the bolt furnished. Washers shall comply with ASTM F436. Galvanizing shall comply with AASHTO M 232 or ASTM B 695 Class 40 or 50. Nuts shall be galvanized by the same process as that of the bolts.

Subsection 712.02(f) Materials for Span Wire Support Pole With Foundation is hereby deleted and the following is substituted therefor:

(f) Concrete shall comply with Section 802 for Class S concrete. The Department will perform all acceptance sampling and testing at the frequencies shown for Contractor acceptance in Subsection 802.06. Reinforcing steel shall comply with Section 804 for Grade 60 steel.

The third paragraph of **Subsection 713.02 Materials for Span Wire Assembly** is hereby deleted and the following is substituted therefor:

Suitable cable ties shall be provided to suspend the traffic control cable at intervals not to exceed 18" (450 mm). Necessary eyebolts, washers, nuts, and fittings shall be galvanized steel complying with AASHTO M 232 or ASTM B695, Class 40 or 50.

Subsection 714.02(a) Materials for Traffic Signal Mast Arm and Pole with Foundation is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****TRAFFIC CONTROL FACILITIES**

(a) Poles and mast arms shall be ASTM A 1011, SS, Grade 50 (345), ASTM A709, Grade 50 (345), ASTM A 595 Grade A or ASTM A 572, Grade 50 or Grade 65. Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(c) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(c) Anchor Base Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(e) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(e) Hex nuts shall comply with AASHTO M 292 Grade 2H or ASTM A563 Grade DH or DH3 (Grade 10S or 10S3). The thread series shall correspond with that of the bolt furnished. Washers shall comply with ASTM F436. Galvanizing shall comply with AASHTO M 232 or ASTM B695, Class 40 or 50. Nuts shall be galvanized by the same process as that of the bolts.

Subsection 714.02(f) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(f) Clamp Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(g) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(g) Flange and Gusset Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 714.02(h) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

(h) Clamp and Flange Bolts shall be ASTM F3125, Grade A325, Type 1, Heavy Hex with the requirements of Annex A2. Galvanizing shall comply with AASHTO M 232 or ASTM B695, Class 40 or 50.

Subsection 714.02(i) Materials for Traffic Signal Mast Arm and Pole With Foundation is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****TRAFFIC CONTROL FACILITIES**

(i) Concrete shall comply with Section 802 for Class S concrete. The Department will perform all acceptance sampling and testing at the frequencies shown for Contractor acceptance testing in Subsection 802.06. Reinforcing steel shall comply with Section 804 for Grade 60 steel.

Subsection 715.02(c) Materials for Traffic Signal Pedestal Pole With Foundation is hereby deleted and the following is substituted therefor:

(c) Anchor Base Plates shall be ASTM A709, Grade 36 (250). Galvanizing shall comply with AASHTO M 111, Thickness Grade 100.

Subsection 715.02(e) Materials for Traffic Signal Pedestal Pole With Foundation is hereby deleted and the following is substituted therefor:

(e) Hex nuts shall comply with AASHTO M 292 Grade 2H or ASTM F436 Grade DH or DH3 (Grade 10S or 10S3). The thread series shall correspond with that of the bolt furnished. Washers shall comply with ASTM F436. Galvanizing shall comply with AASHTO M 232 or ASTM B695, Class 40 or 50. Nuts shall be galvanized by the same process as that of the bolts.

The fifth and sixth paragraphs of **Subsection 728.02 Materials for Delineators** are hereby deleted and the following are substituted therefor:

Steel posts for bridge rail installation shall be a 1" x 1" x 3/16" (25 mm x 25 mm x 4.76 mm) angle weighing 1.61 pounds per foot (2.4 kg/m), and manufactured from ASTM A709, Grade 36. Length of post and spacing of holes shall be as shown on the plans.

All delineators posts shall be hot dip galvanized in accordance with ASTM A123 and all fabrication, including punching or drilling holes, shall be completed before the posts are galvanized.

The second and third paragraphs of **Subsection 730.02 Materials for Breakaway Sign Support** are hereby deleted and the following are substituted therefor:

All structural steel, except pipe posts but including base plates on pipe posts, and steel fuse plates, shall comply with AASHTO M 270 Grade 50. Pipe posts shall be structural steel complying with ASTM A 53 Grade B pipe. Steel bolted or welded to the primary support posts and not affecting the breakaway function, may be AASHTO M 270 Grade 36.

All high strength bolts, nuts, and washers shall comply with ASTM F3125, Grade A325, Type 1, Heavy Hex with the requirements of Annex A2.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

TRAFFIC CONTROL FACILITIES

The third paragraph of **Subsection 730.03 Fabrication for Breakaway Sign Support** is hereby deleted and the following is substituted therefor:

All structural steel shall be galvanized after fabricating according to AASHTO M 111. All bolts, nuts, and washers shall be galvanized according to AASHTO M 232 or ASTM B695, Class 40 or 50.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****GENERAL REQUIREMENTS FOR SIGNS**

Section 723 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

Subsection 723.02(b) is hereby deleted and the following is substituted therefor:

(b) Sign Panels. Standard signs shall consist of a single sheet of aluminum alloy (ASTM B 209, Alloy 5052 H38) without stiffeners on the back. Minimum sign blank thickness shall be 0.080" (2.0 mm) for a sign size of 9 square feet (0.84 sq m) or less or 0.100" (2.5 mm) for a sign size greater than 9 square feet (0.84 sq m). Sign blanks shall be flat and straight and within commercial tolerances established by the aluminum industry.

