

ARIZONA DEPARTMENT OF TRANSPORTATION



ADVERTISEMENT FOR BIDS SPECIAL PROVISIONS BIDDERS DOCUMENTS

SUBMITTED BY:

(Company or Firm Name)

(Mailing Address)

(City)

(State)

(Zip Code)

(Street Address - If Different From Above)

(City)

(State)

(Zip Code)

Arizona Commercial License No. _____

License Classifications(s) _____

TRACS/Proj. No.:

191 GH 120 H832401C STP-191-B(203)T
BOWIE JCT. - SAFFORD HIGHWAY (US 191)
(Relation Street to Junction US 70)

Contracts and Specifications Section
1651 West Jackson, Room 121F
Phoenix, Arizona 85007-3217

NOTICE

TO ALL BIDDERS

Read carefully the complete ADVERTISEMENT FOR BIDS and SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS in the Specifications. Important information is given in both documents which affects the acceptance of your bid proposal. Failure to comply may result in rejection of your bid.

Bids are to be prepared with black ink or typed and any alterations, initials or signatures must be in black ink.

Unit prices must be shown for each item of work in the Bidding Schedule, as well as, the extended bid amount. This applies to all items, including lump sum items.

If goals are established for participation by Disadvantaged Business Enterprises (DBE's), please read carefully the portion of the special provisions which addressed this subject. It is advisable to contact ADOT's Business Engagement and Compliance Office for assistance, particularly when bidding infrequently or for the first time.

It is **NOT** advisable to mail bid proposals. Proposals received in Contracts and Specifications Services, 1651 W. Jackson, Room 121F, Phoenix, Arizona 85007, after the designated time for opening will not be accepted regardless of the reason for not being received on time.

IMPORTANT

PRIOR TO SUBMITTING YOUR BID, PRINT
COMPANY NAME, ADDRESS, CITY, STATE, AND ZIP
IN THE SPACE PROVIDED ON THE COVER OF
YOUR PROPOSAL. PLEASE ENSURE THAT THIS
DATA IS THE SAME AS SHOWN ON THE BIDDING
DOCUMENTS.

ARIZONA DEPARTMENT OF TRANSPORTATION

ADVERTISEMENT FOR BIDS

BID OPENING: Friday, August 19, 2016, at 11:00 A.M. (M.S.T.)

TRACS NO 191 GH 120 H832401C
PROJ NO STP-191-B(203)T
TERMINI BOWIE JCT. – SAFFORD HIGHWAY (US 191)
LOCATION RELATION STREET TO JUNCTION US 70

| | | | |
|-----------|------------------|-----------|----------|
| ROUTE NO. | MILEPOST | DISTRICT | ITEM NO. |
| US 191 | 120.32 to 121.05 | Southeast | 12016 |

The amount programmed for this contract is \$1,300,000. The location and description of the proposed work and the representative items and approximate quantities are as follows:

The proposed Intersection Improvement project is located in Graham County within the City of Safford starting at Relation Street (Milepost 120.32) and ending at the junction of US 70 (Milepost 121.05). The total length of the project is approximately 0.73 miles. The work consists of The work includes minor roadway excavation and embankments; concrete curb, gutter, sidewalk and sidewalk ramps; aggregate base; asphalt concrete pavement; drainage; relocating existing water and storm drain facilities, furnishing and installing signing and pavement markings; furnishing and installing traffic signals, and other related work.

| REPRESENTATIVE ITEMS | UNIT | QUANTITY |
|--|-------------|-----------------|
| Asphalt Concrete (Misc. Str) | TON | 353 |
| Asphalt Concrete Friction Course | TON | 631 |
| Warning, Marker, or Regulatory Sign Panel | SQ.FT. | 328 |
| Pole (Type Q) | EACH | 2 |
| Pole (Type R) | EACH | 2 |
| Mast Arm (Tapered) | EACH | 8 |
| Electrical Conduit (2-3")(Directional Drill) | L.FT. | 271 |
| Traffic Signal Face (Type F)(LED) | EACH | 10 |
| Loop Detector for Traffic Signals | EACH | 10 |
| Concrete Curb and Gutter | L.FT. | 2,147 |
| Concrete Sidewalk | SQ.FT. | 14,721 |
| Concrete Driveway | SQ.FT. | 9,596 |

The time allowed for the completion of the work included in this project will be 110 working days.

The Arizona Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252.42 U.S.C. §§ 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, **Disadvantaged Business Enterprises** will be afforded full and fair opportunity to submit bids in response to this invitation and will not be

discriminated against on the grounds of race, color, or national origin in consideration for an award.

The minimum contract-specified goal for participation by Disadvantaged Business Enterprises in the work, as a percentage of the total amount bid, shall be 5.87.

Project plans, special provisions, and proposal pamphlets may be purchased in paper format from Contracts and Specifications Section, 1651 W. Jackson, Room 121F, Phoenix, AZ 85007-3217, (602) 712-7221. The cost is \$35, payable at time of order by cash, check, or money order. Please indicate whether a bid proposal package or a subcontractor/supplier set is desired. An additional fee of \$5 will be charged for each set of Special Provisions requested which is not accompanied by the purchase of a related set of project plans. Checks should be made payable to the Arizona Department of Transportation. We cannot guarantee mail delivery. No refund will be made for plans or specifications returned.

Contract documents and other project documents are available as electronic files, at no charge, from the Contracts and Specifications website, pursuant to Subsection 102.02 of the specifications. The Contracts and Specifications Current Advertisements website is located at:

<http://www.azdot.gov/business/ContractsandSpecifications/CurrentAdvertisements>.

Documents should be available within one week following the advertisement for bids.

This project is eligible for electronic bidding.

To submit a valid bid, the bidder must (1) have prequalification from the Department as necessary for the project, and (2) be included on the project Plansholder List as a Prime. The Application for Contractor Prequalification shall be filed at least 15 calendar days prior to the bid opening date. The Application may be obtained from the Contracts and Specifications website.

This contract is subject to the provisions of Arizona Revised Statutes Section 42-5075 -- Prime contracting classification; exemptions; definitions.

No award will be made to any contractor who is not a duly licensed contractor in accordance with Arizona Revised Statutes 32-1101 through 32-1170.03.

All labor employed on this project shall be paid in accordance with the minimum wage rates shown in the General Wage Decision. These rates have been determined in accordance with the requirements of the law and issued by the Secretary of Labor for this project. The wage scale is on file in Contracts and Specifications Section and copies may be obtained at all reasonable times.

A proposal guaranty in the form of either a certified or a cashier's check made payable to the State Treasurer of Arizona for not less than ten percent of the amount of the bid or in the form of a surety (bid) bond for ten percent of the amount of the bid shall accompany the proposal.

Surety (bid) bonds will be accepted only on the form provided by the Department and only from corporate sureties authorized to do business in Arizona.