Guide signs shall be fabricated using one piece extruded panels fabricated of aluminum alloy (ASTM B221, Alloy 6063 T6).

Extruded panel signs shall consist of sign panels; stringers or horizontal supporting members; necessary fasteners for assembling the units; reflective materials; letters; numerals; symbols; and border. All extrusions and fasteners shall be applied without causing objectionable projections on the sign face.

The one piece extruded aluminum panels shall be a minimum of 12" (300 mm) in width except one 6" (150 mm) panel may be used per sign face when necessary to construct the sign as shown on the plans.

All extruded panels shall be bolted together at every other hole (every 24" [610 mm]) with the faces and ends in alignment.

Single sheet and extruded panels to which reflective sheeting is to be applied shall be conversion coated as specified in ASTM B449 or ASTM B921 per the sheeting manufacturer's recommendations.

All fabrication, including cutting and punching of holes, excluding holes for demountable letters, numerals, symbols, and borders, shall be completed before conversion coating.

Sign panels shall be free of buckles, warp, dents, cockles, burrs, and defects resulting from fabrication. The surface of all sign panels shall be flat.

The Contractor shall submit a Certified Test Report to the Engineer covering the sign panels.

The first paragraph of **Subsection 723.02(c)** is hereby deleted and the following is substituted therefor:

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION

GENERAL REQUIREMENTS FOR SIGNS

(c) Retroreflective Sheeting. The retroreflective sheeting for signs shall comply with ASTM D4956 for Type III, IV, VIII, or IX retroreflective sheeting, except that Type IX retroreflective sheeting shall be used on all W1-6, W1-8, and OM-3 signs. ASTM D4956 Type XI sheeting shall be used on all R5-1 and R5-1a signs. All retroreflective sheeting shall have either Class 1 or Class 2 backing.

Subsection 723.02(d) is hereby deleted and the following is substituted therefor:

(d) Legend. All legend, which includes letters, numerals, symbols, arrows, and border, shall have a regular outline, be clean cut and sharp, and shall have a continuous stroke and border without ragged or torn edges.

All legend on guide signs shall be of the size shown on the plans. Legend on standard signs shall comply with the latest revision of FHWA Standard Highway Signs.

The legend on freeway main lane guide signs shall be demountable. Unless otherwise specified, the legend on all other guide signs shall be manufactured using either direct application or acrylic overlay film. All other signs shall be manufactured using standard industry processes, including silk screening, acrylic overlay film, and digital printing. Digitally printed signs shall be overlaid with a clear UV film per the sheeting manufacturer's recommendation.

All demountable legend shall be of the same manufacturer. The sign area outside the corner radius shall not be trimmed to match the border radius.

Frames for border strips, corners, shields, and legend shall be fabricated from 0.063" (1.6 mm) sheet aluminum complying with the requirements of ASTM B209, Alloy 5052-H38. Mounting holes shall be provided with the frames to permit the use of screws, bolts, rivets, or other fasteners of stainless steel, galvanized steel, or aluminum to fasten the frames to the sign face, subject to the condition that dissimilar metals shall be insulated to prevent corrosion.

The aluminum frames shall comply with Subsection 723.02(b).

All border material shall be secured from the same company that furnishes the cutout letters, numerals, etc. and shall be mounted in the same manner as the cutout letters.

Transparent colors, inks, paints, and films used in the sign manufacturing process shall be of the type and quality recommended by the manufacturer of the reflective sheeting and shall conform to red, blue, yellow, and green colors approved by the FHWA and shown in the MUTCD and FHWA Standard Highway Signs. The Contractor shall provide a sheeting manufacturer's full component system warranty, and shall provide certification that the materials used shall meet all MUTCD minimum requirements for retroreflectivity and contrast for the warranty period of the sheeting.

ARKANSAS DEPARTMENT OF TRANSPORTATION**SUPPLEMENTAL SPECIFICATION****CHANNEL POST SIGN SUPPORT**

Section 729 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The following paragraph is added after the last paragraph of **Subsection 729.02 Materials**:

All posts used on the project, manufactured after December 31, 2019, shall comply with the requirements of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before December 31, 2019, and successfully tested to the requirements of National Cooperative Highway Research Program (NCHRP) Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives. The Contractor shall furnish a certification of such compliance from the manufacturer or supplier of all posts prior to using the devices on the project. The certification shall state the post meets the requirements of MASH, or in the case that the post was manufactured on or before December 31, 2019, the certification shall state the post meets the requirements of NCHRP 350 or MASH. The certification shall include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments for each device. Devices shall be fabricated and installed in accordance with the plans and with the crash testing documentation provided in the FHWA approval letter, which is available at:

http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
CONCRETE FOR STRUCTURES

Division 800 of the Standard Specifications for Highway Construction, Edition of 2014, is hereby amended as follows:

The first and second paragraph of **Subsection 802.02(a), Cement**, are hereby deleted and the following substituted therefor:

(a) Cement. Portland cement, blended cement, fly ash, and slag cement shall be from sources that are listed on the Department's Qualified Products List (QPL) in Division 500 and that have executed a certification agreement with the Department.

The first and second sentence of the third paragraph of **Subsection 802.02(a), Cement**, are hereby deleted and the following substituted therefor:

The total alkalis in the Portland or blended cement ($\text{Na}_2\text{O} + 0.658 \text{ K}_2\text{O}$) shall not exceed 0.60%. The total alkalis in the cementitious material shall not exceed 5 lbs./cu yd (2.4 kg/cu m).

The sixth paragraph of **Subsection 802.02(b), Fine Aggregate**, is hereby deleted.

The sixth paragraph of **Subsection 802.02(c), Coarse Aggregate**, is hereby deleted.

Subsection 802.02(e), Admixtures, is hereby deleted and the following substituted therefor:

(e) Admixtures. Admixtures shall be from sources that are listed on the Department's QPL in Division 500. Admixtures will be reviewed and approved during the mix design submittal. Admixtures shall be compatible with each other, as advised by the manufacturer. The admixture dosage rate range as recommended by the manufacturer shall be used. Should the dosage rate for any admixture not yield desirable characteristics in the concrete, the dosage of admixture used shall be based on test results obtained by trial batches.

Admixtures shall be added to the mixing water by means of a mechanical dispenser that will accurately meter the additive throughout the mix water cycle. The dispenser shall be constructed and connected so that the amount of admixture entering the mixing water can be readily determined.

Subsection 802.05(b), Mix Design by the Contractor, is hereby deleted and the following substituted therefor:

(b) Mix Design by the Contractor. The proportions to be used in the mix for each class shall be determined by the Contractor using the absolute volume method. The Contractor may use the procedure provided in the ACI Standard 211.1 or Portland Cement Association "Design and Control of Concrete Mixtures", modified to comply with the minimum compressive strength and maximum water/cement ratio specified for the class of concrete. A minimum of 15 business days prior to the start of production of the concrete mixture, the Contractor shall submit test results and/or certifications for all materials and detailed mix design data to the Engineer of Materials for review and approval. The ARDOT Concrete Mix Design Submittal form is available for download on the Materials Division website and shall be used. The Department will assign a Mix Design ID, and it shall be included on the delivery ticket.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
CONCRETE FOR STRUCTURES

The Contractor will submit slump ranges during the mix design process. The Engineer of Materials will determine the allowable tolerances for slump during review of the mix design. The mixed concrete shall have a uniform consistency with a slump, as determined by AASHTO T 119, not exceeding the tolerances as listed on the mix design.

Acceptance of the mix design by the Engineer will be based on apparent conformity to the requirements shown in Table 802-1 and listed herein. If the mix design fails to produce acceptable results or if there is a change in the aggregates, fly ash, or cement being used, a new mix design will be required. It shall remain the Contractor's responsibility during production to produce concrete conforming to the mix design and the minimum acceptance criteria specified. When requested by the Engineer, the Contractor shall submit samples of all materials for verification testing. Production shall not begin until the mix design is accepted by the Engineer.

A mix design submitted for acceptance need not be prepared specifically for this project but may be a previously accepted design that uses the same materials and meets the same design criteria.

Mix designs accepted under this section will become the property of the Department and may be accepted for use on other projects, by other contractors, or by the Department.

In **Table 802-1**, Slump Range for all classes of concrete are hereby deleted.

The first paragraph of **Subsection 802.05(d), Fly Ash**, is hereby deleted and the following substituted therefor:

Fly ash may be used as a partial replacement for Portland or blended cement, not exceeding 25% by weight. Substitution shall be made at the rate of one pound (kilogram) of fly ash for each pound (kilogram) of cement replaced, in all classes of concrete except Class B. Substitution shall be made at the rate of one pound (kilogram) of fly ash for each pound (kilogram) of cement replaced. The water/cement ratio shall be calculated using the total weight of both cement and fly ash. Fly ash in Class B concrete shall meet the requirements specified in Subsection 802.05(c) and listed herein. Mixtures with fly ash shall meet the same requirements as mixtures without fly ash. Fly ash will not be allowed as a substitute in high early strength mixes. When fly ash is used, the total weight of both cement and fly ash will be used in design calculations.

ARKANSAS STATE HIGHWAY COMMISSION



STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

EDITION OF 2014

PROPOSAL DOCUMENTS AND SCHEDULE OF ITEMS

ARKANSAS STATE HIGHWAY COMMISSION

PROPOSAL DOCUMENTS

PROPOSAL FOR CONSTRUCTING:

THE PURPOSE OF THIS PROJECT IS TO IMPROVE ADA COMPLIANCE AND SAFETY FOR PEDESTRIANS ON HIGHWAYS 7 AND 70B IN GARLAND COUNTY. THIS PROJECT CONSISTS OF REMOVAL AND DISPOSAL ITEMS, EARTHWORK, PORTLAND CEMENT CONCRETE PAVEMENT, ACHM BASE, BINDER, AND SURFACE COURSES, COLD MILLING ASPHALT PAVEMENT, ACHM PATCHING OF EXISTING ROADWAY, MAINTENANCE OF TRAFFIC, MINOR DRAINAGE, EROSION CONTROL, TRAFFIC SIGNAL ITEMS, PAVEMENT MARKING, AND MISC. ITEMS.