Proposal pamphlets in paper format shall be submitted only in the envelope provided by the Department to:

Arizona Department of Transportation
Infrastructure Delivery and Operations Division
Contracts and Specifications Section
1651 West Jackson Street, Room 121F
Phoenix, Arizona 85007-3217

Sealed bids will be received until the hour indicated and then publicly opened and read. No bids will be received after the time specified.

| | | |
|--------------------------|-------------|----------------|
| Engineering Specialist: | Sam Patton | (602) 712-8261 |
| Construction Supervisor: | Brian Jevan | (928) 432-4936 |

STEVE BEASLEY,
Manager
Contracts & Specifications

191 GH 120 H832401C
STP-191-B(203)T
PROJECT ADVERTISED ON: June 30, 2016

SPECIAL PROVISIONS

FOR

ARIZONA PROJECT

**191 GH 120 H832401C
STP-191-B(203)T**

BOWIE JCT. – SAFFORD HIGHWAY (US 191)

RELATION STREET TO JUNCTION US 70

INTERSECTION IMPROVEMENT

PROPOSED WORK:

The project is located in Graham County within the City of Safford starting at Relation Street (Milepost 120.32) and ending at the junction of US 70 (Milepost 121.05). The work consists of minor roadway excavation and embankments; concrete curb, gutter, sidewalk and sidewalk ramps; aggregate base; asphaltic concrete pavement; fire hydrant relocation; storm drain extension; signing and pavement markings; traffic signals, and other related work.

PROFESSIONAL ENGINEER SEALS:

This book of specifications and related contract documents represents the efforts of the following firms:

- (1) Michael Baker International
- (2) Alpha Engineering, Inc.

A representative of each firm has affixed his/her professional seal below, which attests that those portions of these specifications which relate to the subject areas, were prepared under his/her direction.



Michael Baker International
(Roadway, Traffic, Utility Adjustments),

Alpha Engineering, Inc.
(Drainage, Utility Relocation)

(SPC00FA, 02/22/16)

SPECIFICATIONS:

The work embraced herein shall be performed in accordance with the requirements of the following separate documents:

Arizona Department of Transportation, Standard Specifications for Road and Bridge Construction, Edition of 2008 (Pub. # 31-066),

Arizona Department of Transportation, Intermodal Transportation Division, Standard Drawings, listed in the project plans, and available on the Department's website,

Arizona Department of Transportation, Traffic Group, Manual of Approved Signs, available on the Department's website,

Arizona Department of Transportation, Traffic Group, Traffic Control Design Guidelines, Edition of 2010, available on the Department's website,

Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 edition and Arizona Supplement to the 2009 edition, dated January, 2012,

The Proposal Pamphlet and Non-bid Pamphlet which include the following documents:

These Special Provisions,

Appendix A – Subgrade Acceptance Chart

Appendix B - Arizona Eastern Railway Company Documents
“Sample”

List of Subcontractors, Suppliers, Service Providers and Manufacturers Bidding ADOT Contracts, dated 9/23/10,

Required Contract Provisions Federal-Aid Construction Contracts (Form FHWA 1273 Revised May 1, 2012),

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246), July 1, 1978, Revised November 3, 1980 and Revised April 15, 1981,

Title VI / Non-Discrimination Assurances,

Appendix A

Appendix E,

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), July 1, 1978, Revised November 3, 1980 and Revised April 15, 1981,

Equal Employment Opportunity Compliance Reports, Federal-Aid Projects, February 1, 1977, Revised July 1, 1978, Revised November 3, 1980, Revised April 15, 1981, Revised September 7, 1983, Revised October 15, 1998, Revised January 1, 2005, Revised August 1, 2005, and Revised March 1, 2015

Wage Determination Decision,

Bidding Schedule,

Included in the Proposal Pamphlet only:

Proposal,

Surety (Bid) Bond, 12-1303,

Certification With Regard to the Performance of Previous Contracts or Subcontracts Subject to the Equal Opportunity Clause and the Filing of Required Reports, Federal Aid Projects, April, 1969, Rev. July, 2003,

Certification With Respect to the Receipt of Addenda,

Affidavit Disadvantaged Business Enterprises,

BID SUBMISSION:

In submitting a bid, the holder of a Bid Proposal Pamphlet shall completely execute the following documents:

Proposal,

Bidding Schedule,

Surety (Bid) Bond, 12-1303,

Certification With Regard to the Performance of Previous Contracts or Subcontracts Subject to the Equal Opportunity Clause and the Filing of Required Reports, Federal Aid Projects, April, 1969, Rev. July, 2003, and

Certification With Respect to the Receipt of Addenda.

Affidavit Disadvantaged Business Enterprises.

PROPOSAL GUARANTY:

Each bidder is advised to satisfy itself as to the character and the amount of the proposal guaranty required in the Advertisement for Bids.

CONTRACT DOCUMENTS:

The bidder to whom an award is made will be required to execute a Performance Bond and a Payment Bond, each in 100 percent of the amount of the bid, an Insurance Certificate and the Contract Agreement.

A copy of these documents is not included in the Proposal Pamphlet which is furnished to prospective bidders; however, each bidder shall satisfy itself as to the requirements of each document.

The documents, approved by the Department of Transportation, Highways Division, are identified as follows:

Statutory Performance Bond, 12-1301, September, 1992

Statutory Payment Bond, 12-1302, September, 1992

Contract Agreement, 12-0912, August, 2000

Certificate of Insurance, 12-0100, June, 1998

A copy of each document may be obtained by making a request to Contracts and Specifications Services.

COPIES OF PROJECT DOCUMENTS:

Distribution of a limited number of plans and Special Provisions will be made to the successful low bidder, at no charge, following confirmation of bid prices and DBE submittal, if applicable. The distribution will be made on the following basis:

| Contract Size (Dollars) | Full Size Plans | 1/2 Size Plans | Bound Bid Books | Unbound Bid Books |
|------------------------------------|----------------------------|---------------------------|----------------------------|------------------------------|
| \$0 - \$20,000,000 | 2 | 10 | 5 | 10 |
| over \$20,000,000 | 5 | 20 | 5 | 20 |

These plans and Special Provisions will be set aside and designated for use by the low bidder along with an equal number held in reserve for the responsible District Office.

Any additional plans or Special Provisions that the low bidder may require beyond the above distribution will be available at the invoice cost of printing by ordering through the Engineer.

MATERIAL AND SITE INFORMATION:

Projects requiring materials, excavation, or site investigation may have additional information available concerning the material investigations of the project site and adjacent projects. This information, when available and applicable, may be examined in the Office of the Bridge Group-Geotechnical Section, located at 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740. The contractor may contact Bridge Group at (602) 712-7481 to schedule an appointment to examine the information. This information will not be attached to the contract documents. Copies of available information may be purchased by prospective bidders.