State Highway 7 & 70B, Section 9 & 9B, in **GARLAND** County, Arkansas, in accordance with Standard Specifications for Highway Construction, Edition of 2014; the Supplemental Specifications and Special Provisions attached hereto; and the Construction Plans on file in the Office of the State Highway Commission, designated as

Job **061922** **FEDERAL AID PROJECT VRU-9210(58) & HSIP-9210(58)**

Job Name: **HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)**

said project being approximately **2.80 miles in length.**

Proposal received until 10:00 a.m. on November 4, 2026

TO THE ARKANSAS STATE HIGHWAY COMMISSION:

Gentlemen: By submission of your bid, you agree to the following:

It is hereby certified that a careful examination has been made of the Plans, Specifications, Supplemental Specifications, Special Provisions, and Form of Contract and the site of the work throughout its whole extent. On the basis of the Plans, Specifications, Supplemental Specifications, Special Provisions, and Form of Contract, the bidder proposes to furnish all necessary machinery, equipment, tools, labor and other means of construction, and to furnish all materials as specified, in the manner and at the time prescribed, and to finish the entire project within the time hereinafter proposed. The bidder understands that the quantities of work mentioned herein are approximate only, and are subject to increase or decrease, and hereby proposes to perform all quantities of work, whether increased or decreased, in accordance with the provisions of the Specifications, and at the unit prices bid in the attached Schedule of Items.

Receipt is hereby specifically acknowledged, and complete examination expressly guaranteed of the following:

1. Standard Specifications for Highway Construction, Edition of 2014.
2. Supplemental Specifications.
3. Special Provisions.
4. Proposal Documents.
5. Schedule of Items .
6. Construction Plans.

The bidder further proposes to perform all Extra Work that may be required, on the basis provided in the Specifications, and to give such work personal attention, and to secure economical performance.

The bidder further proposes to execute the contract agreement, and to furnish satisfactory bonds within ten days after he has received notice that he has been awarded the contract. The bidder further agrees to begin work when ordered by the Engineer, or within ten days thereafter, and to complete the work **within three hundred seventy (370) calendar days.**

PROPOSAL DOCUMENTS

(Continued)

The bidder also proposes to furnish a surety Performance bond or bonds in a sum equal to the full amount of the contract and a surety Payment bond or bonds in a sum equal to 80% of the full amount of the contract. These bonds shall not only serve to guarantee the completion of the work and payment of all bills and claims by the bidder, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications and Special Provisions fulfilled.

The bidder shall furnish a Proposal Guaranty in the form specified in Subsection 102.09 of the Specifications, in the amount of five percent (5%) of the total amount bid, which is submitted as a guarantee of the good faith of the proposal, and that the Bidder will enter into written contract, as provided, to do the work should the award be made to him; and it is hereby agreed that if, at any time other than as provided in Subsection 102.11 of the Standard Specifications, Withdrawal/Modification of Proposals, the bidder should withdraw his proposal, or should fail to execute the contract and furnish satisfactory bonds as herein provided, if his proposal is accepted, the Arkansas State Highway Commission, in either of such events, shall be entitled and is hereby given the right to retain the Proposal Guaranty, not as a penalty, but as liquidated damages, it being understood and agreed by the bidder that the amount of the Proposal Guaranty is a reasonable sum to be fixed as liquidated damages considering the damages the Arkansas State Highway Commission will sustain in the event of the bidder's withdrawal of his proposal, or failure to execute the contract and furnish satisfactory bonds if his proposal is accepted, and said amount is herein agreed upon and fixed as liquidated damages because of the difficulty of ascertaining the exact amount of damage that may be sustained by reason of the above set out circumstances.

Arkansas Department of Transportation
Schedule of Items

State Job No.: 061922

Date Estimated: 9/4/2026

Job Name: HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

Date Revised: 10/1/2026

Federal Aid Project: VRU-9210(58) & HSIP-9210(58)

Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
Section 01 - PROPOSAL ITEMS				
0001	201 - CLEARING AND GRUBBING TREES	1.000 EACH		
0002	202 - REMOVAL AND DISPOSAL OF CURB	159.000 LF		
0003	202 - REMOVAL AND DISPOSAL OF CURB AND GUTTER	2,274.000 LF		
0004	202 - REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	37.000 SQYD		
0005	202 - REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	183.000 SQYD		
0006	202 - REMOVAL AND DISPOSAL OF WALKS	1,143.000 SQYD		
0007	202 - REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	1.000 EACH		
0008	202 - REMOVAL AND DISPOSAL OF DROP INLETS	2.000 EACH		
0009	202 - REMOVAL AND DISPOSAL OF PIPE CULVERTS	1.000 EACH		
0010	202 - REMOVAL AND DISPOSAL OF SIGNS	15.000 EACH		
0011	202 - REMOVAL AND DISPOSAL OF BOLLARDS	2.000 EACH		
0012	SPSS210 - UNCLASSIFIED EXCAVATION	625.000 CUYD		
0013	SP&210 - COMPACTED EMBANKMENT	481.000 CUYD		
0014	SPSS309 - PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)	679.000 SQYD		
0015	SS&401 - TACK COAT	436.000 GAL		
0016	SPSS405 - MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	136.000 TON		
0017	SPSS405 - ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2") (MINIMUM BID \$120.00)	7.000 TON		
0018	SPSS406 - MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	67.000 TON		
0019	SPSS406 - ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1") (MINIMUM BID \$120.00)	4.000 TON		
0020	SPSS407 - MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	472.000 TON		