(EPRISE, 03/15/11)

DISADVANTAGED BUSINESS ENTERPRISES:

1.0 Policy:

The Arizona Department of Transportation (hereinafter the Department) has established a Disadvantaged Business Enterprise (DBE) program in accordance with the regulations of the U.S. Department of Transportation (USDOT), 49 CFR Part 26. The Department has received Federal financial assistance from the U.S. Department of Transportation and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of the Department to ensure that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in USDOT-assisted contracts. It is also the policy of the Department:

1. To ensure nondiscrimination in the award and administration of USDOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for USDOT-assisted contracts;
3. To ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are counted as DBEs;
5. To help remove barriers to the participation of DBEs in USDOT-assisted contracts; and
6. To assist in the development of firms that can compete successfully in the market place outside the DBE program.

2.0 Assurances of Non-Discrimination:

The contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, sex or national origin in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of 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 state deems appropriate. The contractor, subrecipient, or subcontractor shall ensure that all subcontract agreements contain this non-discrimination assurance.

3.0 Definitions:

(A) Disadvantaged Business Enterprise (DBE): a for-profit small business concern which meets both of the following requirements:

- (1) Is at least 51 percent owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly owned business, at least 51 percent of the stock is owned by one or more such individuals; and,
- (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

(B) Socially and Economically Disadvantaged Individuals: any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is:

- (1) Any individual who is found to be a socially and economically disadvantaged individual on a case-by-case basis.
- (2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - (ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (iii) "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
 - (iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - (v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;

(vi) "Women;"

(vii) Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA), at such time as the SBA designation becomes effective.

(C) Joint Venture: an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

(D) Non-DBE: any firm that is not a DBE.

(E) RACE-CONSCIOUS: a measure or program is one that is focused specifically on assisting only DBEs, including women-owned DBEs.

(F) RACE-NEUTRAL: a measure or program is one that is, or can be, used to assist all small businesses. For the purposes of this part, race-neutral includes gender-neutrality.

4.0 Working with DBEs:

The Department works with DBEs and assists them in their efforts to participate in the highway construction program. All bidders should contact the Civil Rights Office at the address shown below for assistance in their efforts to use DBEs in the construction program of the Department:

Arizona Department of Transportation
Civil Rights Office
1135 N. 22nd Avenue (second floor), Mail Drop 154A
Phoenix, AZ 85009
Phone (602) 712-7761
FAX (602) 712-8429

5.0 Applicability:

The Department has established an overall annual goal for DBE participation on Federal-aid contracts. The Department intends for the goal to be met with a combination of race conscious efforts and race neutral efforts. Race conscious participation occurs where the contractor uses a percentage of DBEs, as defined herein, to meet the contract-specified goal. Race neutral efforts are those that are, or can be, used to assist all small businesses or increase opportunities for all small businesses. The regulation, 49 CFR 26, defines race neutral as when a DBE wins a prime contract, is awarded a subcontract on a project without DBE goals, and is awarded a subcontract from a prime contractor that did not consider the firm's DBE status.

The contractor shall meet the goal specified herein with DBEs, or establish that it was unable to meet the goal despite making good faith efforts to do so. Prime contractors are encouraged to obtain DBE participation above and beyond any goals that may be set for this project.

The provisions are applicable to all bidders including DBE bidders.

6.0 Certification:

Certification as a DBE shall be predicated on:

- (1) The completion and execution of an application for certification as a "Disadvantaged Business Enterprise".
- (2) The submission of documents pertaining to the firm(s) as stated in the application(s), including but not limited to a statement of social disadvantage and a personal financial statement.
- (3) The submission of any additional information which the Department may require to determine the firm's eligibility to participate in the DBE program.
- (4) The information obtained during the on-site visits to the offices of the firm and to active job-sites.

Applications for certification may be filed with the Department at any time. Both hardcopy submission and online submission is available.

For hardcopy submissions, applications for certification are available at the Department's Civil Rights Office, 1135 N. 22nd Avenue (second floor), mail drop 154A, Phoenix, Arizona 85009, phone (602) 712-7761. Hardcopy applications may also be obtained through the internet at www.azdbe.org. Hardcopy applications must be filed through the Civil Rights Office at the above address.

For online submissions, the online application process may be accessed through the internet at www.azdbe.org.

DBE firms and firms seeking DBE certification shall cooperate fully with requests for information relevant to the certification process. Failure or refusal to provide such information is a ground for denial or removal of certification.

Arizona is a member of the AZ Unified Certification Program (AZUCP). Only DBE firms that are certified by the AZUCP are eligible for credit on ADOT projects. A list of DBE firms certified by AZUCP is available on the internet at www.azdbe.org. The list will indicate contact information and specialty for each DBE firm, and may be sorted in a variety of ways. However, ADOT does not guarantee the accuracy and/or completeness of this information, nor does ADOT represent that any licenses or registrations are appropriate for the work to be done.

The Department's certification is not a representation of qualifications and/or abilities. The contractor bears all risks that the firm may not be able to perform its work for any reason.

7.0 General:

Each contractor shall establish a program that will ensure nondiscrimination in the award and administration of contracts and subcontracts.

Each contractor shall also designate a full time employee who shall be responsible for the administration of the contractor's DBE program.

Agreements between the bidder and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders are prohibited.

8.0 DBE Subcontractor Payment Reporting:

The Department is required to collect data on DBE and non-DBE participation to report to FHWA on Federal-aid projects. The contractor is notified that such record keeping is required by the Department for tracking DBE participation.

The contractor shall submit a report on a monthly basis indicating the amounts earned by and paid to all DBEs and non-DBEs working on the project. In addition, the contractor shall require that all DBE and non-DBE subcontractors verify receipt of payment.

The contractor shall provide all such required information for the current month by the 5th of the following month. The required information shall be submitted electronically through the Department's web-based payment tracking system (<https://adot.dbesystem.com>).

9.0 Goals:

The minimum goal for participation by DBEs on this project is as follows:

5.87 Percent

The percentage of DBE participation shall be based on the total bid.

10.0 Crediting DBE Participation Toward Meeting Goals:

10.01 General Requirements:

Only the value of the work actually performed by the DBE can be credited toward DBE participation. Credit towards the contractor's DBE goal is given only after the DBE has been paid for the work performed.

The contractor bears the responsibility to determine whether the DBE possesses the proper contractor's license(s) to perform the work. If a DBE cannot complete its work due to failure to obtain or maintain its licensing, the contractor bears the responsibility to immediately request

approval to replace the DBE with another DBE and notify the Engineer and the Civil Rights Office.

The Department's certification is not a representation of qualifications and/or abilities. The contractor bears all risks that the DBE may not be able to perform its work for any reason.

A DBE may participate as a prime contractor, subcontractor, joint venture partner with either a prime contractor or a subcontractor, or as a vendor of materials or supplies. A DBE joint venture partner shall be responsible for a clearly defined portion of the work to be performed, in addition to meeting the requirements for ownership and control.

The dollar amount of work to be accomplished by DBEs, including partial amount of a lump sum or other similar item, shall be on the basis of subcontract, purchase order, hourly rate, rate per ton, etc., as agreed to between parties.

With the exception of bond premiums, all work must be attributed to specific bid items. Where work applies to several items, the DBE contracting arrangement must specify unit price and amount attributable to each bid item. DBE credit for any individual item of work performed by the DBE shall be the lesser of the amount to be paid to the DBE or the prime contractor's bid price. If the amount bid by the DBE on any item exceeds the prime contractor's bid amount, the prime contractor may not obtain credit by attributing the excess to other items.

Where more than one DBE is engaged to perform parts of an item (for example, supply and installation), the total amount payable to the DBEs will not be considered in excess of the prime contractor's bid amount for that item.

Bond premiums may be stated separately, so long as the arrangement between the prime contractor and the DBE provides for separate payment not to exceed the price charged by the bonding company.

DBE credit may be obtained only for specific work done for the project, supply of equipment specifically for physical work on the project, or supply of materials to be incorporated in the work. DBE credit will not be allowed for costs such as overhead items, capital expenditures (for example, purchase of equipment), and office items.

If a DBE performs part of an item (for example, installation of materials purchased by a Non-DBE), the DBE credit shall not exceed the lesser of (1) the DBE's contract or (2) the prime contractor's bid for the item, less a reasonable deduction for the portion performed by the Non-DBE.

When a DBE performs as a partner in a joint venture, only that portion of the total dollar value of the contract which is clearly and distinctly performed by the DBE's own forces can be credited toward the DBE goal.

The contractor may credit second-tier subcontracts issued to DBEs by non-DBE subcontractors. Any second-tier subcontract to a DBE used to meet the goal must meet the requirements of a first-tier DBE subcontract.

All DBE and non-DBE subcontracting activity must be reported by the contractor and counted toward participation. This includes lower-tier subcontracting regardless of whether or not the DBE is under contract with another DBE.

DBE prime contractors must meet the DBE participation goal or demonstrate good faith efforts. This is determined by counting the work the DBE has committed to performing with its own forces, as well as the work that it has committed to be performed by DBE subcontractors and DBE suppliers.

A prime contractor may credit the entire amount of that portion of a construction contract that is performed by the DBE's own forces. The cost of supplies and materials obtained by the DBE for the work of the contract can be included so long as that cost is reasonable. Leased equipment may also be included. No credit is permitted for supplies purchased or equipment leased from the prime contractor or its affiliate(s).

When a DBE subcontracts a part of the work of its contract to another firm, the value of the subcontract may be credited towards the DBE goal only if the DBE's subcontractor is itself a DBE and performs the work with its own forces. Work that a DBE subcontracts to a non-DBE firm does not count toward a DBE goal.

A prime contractor may credit the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a USDOT-assisted contract, provided the fees are reasonable and not excessive as compared with fees customarily allowed for similar services.

10.02 Police Officers:

DBE credit will not be permitted for procuring DPS officers. For projects on which officers from other agencies are supplied, DBE credit will be given only for the broker fees charged, and will not include amounts paid to the officers. The broker fees must be reasonable.

10.03 Commercially Useful Function:

As a prime contractor, a DBE shall perform a significant portion of the contract work with its own work force in accordance with normal industry practices and Subsection 108.01 - Subletting of Contract of the Standard Specifications.

A prime contractor can credit expenditures to a DBE subcontractor toward DBE goals only if the DBE performs a commercially useful function on the contract. A DBE performs a commercially useful function when it is responsible for execution of the work of a contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, the

Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

A DBE will not be considered to perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the Department will examine similar transactions, particularly those in which DBEs do not participate.

If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or if the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, the Department will presume that the DBE is not performing a commercially useful function.

When a DBE is presumed not to be performing a commercially useful function as provided above, the DBE may present evidence to rebut this presumption. Decisions on commercially useful function matters are subject to review by FHWA, but are not administratively appealable to U.S. DOT.

10.04 Trucking:

The Department will use the following factors in determining whether a DBE trucking company is performing a commercially useful function. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract on every day that credit is to be given for trucking.

The contractor will receive credit for the total value of transportation services provided by the DBE using trucks it owns, insures and operates, and using drivers it employs.

The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services.

The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees results in credit only for the fee or commission paid to the DBE as a result of the lease agreement.

Example: DBE Firm X uses two of its own trucks on contract. It leases two trucks from DBE Firm Y and six trucks from non-DBE firm Z. DBE credit would only be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. With respect to the other two trucks provided by Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks Firm X receives as a result of the lease with Firm Z.

10.05 Materials and Supplies:

The Department will credit expenditures with DBEs for material and supplies towards the DBE goal as follows. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies is credited. A manufacturer is defined as a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract, and of the general character described by the specifications.

If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies is credited. A DBE regular dealer is defined as a firm that owns, operates, or maintains a store or warehouse or other establishment in which the materials, supplies, articles, or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A firm may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, stone or asphalt without owning, operating, or maintaining a place of business, as provided above, if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement, and not on an ad-hoc or contract-by-contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph and the paragraph above.

With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, the Department will credit the entire amount of the fees or commissions charged by the DBE for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves may not be counted toward the DBE goal.

DBE credit for supplying paving grade asphalt and other asphalt products will only be permitted for standard industry hauling costs, and only if the DBE is owner or lessee of the equipment and trucks. Leases for trucks must be long term (extending for a fixed time period and not related to time for contract performance) and must include all attendant responsibilities such as insurance, titling, hazardous waste requirements, and payment of drivers.

11.0 Joint Checks:

11.01 Requirements:

A DBE subcontractor and a material supplier (or equipment supplier) may request permission for the use of joint checks for payments from the prime contractor to the DBE subcontractor and the supplier. Joint checks may be issued only if all the conditions in this subsection are met.

1. The DBE subcontractor must be independent from the prime contractor and the supplier, and must perform a commercially useful function. The DBE subcontractor must be responsible for negotiating the price of the material, determining quality and quantity, ordering the materials, installing (where applicable), and paying for the material. The DBE subcontractor may not be utilized as an extra participant in a transaction, contract, or project in order to obtain the appearance of DBE participation.
2. The use of joint checks will be allowed only if the prime contractor, DBE subcontractor, and material supplier establish that the use of joint checks in similar transactions is a commonly recognized business practice in the industry, particularly with respect to similar transactions in which DBE's do not participate.
3. A material or supply contract may not bear an excessive ratio relative to the DBE subcontractor's normal capacity.
4. There may not be any exclusive arrangement between one prime and one DBE in the use of joint checks that may bring into question whether the DBE is independent of the prime contractor.
5. Any arrangement for joint checks must be in writing, and for a specific term (for example, one year, or a specified number of months) that does not exceed a reasonable time to establish a suitable credit line with the supplier.
6. The prime contractor may act solely as the payer of the joint check, and may not have responsibility for establishing the terms of the agreement between the DBE subcontractor and the supplier.
7. The DBE must be responsible for receiving the check from the prime contractor and delivering the check to the supplier.
8. The prime contractor cannot require the DBE subcontractor to use a specific supplier, and the prime contractor may not participate in the negotiation of unit prices between the DBE subcontractor and the supplier.