Arkansas Department of Transportation
Schedule of Items

State Job No.: 061922

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Job Name: HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

Date Revised: 10/1/2026

Federal Aid Project: VRU-9210(58) & HSIP-9210(58)

Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
0021	SPSS407 - ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2") (MINIMUM BID \$120.00)	3.000 TON		
0022	SPSS407 - ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2") (MINIMUM BID \$120.00)	28.000 TON		
0023	SP&412 - COLD MILLING ASPHALT PAVEMENT	4,049.000 SQYD		
0024	SPSS415 - ACHM PATCHING OF EXISTING ROADWAY	50.000 TON		
0025	SPSS505 - PORTLAND CEMENT CONCRETE DRIVEWAY	220.440 SQYD		
0026	SP&602 - FURNISHING FIELD OFFICE	1.000 EACH		
0027	SPSS603 - MAINTENANCE OF TRAFFIC	1.000 L.S.		
0028	SS&604 - SIGNS	2,084.000 SQFT		
0029	SS&604 - BARRICADES	128.000 LF		
0030	SS&604 - TRAFFIC DRUMS	95.000 EACH		
0031	SS&604 - TRAFFIC CONE	60.000 EACH		
0032	604 - REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	80.000 LF		
0033	604 - REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	80.000 LF		
0034	604 - REMOVAL OF PERMANENT PAVEMENT MARKINGS	4,375.000 LF		
0035	SS&604 - VERTICAL PANELS	277.000 EACH		
0036	SS&606 - 18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	3.000 LF		
0037	SS&606 - 24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	17.000 LF		
0038	SS&606 - SELECTED PIPE BEDDING	5.000 CUYD		
0039	SS&609 - DROP INLETS (TYPE MO)	1.000 EACH		
0040	SS&609 - DROP INLETS (TYPE ST)	1.000 EACH		
0041	SS&609 - DROP INLETS (TYPE SPECIAL)	1.000 EACH		
0042	SS&609 - DROP INLET (TYPE SPECIAL-1)	1.000 EACH		
0043	SS&609 - DROP INLET EXTENSIONS (4')	1.000 EACH		
0044	620 - LIME	1.000 TON		
0045	620 - SEEDING	0.500 ACRE		

Arkansas Department of Transportation
Schedule of Items

State Job No.: 061922

Date Estimated: 9/4/2026

Job Name: HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

Date Revised: 10/1/2026

Federal Aid Project: VRU-9210(58) & HSIP-9210(58)

Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
0046	SS&620 - MULCH COVER	1.000 ACRE		
0047	620 - WATER	65.600 MGAL		
0048	621 - TEMPORARY SEEDING	0.500 ACRE		
0049	621 - SILT FENCE	1,000.000 LF		
0050	621 - SAND BAG DITCH CHECKS	220.000 BAG		
0051	621 - SEDIMENT REMOVAL AND DISPOSAL	56.000 CUYD		
0052	SS&621 - FILTER SOCK (12")	240.000 LF		
0053	623 - SECOND SEEDING APPLICATION	0.500 ACRE		
0054	624 - SOLID SODDING	350.000 SQYD		
0055	SPSS632 - CONCRETE ISLAND	527.000 SQYD		
0056	SPSS633 - CONCRETE WALKS	535.000 SQYD		
0057	SS&634 - CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	2,802.000 LF		
0058	635 - ROADWAY CONSTRUCTION CONTROL	1.000 L.S.		
0059	SS&640 - MODIFYING DROP INLETS	7.000 EACH		
0060	SPSS641 - WHEELCHAIR RAMPS (TYPE 3)	143.000 SQYD		
0061	SPSS641 - WHEELCHAIR RAMPS (TYPE 4)	130.000 SQYD		
0062	SPSS641 - WHEELCHAIR RAMPS (TYPE 5)	103.000 SQYD		
0063	SPSS641 - WHEELCHAIR RAMPS (TYPE 6)	99.000 SQYD		
0064	SP - SURFACE-APPLIED DETECTABLE WARNING PANELS	831.000 SQFT		
0065	SP&701 - SYSTEM LOCAL CONTROLLER TS2- TYPE 2, E-NET (8 PHASES)	3.000 EACH		
0066	SP - TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	7.000 EACH		
0067	SP - ETHERNET SWITCH, T100 HARDENED (8- PORT)	3.000 EACH		
0068	SP - E-NET CABLE (EXTERIOR CAT 5E)	345.000 LF		
0069	SP - CELLULAR MODEM	3.000 EACH		
0070	SP - LOCAL RADIO (E-NET 5.8) WITH ANTENNA	3.000 EACH		
0071	SP - RECTANGULAR RAPID FLASHING BEACON (RRFB)	3.000 EACH		
0072	SP - RECTANGULAR RAPID FLASHING BEACON (RRFB) - AC	14.000 EACH		
0073	SP - LED BLANK OUT SIGN	4.000 EACH		

Arkansas Department of Transportation
Schedule of Items

State Job No.: 061922

Date Estimated: 9/4/2026

Job Name: HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

Date Revised: 10/1/2026

Federal Aid Project: VRU-9210(58) & HSIP-9210(58)

Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
0074	SP&706 - TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	15.000 EACH		
0075	SP&707 - CENTRAL CONTROL UNIT	10.000 EACH		
0076	SP&707 - POLE MOUNTED ASSEMBLY	67.000 EACH		
0077	SP - PEDESTRIAN SIGNAL HEAD RELOCATION	9.000 EACH		
0078	SP&707 - COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	22.000 EACH		
0079	SP - EMBEDDED LED PEDESTRIAN ACTIVATED CROSSWALK SIGN	6.000 EACH		
0080	SP - PASSIVE PEDESTRIAN DETECTION SYSTEM	2.000 EACH		
0081	SP - IN-ROAD LIGHTING SYSTEM	1.000 EACH		
0082	708 - TRAFFIC SIGNAL CABLE (5C/12 A.W.G.)	12,675.000 LF		
0083	708 - TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	9,420.000 LF		
0084	708 - TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	1,170.000 LF		
0085	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	8,120.000 LF		
0086	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	750.000 LF		
0087	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	215.000 LF		
0088	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/8 A.W.G.)	1,550.000 LF		
0089	SP - ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G.)	1,890.000 LF		
0090	SP - ELECTRICAL CONDUCTORS FOR LUMINAIRES	840.000 LF		
0091	709 - GALVANIZED STEEL CONDUIT (2")	300.000 LF		
0092	710 - NON-METALLIC CONDUIT (2")	1,850.000 LF		
0093	710 - NON-METALLIC CONDUIT (3")	4,075.000 LF		
0094	SS&711 - CONCRETE PULL BOX (TYPE 2)	27.000 EACH		
0095	SS&711 - CONCRETE PULL BOX (TYPE 3)	1.000 EACH		
0096	SS&711 - CONCRETE PULL BOX (TYPE 2 HD)	33.000 EACH		
0097	SS&711 - CONCRETE PULL BOX (TYPE 3 HD)	5.000 EACH		
0098	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (18')	1.000 EACH		

Arkansas Department of Transportation
Schedule of Items

State Job No.: 061922

Date Estimated: 9/4/2026

Job Name: HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

Date Revised: 10/1/2026

Federal Aid Project: VRU-9210(58) & HSIP-9210(58)

Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
0099	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')	1.000 EACH		
0100	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32')	1.000 EACH		
0101	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1.000 EACH		
0102	SS&714 - TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1.000 EACH		
0103	SP - LED LUMINAIRE ASSEMBLY	3.000 EACH		
0104	SS&715 - TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	50.000 EACH		
0105	SP - SERVICE POINT ASSEMBLY (6 CIRCUITS)	3.000 EACH		
0106	SP - PEDESTAL TYPE SERVICE POINT ASSEMBLY (6 CIRCUITS)	5.000 EACH		
0107	SP - REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.000 L.S.		
0108	718 - REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	270.000 LF		
0109	718 - REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	570.000 LF		
0110	719 - THERMOPLASTIC PAVEMENT MARKING WHITE (6")	815.000 LF		
0111	719 - THERMOPLASTIC PAVEMENT MARKING WHITE (8")	195.000 LF		
0112	719 - THERMOPLASTIC PAVEMENT MARKING WHITE (12")	162.000 LF		
0113	719 - THERMOPLASTIC PAVEMENT MARKING WHITE (24")	4,795.000 LF		
0114	719 - THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	755.000 LF		
0115	719 - THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	220.000 LF		
0116	SP - PREFORMED THERMOPLASTIC PAVEMENT MARKING SYSTEM	72.000 SQYD		
0117	SS&726 - STANDARD SIGN	211.000 SQFT		
0118	SS&729 - CHANNEL POST SIGN SUPPORT (TYPE U-1)	18.000 EACH		
0119	SS&729 - CHANNEL POST SIGN SUPPORT (TYPE U-2)	2.000 EACH		

Arkansas Department of Transportation
Schedule of Items

State Job No.: 061922

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Job Name: HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

Date Revised: 10/1/2026

Federal Aid Project: VRU-9210(58) & HSIP-9210(58)