11.02 Procedure and Compliance:

1. The Civil Rights Office must approve the agreement for the use of joint checks in writing.

2. After obtaining authorization for the use of joint checks, the prime contractor, the DBE, and the supplier must retain documentation to allow for efficient monitoring of the agreement.
3. Copies of canceled checks must be submitted with the payment information for the period in which the joint check was issued. Certificates of payment must indicate whether or not joint checks were used.
4. The prime contractor, DBE, and supplier each have an independent duty to report to the Department in the case of any change from the approved joint check arrangement.
5. Any failure to comply will be considered by the Department to be a material breach of this contract and will subject the prime contractor, DBE, and supplier to contract remedies and, in the case of serious violations, a potential for termination of the contract, reduction or loss of prequalification, debarment, or other remedies which may prevent future participation by the offending party.

12.0 Submission with Bids:

All bidders are required to certify in their bid proposal on the "Disadvantaged Business Enterprise Assurances" certificate either:

- (1) The established goal for DBE participation has been met and arrangements have been made at the time of bid with certified DBEs or
- (2) The bidder has been unable to meet the goal prior to the submission of the bid and has made good faith efforts to do so.

BIDS SUBMITTED WITH ALTERED, INCOMPLETE, OR UNSIGNED CERTIFICATES WILL BE CONSIDERED NON-RESPONSIVE.

Certifications on forms other than those furnished by the Department will be considered non-responsive.

13.0 Bidder Meeting DBE Goal:

13.01 General:

If the bidder indicates in the bid that it has met or exceeded the DBE goal, the DBE Intended Participation Affidavit, its attachments, and a written confirmation from each DBE that it is participating in the contract as provided on the affidavit, shall be submitted as follows:

- (1) The DBE Intended Participation Affidavit, its attachments, and the confirmations must be received by the Civil Rights Office no later than 4:00 P.M. on the fifth working day following the bid opening. Copies of this affidavit and the attachments are available from the Civil Rights Office, 1135 N. 22nd Avenue (second floor), mail drop 154A,

Phoenix, Arizona 85009, phone (602) 712-7761, or on the internet at http://www.azdot.gov/inside_adot/CRO/DBEP.asp. This affidavit and its attachments shall indicate that the bidder has met or exceeded the DBE goal if this was indicated on the submittal with the bid.

- (2) The affidavit and attachments must be accurate and complete in every detail and must be signed by an officer of the contractor(s).
- (3) The DBE Intended Participation affidavit must be submitted listing the DBEs used and the creditable amounts.
- (4) A separate DBE Intended Participation affidavit attachment must be submitted for each DBE used to meet the goal of the project. The bidder shall indicate each DBE's name, the bid items the DBE will perform, and proposed subcontract amount. All partial items must be explained. If not, the DBE will be considered to be responsible for the entire item.
- (5) A written confirmation from each DBE used to meet the goal indicating that it is participating in the contract, as provided on the affidavit, must also be submitted at this time.
- (6) A bidder must determine DBE credit in accordance with Section 10 above, entitled "Crediting DBE Participation Toward Meeting Goals." The affidavit will be reviewed by the Civil Rights Office.
- (7) Only those DBE firms certified by the Arizona Unified Certification Program (AZUCP) at the time of the bid opening will be considered. It shall be the bidder's responsibility to ascertain the certification status of designated DBEs.
- (8) The bidder bears the risk of late delivery by the postal service or a delivery service. Late-filed affidavits will not be accepted.

13.02 Failure to Comply:

If the apparent low bidder fails to submit the required information by the stated time and in the manner herein specified, or if the submitted information reveals a failure to meet the requirements of the specifications, the apparent low bidder shall be ineligible to receive award of the contract and the bid will be rejected. The proposal guarantee (bid bond) shall be forfeited if no submission is made or if the State Transportation Board finds the submission was made in bad faith.

14.0 Documented Good Faith Effort:

14.01 General:

If the apparent low bidder has stated in its bid proposal that it has been unable to meet the DBE goal, that bidder must demonstrate, through detailed and comprehensive

documentation, that good faith efforts have been made to solicit, assist, and use DBE firms to meet the DBE goal prior to the bid. The bidder cannot change its bid proposal after submission.

Failure to demonstrate good faith efforts to the satisfaction of ADOT will result in the rejection of the bid.

The apparent low bidder who cannot meet the DBE goal at the time bids are opened must submit its documentation of good faith effort to the Civil Rights Office. The bidder's documentation must be received by the Department's Civil Rights Office by 4:00 P.M. on the fifth working day after the bids are opened.

Bidders are encouraged to review Appendix A of 49 CFR Part 26.

In order to be awarded a contract on the basis of good faith efforts, a bidder must show that it took all necessary and reasonable steps to achieve the DBE goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful. The Department will consider the quality, quantity, and intensity of the different kinds of efforts the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to make if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE goal. Mere pro forma efforts are not sufficient good faith efforts to meet the DBE contract requirements.

The contractor shall, as a minimum, seek DBEs in the same geographic area in which it generally seeks subcontractors for a given project. If the contractor cannot meet the goals using DBEs from this geographic area, the contractor, as part of its effort to meet the goals, shall expand its search to a reasonably wider geographic area.

The following is a list of types of efforts a bidder must address when submitting good faith effort documentation.

- (1) Soliciting through all reasonable and available means (e.g., attendance at pre-bid meeting, advertising, written notices, and other means) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow-up initial solicitations.
- (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

- (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to the DBE subcontractors and suppliers, and to select those portions of work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided from the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform work.

A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. However, prime contractors are not required to accept higher quotes from DBEs if the price difference is excessive or unreasonable. Documentation, such as copies of all other bids or quotes, must be submitted.

- (5) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations or associations and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal.
- (6) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- (7) Making efforts to assist interested DBEs in obtaining necessary equipment supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

In determining whether a bidder has made good faith efforts, the Department will take into account the ability of other bidders to meet the DBE goal.

The bidder will not be considered to have made good faith efforts if the bidder failed to contact the ADOT Civil Rights Office prior to the letting, either in writing, by e-mail, or by telephone,

to inform the Civil Rights Office of the firm's difficulty in meeting the DBE goals on a given project, and to request assistance. If the bidder contacts the Civil Rights Office by telephone, the contact must be documented in a telephone log indicating the date and time of call, and name of the person to which he spoke. The telephone number for the Civil Rights Office is (602) 712-7761. The contact must be made in sufficient time to allow the Civil Rights Office to provide assistance.

The ADOT Civil Rights Office will analyze the submittal to determine if in fact good faith efforts have been demonstrated consistent with ADOT procedures and the Federal regulations, 49 CFR 26, Appendix A.

The bidder may appeal the determination of the Civil Rights Office to the State Engineer. That appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. The protest must be received by the State Engineer no later than seven calendar days after the decision of the Civil Rights Office. Copies of the protest shall be sent by the protestant to every bidder, at the same time the protest is submitted to the State Engineer. Any other interested party may submit a response to the appeal no later than seven calendar days after the appeal is requested. Responses from other interested parties must also be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. Any interested party submitting such response shall also provide a copy of its response to every bidder, at the same time the protest is submitted to the State Engineer. The State Engineer shall promptly consider any appeals under this subsection and notify all bidders of the State Engineer's findings and decision.

Any interested party may protest the State Engineer's decision to the Transportation Board, pursuant to the requirements of Subsection 103.10 of the Standard Specifications.

14.02 Failure to Comply:

If the apparent low bidder fails to submit the required information by the stated time and in the manner herein specified, or if the submitted information reveals a failure to meet the requirements of the specifications, the apparent low bidder shall be ineligible to receive award of the contract and the bid will be rejected. The proposal guarantee (bid bond) shall be forfeited if no submission is made or if the State Transportation Board finds the submission was made in bad faith.

15.0 Rejection of Low Bid:

If, for any reason, the bid of the apparent low bidder is rejected, there will be a new apparent low bidder. The Department will notify the new apparent low bidder, and this bidder shall submit its subsequent detailed submission as set forth in paragraph 12 or 13 above.

16.0 Time is of the Essence:

TIME IS OF THE ESSENCE IN RESPECT TO THE DBE PROVISIONS.

17.0 Contract Performance:

Contract items of work designated by the contractor to be awarded to DBEs shall be performed by the designated DBE or a Department-approved DBE substitute. DBE contract work items shall not be performed by the contractor, or a non-DBE subcontractor without prior approval by the Civil Rights Office. The DBE must perform a commercially useful function; that is, the DBE must manage, perform, and supervise a distinct element of work.

The Department reserves the right to inspect all records of the contractor and all records of the DBEs concerning this contract.

The contractor shall provide to the Engineer, at the pre-construction conference, copies of completed and signed subcontracts purchase orders, invoices, etc., with the appropriate DBEs.

Within five working days of the preconstruction conference, the contractor shall also provide electronic copies of signed subcontract agreements to the Civil Rights Office through the Department's web-based payment tracking system (<https://adot.dbesystem.com>). As part of this submittal, contractors shall be required to log into the system and enter the name, contact information, and subcontract amounts for all subcontractors and vendors performing on the project as verification that scopes of services and commitments made through the DBE Intended Participation Affidavits are being met.

Subcontract agreements shall include all required assurances, including FHWA Form 1273, and the prompt payment and return of retention requirements specified in Subsection 109.06(B) of the specifications. Each page of each required attachment must be dated and initialed by the DBE in order for the subcontract to be considered valid. Contractors executing agreements with subcontractors, DBE or non-DBE, that materially modify federal regulation and state statutes, or prompt payment and retention requirements, through subcontract terms and conditions will be found in breach of contract which may result in termination of the contract, or any other such remedy as the Engineer deems appropriate.

Use of a DBE named on the DBE Intended Participation Affidavit is a condition of award. Substitution will not be allowed without written evidence from the prime contractor and DBE that the DBE is unable or unwilling to perform. Contractors may not terminate a DBE subcontract for convenience, in whole or in part, except to the extent that the Department has eliminated items of work subcontracted to the DBE. All terminations, substitutions, and reductions in scope must be approved by the Civil Rights Office.

18.0 Non-Performance by DBEs:

In the event a DBE is unable or unwilling to fulfill its agreement with the contractor, the contractor will immediately notify the Engineer and provide all facts surrounding the matter. Such failure on the part of a DBE will not relieve the contractor of responsibility for meeting the DBE goal on the contract. The contractor shall immediately make reasonable good faith efforts to obtain another certified DBE to perform an equal or greater dollar value of work to the extent needed to meet the DBE goal. The substitute DBE's name, description of work,

and dollar value of work shall be submitted to the Engineer and the Department's Civil Rights Office. Approval of the Civil Rights Office must be obtained prior to the substitute DBE beginning work.

In the event a prime contractor is unable, after a substantial good faith effort, to obtain another certified DBE, the Department's Civil Rights Office may lower the DBE goal on the project. However, the Civil Rights Office must approve this in writing prior to a Non-DBE starting the work which had been subcontracted to the DBE.

19.0 Compliance:

The contractor's achievement of the goal is measured by actual payments made to the DBEs. The contractor shall submit at the completion of the project the "Certification of Payments to DBE Firms" affidavit for each DBE firm working on the project. This affidavit shall be signed by the prime contract and the relevant DBE, and submitted to the Civil Rights Office. At that time, a copy of each completed affidavit shall also be submitted to the Engineer.

Acceptance and final payment to the contractor, in accordance with Subsections 105.20 and 109.09, will not be made until all "Certification of Payments to DBE Firms" affidavits are received and deemed acceptable by the Engineer and the Civil Rights Office.

20.0 Sanctions:

If the Department determines that the contractor has failed to make sufficient reasonable efforts to meet contract DBE goals, or to otherwise carry out these DBE special provisions, such failure shall constitute a breach of contract and may result in termination of the contract, or any other such remedy as the Engineer deems appropriate.

If the Engineer determines that such failure is not cause to terminate the contract, an amount equal to the value of the DBE goal that was not obtained will be deducted from the payment due the contractor. However, if the failure is the first by the contractor, and the Engineer determines the failure was an unintentional error or oversight, the amount to be deducted may be reduced up to one-half (1/2) of the value of the unobtained DBE goal as determined by the Civil Rights Office. In addition to any other sanctions, willful failure of the contractor or a DBE to comply with this contract or with the Federal DBE regulations may result in disqualification from further contracting, subcontracting, or other participation in ADOT projects.

(MENTOR, 02/23/06)

MENTOR-PROTEGE PROGRAM

Description:

Purpose:

The Mentor-Protege program is an initiative to encourage and develop disadvantaged businesses in the highway construction industry. The program will permit contractors to provide certain types of assistance to certified Disadvantaged Business Enterprise (DBE) subcontractors on highway construction projects.

The program is intended to increase legitimate DBE activities and is not intended to diminish nor circumvent existing DBE rules or regulations. Abuse of this program may be used as the basis for actions against both categories of firms including suspension or debarment.

Policy:

It is the policy of ADOT that contractors and certified DBE subcontractors may engage in a Mentor-Protege agreement under certain conditions. Such an agreement must be mutually beneficial to both parties and ADOT in fulfilling requirements of 49 Code of Federal Regulations Part 23.

Definitions:

DBE: The definition, status, and requirements of DBE firms are defined by 49 CFR Part 23. Please also refer to the special provision entitled "Disadvantaged Business Enterprises".

Mentor: A designated contractor who oversees the development of a designated DBE subcontractor by training, counseling, assisting, and sponsoring the DBE firm in an ADOT approved Mentor-Protege Program.