Line Number	Item Code and Description	Estimated Quantity	Unit Bid Price	Price Extension
0120	SP - VIDEO DETECTOR ROTATION	13.000 EACH		
0121	SP&733 - 360-DEGREE CAMERA	2.000 EACH		
0122	733 - VIDEO CABLE	815.000 LF		
0123	SP&733 - VIDEO CABLE (EXTERIOR CAT 5E)	280.000 LF		
0124	SP - LED ROADWAY ILLUMINATION POLE (17,714 LUMENS, COBRA HEAD, T-BASE, 20')	3.000 EACH		
0125	SP - LED ROADWAY ILLUMINATION POLE (16,800 LUMENS, COBRA HEAD, T-BASE, 30')	2.000 EACH		
0126	SP - LED ROADWAY ILLUMINATION POLE (17,714 LUMENS, COBRA HEAD, T-BASE, 30')	7.000 EACH		
Section 01 Total:				
Subtotal:				
0127	601 - MOBILIZATION (UNIT BID AMOUNT MAY NOT EXCEED 5% OF SUBTOTAL)	1.000 L.S.		
Bid Total:				

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENT TO PROPOSAL
ANTI-COLLUSION AND DEBARMENT CERTIFICATION

**FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS
BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.**

As a condition precedent to the acceptance of the bidding document for this project, the bidder shall file this Affidavit executed by, or on behalf of the person, firm, association, or corporation submitting the bid. The original of this Affidavit shall be filed with the Arkansas Department of Transportation **at the time proposals are submitted.**

A F F I D A V I T

I hereby certify, under penalty of perjury under the laws of the United States and/or the State of Arkansas, that the bidder listed below has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid for this project, is not presently barred from bidding in any other jurisdiction as a result of any collusion or any other action in restraint of free competition, and that the foregoing is true and correct.

Further, that except as noted below, the bidder, or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federal funds:

- a. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State, or Local agency;
- b. has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State, or Local agency within the past 3 years;
- c. does not have a proposed debarment pending; and
- d. has not been indicted, convicted, or had an adverse civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENT TO PROPOSAL
ANTI-COLLUSION AND DEBARMENT CERTIFICATION

**FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS
BID NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.**

EXCEPTIONS:

APPLIED TO	INITIATING AGENCY	DATES OF ACTION

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

Job No.	
	(Name of Bidder)
F.A.P. No.	
	(Signature)
(Date Executed)	(Title of Person Signing)

The following Notary Public certification is **OPTIONAL** and may or may not be completed at the contractor's discretion.

State of _____)
County of _____)ss.

_____, being duly sworn, deposes and says that he is

_____ of _____
(Title) (Name of Bidder)

and that the above statements are true and correct.

Subscribed and Sworn to before me this _____ day of _____, 20____.
My commission expires: _____.

(NOTARY SEAL)

(Notary Public)



SUPPLEMENT TO THE PROPOSAL CERTIFICATION FOR BOYCOTT AND ILLEGAL IMMIGRANT RESTRICTIONS

Pursuant to Arkansas law, a vendor must submit the below certifications prior to entering into a contract with a public entity for an amount as designated by the applicable laws.

- Israel Boycott Restriction:** For contracts valued at \$1,000 or greater.
A public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in a boycott of Israel. If at any time after signing this certification the contractor decides to engage in a boycott of Israel, the contractor must notify the contracting public entity in writing. See Arkansas Code Annotated § 25-1-503.
- Illegal Immigrant Restriction:** For contracts exceeding \$25,000.
No state agency may enter into or renew a public contract for services with a contractor who employs or contracts with an illegal immigrant. A contractor shall certify that it does not employ, or contract with, illegal immigrants. See Arkansas Code Annotated § 19-11-105.
- Energy, Fossil Fuel, Firearms, and Ammunition Industries Boycott Restriction:** For contracts valued at, or exceeding, \$75,000.
A public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of an Energy, Fossil Fuel, Firearms, or Ammunition Industry. If a company does boycott any of these industries, see Arkansas Code Annotated § 25-1-1102.
- Scrutinized Company Restriction:** Required with bid or proposal submission.
A state agency shall not contract with a Scrutinized Company or a company that employs a Scrutinized Company as a subcontractor. A Scrutinized Company is a company owned in whole or with a majority ownership by the government of the People's Republic of China. A state agency shall require a company that submits a bid or proposal for a contract to certify that it is not a Scrutinized Company and does not employ a Scrutinized Company as a subcontractor. See Arkansas Code Annotated § 25-1-1203.

The bidder hereby agrees and certifies that it does not, and shall not for the remaining aggregate term of the contract, participate in the activities checked below:

- ☐ Do not boycott Israel.
- ☐ Do not employ illegal immigrants.
- ☐ Do not boycott Energy, Fossil Fuel, Firearms, or Ammunition Industries.
- ☐ Do not employ a Scrutinized Company as a subcontractor.

Job No.	
F.A.P. No.	
Name of Bidder	

Bidder Signature

Date

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENT TO PROPOSAL
CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective contractor certifies, by signing and submitting this proposal, to the best of his or her knowledge and belief that:

1. No Federal appropriated funds have been paid or will be paid, by or on his or her behalf, 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 any 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.
2. 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-Aid contract, the prospective contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions. (Available from Arkansas Department of Transportation, Program Management Division.)

This Certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. This Certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code.