Protege: An ADOT-certified DBE subcontractor who is guided by a mentor through training and specialized assistance to gain experience, develop expertise in highway construction, and attain general business growth in an approved Mentor-Protege program.

Mentor-Protege Development Plan: A detailed plan outlining a management agreement between a contractor (who agrees to serve as a mentor) and a DBE subcontractor (who agrees to serve as a protege).

Implementation:

Approval Process:

- (1) When a contractor and DBE agree to engage in a Mentor-Protege Development Plan Agreement, ADOT Civil Rights Office will be notified by either party for the purpose of (a) reviewing requirements of STAA, 49 CFR part 23, and Mentor-Protege program; (b) establishing timeline for processing Agreement; (c) preliminary review of Agreement objective(s) and duration; and (d) reporting requirements. (A copy of the suggested form of agreement is included in these special provisions).
- (2) A completed Mentor-Protege Development Plan will be submitted to ADOT within 30 days following the initial review. Approval of the Agreement by ADOT will be in two stages:
 - a) General approval of Agreement by ADOT within 15 working days following submission of Agreement.
 - b) Approval of working plan for the designated project where a Mentor-Protege Development Plan will be implemented.
- (3) Duration of a Mentor-Protege Development Plan may exceed that of a single project, not to exceed three years. Duration of a working plan may exceed that of a single project. However, the continued use of an existing working plan must be approved by the ADOT Civil Rights Office prior to beginning work on a new project.
- (4) The Mentor-Protege program is not intended to provide DBE firms with a means to avoid management and operational responsibilities. Mentors cannot be responsible for the management of DBE proteges. Under the program, all administrative functions must be performed by personnel responsible to or employed by protege. The protege must retain final decision making responsibilities.
- (5) Mentor and protege shall agree to an interview by ADOT Civil Rights Office during the development of the Mentor-Protege Development Plan.
- (6) Mentor and protege shall agree to evaluations by ADOT. The frequency and method will depend on the project.

Content of Mentor-Protege Development Plan:

A Mentor-Protege Development Plan Agreement shall address the following:

- (1) Areas of Assistance: Identify the specific areas in which the protege requires assistance.

- (2) Schedule of Assistance: Develop an Action Plan which defines the types and scope of assistance the mentor will provide to meet the protege's needs.
- (3) Responsibilities: Define the responsibilities of the mentor and the protege in each of the activities.
- (4) Benchmarks: Include measurable benchmarks to be reached by the protege at successive stages of the plan.
- (5) Evaluation: Provide formal evaluations of the protege's attainment of benchmarks. Evaluations must be made by both the mentor and the protege and reviewed by ADOT.
- (6) Duration: Specify the maximum time frame the development plan agreement can remain in effect not to exceed three years.
- (7) Assurances: Provide assurances that all agreements, oral and written, pertaining to the Mentor-Protege program do not improperly obtain the benefits of the DBE program.
- (8) Key Personnel: Identify mentor's representative(s) responsible for training and/or coordinating the assistance provided to the protege.
- (9) Fees: Identify any fees paid as a condition of the agreement.
- (10) Copies of agreements: Attach copies of all bonding, security, lease agreements, notes, contracts, etc., made for the duration of the Mentor-Protege Plan.

Type of Assistance:

The type of assistance provided by contractors may include, but not be limited to:

- (1) Financial:
 - a) Working Capital Secured by Time Demand Notes or Stocks. Proteges acquiring working capital through the issuance of stocks must maintain no less than 51 percent ownership to maintain DBE certification. Time demand notes may be used to secure working capital. However, any abusive use of recall features will be cause for terminating program. Where working capital is secured by stocks or demand notes, a third party such as a bank could receive progress payments for work accomplished by the protege, made out jointly to the agent and the protege and make payments, on behalf of the protege, to material suppliers or for Federal and State payroll taxes, etc. In no case can the day-to-day control of the firm be

relinquished by the disadvantaged owner as a requirement of the loan.

- b) Bonding. Mentors may bond the entire job and charge a pro-rata share of the cost to the protege. Mentors may bond the entire job and carry the protege by absorbing the cost of the bond. Arrangements of the bonding must be included in the Schedule of Assistance.

(2) Management Technical Assistance:

- a) Assist in conducting a Protege Self-Assessment by areas to be strengthened for long-range planning of the protege firm.
- b) Assist in developing business plan, loan packaging, and financial counseling.
- c) Assist the protege in setting up a cost accounting system and train the protege's personnel to assume full control.
- d) Provide training in plan interpretation, estimating, and materials supply function.
- e) Provide guidance in general project management and related areas to make the protege aware of techniques to improve productivity and competitiveness and broaden knowledge of industry practices.

(3) Operation:

- a) Equipment/Facilities Use. Equipment and facilities may be furnished by mentor, provided that separate lease agreements are made and control over the equipment and facilities are under the supervision of protege.
- b) Training of managers and specialists of the protege in state-of-the-art methods in the contracting industry.
- c) Mentors may provide personnel with specialized expertise for a specific purpose and duration as outlined in the Action Plan. Such personnel must be on the protege's payroll and under direct supervision of the protege. Long term, continual, or repetitive use by a protege of personnel primarily employed by the mentor will be construed as an attempt to artificially inflate DBE participation and may be cause for termination of the Mentor-Protege agreement and decertification of the DBE.

General Practice:

- (1) Agreements may not include exclusive arrangements which limit competition.
- (2) DBE firms shall have the latitude to quote bids to other contractors.
- (3) The contractor and the DBE involved in a Mentor Protege agreement must remain separate and independent business entities.
- (4) Middlemen or passive conduits which serve no commercially useful function, or subcontractors acting essentially as brokers are unacceptable.
- (5) Formal or informal agreements which limit control and management by DBE firms are unacceptable.
- (6) Part ownership in a DBE firm by a non-disadvantaged entity, including a mentor, is permitted by the regulations (49 CFR 23) and may be necessary to ensure adequate capital and technical guidance of the DBE participant. However, any financial investment by the mentor must not create a situation wherein the mentor may assume control over the DBE firm.

Modifications:

Modifications to the Mentor-Protege Development Plan shall be subject to the approval of ADOT.

Termination:

The Mentor-Protege Development Plan may be terminated by mutual consent by both parties with notice to ADOT. ADOT may terminate approval of the Plan upon determination that:

- (1) The protege firm no longer meets the eligibility standards for certification as a DBE.
- (2) Either party has failed or is unable to meet its obligations under the Development Plan.
- (3) The DBE is not progressing or is not likely to progress in accordance with the Development Plan.
- (4) The DBE has reached a satisfactory level of self-sufficiency to compete without special treatment provided in the Development Plan.

In the event a Mentor Protege Development Plan is terminated, the contractor will remain responsible for the DBE goals established in the project Special Provisions.