During the period of performance of the contract, the contractor and all lower tier subcontractors must file a Form-LLL at the end of each calendar year quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any previously filed disclosure form. 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 failure.

The prospective contractor also agrees by submitting his or her proposal that he or she shall require that the language of this Certification be included in all lower tier subcontracts which exceed \$100,000 and that all such subcontractors shall certify and disclose accordingly.

ARKANSAS DEPARTMENT OF TRANSPORTATION
SUPPLEMENT TO PROPOSAL
C E R T I F I C A T I O N

THIS CERTIFICATION SHALL BE COMPLETED BY THE BIDDER
AS PART OF THIS PROPOSAL

The bidder ____, proposed subcontractor ____, hereby certifies that he has ____, has not ____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has ____, has not ____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Currently, Standard Form 100 [EEO-1] is the only report required by the Executive Orders or their implementing regulations)

Job No. _____ (Company) _____

F.A.P. No. _____ By: _____

Date _____ (Title) _____

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

ARKANSAS DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO PROPOSAL

USE OF FOREIGN MADE UNMANNED AIRCRAFT SYSTEMS

In accordance with Office of Management and Budgets Memo M-26-02 and the American Security Drone Act, all contractors, subcontractors, or consultants utilizing a unmanned aircraft system (UAS) aircraft, flight controller, camera, or ground control station supplied by a manufacturer that is based in, or subject to the control of, a foreign adversary country, specifically the People's Republic of China, are directed to cease using the systems for activities associated with the contract pay items of Roadway Construction Control or Bridge Construction Control on federal aid projects.

Security risks have been found to exist on data collected by foreign manufactured drones and the federal government has issued restrictions on their use on federally funded projects. The use of foreign made drones may continue for applications not directly paid for by the Department, such as project update overflights, promotional or recruiting purposes, etc., but the Department strongly encourages that the overall use of foreign manufactured UAS be suspended in all contractor operations.

USE OF FOREIGN MADE UNMANNED AIRCRAFT SYSTEMS

As an authorized representative of this company, I hereby certify that any unmanned aircraft systems to be used or actually used on this federal aid project comply with the above referenced restrictions.

Job No.	_____	_____
		(Company)
F.A.P. No.	_____	By: _____
Date	_____	_____
		(Title)

ARKANSAS DEPARTMENT OF TRANSPORTATION

BIDDERS LIST

JOB NUMBER 061922 LETTING DATE November 4, 2026

JOB NAME HWYS. 7 & 70B PED. IMPVTS. (GARLAND CO.) (S)

CONTRACTOR _____

➔ **ENTER THE WORK CODES TO BE PERFORMED BY THE PRIME CONTRACTOR**

The Department is required by 49 CFR 26.11, to create and maintain a master bidder's list of all firms attempting to participate on federally assisted projects. The Contractor shall provide the names and addresses of all subcontractors, truckers or material suppliers that bid or provided quotes on any item on the project, regardless of whether the quotes were used in preparing the proposal or not. Place an X in the box following the firm's name if DBE Contractor. Denote the firm's and annual gross receipts by checking the appropriate box. The general type of work to be performed should be indicated using the following codes; (01) removal and disposal items (including clearing and grubbing), (02) earthwork (including drainage items), (03) hauling, (04) paving (PCCP or ACHM), (05) miscellaneous concrete, (06) traffic control, (07) erosion control, (08) signals/electrical, (09) structures (includes steel suppliers), (10) material (aggregate) supplier (11) miscellaneous *items should be shown*. See <https://www.census.gov/naics/> for the NAICS codes to enter in the last column. Please contact the Department's Civil Rights Division at (501) 569-2297 with any questions.

Firm Name Address/Phone	DBE	Age of Firm	Annual Gross Receipts	Type of Work (Enter Code)	NAICS code (Enter Code)
		☐ Less than 1 year ☐ 1- 3 years ☐ 4-7 years ☐ 8-10 years ☐ More than 10 years	☐ Less than \$1 million ☐ \$1-3 million ☐ \$3-6 million ☐ \$6-10 million ☐ Greater than \$10 million		
		☐ Less than 1 year ☐ 1- 3 years ☐ 4-7 years ☐ 8-10 years ☐ More than 10 years	☐ Less than \$1 million ☐ \$1-3 million ☐ \$3-6 million ☐ \$6-10 million ☐ Greater than \$10 million		
		☐ Less than 1 year ☐ 1- 3 years ☐ 4-7 years ☐ 8-10 years ☐ More than 10 years	☐ Less than \$1 million ☐ \$1-3 million ☐ \$3-6 million ☐ \$6-10 million ☐ Greater than \$10 million		
		☐ Less than 1 year ☐ 1- 3 years ☐ 4-7 years ☐ 8-10 years ☐ More than 10 years	☐ Less than \$1 million ☐ \$1-3 million ☐ \$3-6 million ☐ \$6-10 million ☐ Greater than \$10 million		
		☐ Less than 1 year ☐ 1- 3 years ☐ 4-7 years ☐ 8-10 years ☐ More than 10 years	☐ Less than \$1 million ☐ \$1-3 million ☐ \$3-6 million ☐ \$6-10 million ☐ Greater than \$10 million		