ARIZONA DEPARTMENT OF TRANSPORTATION

Mentor-Protege Development Plan Agreement

PART ONE: General Agreement

This agreement entered into this ____ day of _____, 20__, in the city of _____, Arizona, by and between _____ (hereafter known as Mentor), and _____ (hereafter known as Protege), in accordance with rules and regulations of the Arizona Department of Transportation (ADOT) Mentor-Protege program, and in accordance with the requirements for increased Disadvantaged Business Enterprises (DBE) participation in the Surface Transportation Act of 1982 (STAA) and Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA).

This agreement is intended to cover the general relationship between the parties to insure compliance with STAA, STURAA, and ADOT guidelines, and to implement all provisions set forth in the Mentor-Protege Development Plan.

PART TWO: Assurances

- 2.1 Both mentor and protege will remain separate and independent business entities. Protege shall have the latitude to quote bids to other contractors.
- 2.2 Protege is an ADOT-certified DBE firm.
- 2.3 The Mentor-Protege program is not intended to provide DBEs with means to avoid management and operational responsibilities.
- 2.4 All agreements, oral and written, pertaining to this Mentor-Protege Plan Agreement do not cause the protege to improperly obtain the benefits of the DBE program.

PART THREE: Content of Plan

Both parties will agree to content of the plan which will include but not be limited to:

- 3.1 Exhibit A: Areas of Assistance--(Areas identified by both parties as the basis for providing assistance by mentor to protege.)
- 3.2 Exhibit B: Schedule of Assistance-- An Action Plan developed by both parties defining the types and scope of assistance; responsibilities of mentor and protege in each activity; resources to be utilized; and measurable benchmarks to be reached by protege.
- 3.3 Exhibit C: Key Personnel-- A list of mentor and protege representatives responsible for training and/or coordinating the Plan.

3.4 Exhibit D: Lease/Agreement(s)--Full copies of all lease agreements for equipment and facilities; financial agreements; and other agreements between the two parties and/or by third parties.

PART FOUR: Monitoring

4.1 Both parties hereby specifically consent to the monitoring of this contract by the appropriate federal and state officials or their agents, and to agree to cooperate with such agencies.

4.2 Both mentor and protege agree to evaluate the progress of the Plan at scheduled intervals with the results reviewed by ADOT.

PART FIVE: Duration

The duration of the Plan will coincide with the length of the project for which the plan was intended. Extended agreement plans shall not exceed a period of three years.

PART SIX: Modifications

None of these agreements may be modified except in writing signed by both parties and approved by ADOT.

PART SEVEN: Termination

The mentor or protege retains the right to terminate this agreement by showing cause in a written notice to all parties and ADOT. ADOT may terminate the approval of this agreement by showing cause in a written notice to mentor and protege. In the event of termination of agreement or termination of ADOT approval, the contractor will remain responsible for the DBE goals established in the project Special Provisions.

PART EIGHT: Privacy Act Provision

The information contained herein and on attachments is used for the ADOT Mentor-Protege Program only, and may not be disclosed without the express permission of all parties involved in this agreement.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed by their duly authorized officers on the day and year first above written.

| | | |
|-------|--|-----------|
| _____ | _____ | _____ |
| Date | Mentor Firm (Authorized Official Name) | Signature |

| | | |
|-------|---|-----------|
| _____ | _____ | _____ |
| Date | Protege Firm (Authorized Official Name) | Signature |

April 1987

GENERAL REQUIREMENTS:

BIDDERS LIST REQUIREMENT:

Bidders shall submit a list of the names of all subcontractors, service providers, manufacturers and suppliers submitting bids, proposals or quotes for this project on the "List of Subcontractors, Suppliers, Service Providers and Manufacturers Bidding ADOT Contracts" form. The form is appended to the Special Provisions.

All bidders must submit the required form, whether or not the bid is the low bid.

Bidders must submit this form with all requested information to the ADOT Civil Rights Office no later than 4:00 p.m. on the fifth working day after bids are opened. Faxed copies are acceptable. The fax number is (602) 712-8429.

The address for the Department's Civil Rights Office is 1135 N. 22nd Avenue (second floor), Phoenix, Arizona 85009.

IF THE BIDDER FAILS TO SUBMIT THE REQUIRED INFORMATION BY THE STATED TIME AND IN THE MANNER HEREIN, THE BIDDER SHALL BE INELIGIBLE FOR AWARD OF THE CONTRACT.

The form must be complete and must include all the names and contact information for all subcontractors, service providers, manufacturers and suppliers that submitted bids, proposals, or quotes on this project regardless of the bidder's intentions to use the sub bid. Information on second tier bids is not required.

Title 49 of the Code of Federal Regulations, Part 26.11, required ADOT to create and maintain a bidders list. The purpose of this list is to develop the list of the DBE and non-DBE firms seeking to work on Federal-aid highway construction contracts. This information is then used to set ADOT's overall DBE goal. The regulation requires the following information be collected: the firm's name; the firm's address; the firm's status as a DBE or non-DBE; the age of the firm; and the annual gross receipts of the firm.

The Civil Rights Office will contact listed firms to obtain information from them that will be used in the agency's annual DBE goal setting process. This information will be maintained as confidential to the extent allowed by federal and state law.

AVAILABILITY OF DOCUMENTS:

Project documents will be available as shown below:

| Documents | Paper Format | Electronic Format |
|---|---------------------|--------------------------|
| Project Plans | X | X |
| Special Provisions | X | X |
| Proposal Pamphlet | X | X |
| Additional Documents (if available) | | |
| Cross Sections | | X |
| Earthwork Quantity Sheets | | X |
| Other Reports | | X |
| Existing Ground Digital Terrain Model (DTM) | | X |
| Design Digital Terrain Model (DTM) | | X |

Documents in Electronic Format:

Project documents in electronic format are available on the Contracts and Specifications website.

In the case of any conflict or discrepancy between the project plans, specifications, or proposal pamphlet in paper and electronic format, the paper document shall govern.

The project plans are provided in PDF format. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF plans with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the plans.

The special provisions and proposal pamphlet are provided in PDF format. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF documents with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the special provisions and proposal pamphlet.

The cross sections, earthwork quantity sheets, and other reports, if applicable, are provided only in PDF format. They are provided for information purposes and contractor convenience only. They are not part of the contract documents. The contractor's use of the information in the cross sections, earthwork quantity sheets, and other reports is at the contractor's sole risk. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF documents with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the documents.

The existing ground DTM and the design DTM, if applicable, are provided as DGN files. They are provided for information purposes and contractor convenience only. The DTMs are not part of the contract documents. The contractor's use of the information in the DTMs is at the contractor's sole risk. The Department makes no representation or warranties as to the compatibility, usability, or readability of the DTMs with any system, software, hardware, or application package other than that on which the files were originally prepared. The version of Microstation used to save the DTMs is indicated at <http://www.azdot.gov/business/engineering-and-construction/CADD>.

The Department is providing the electronic project files to bidders for informational purposes in conjunction with work or services to be provided to the Department under this project. Any use of the electronic files for any purposes other than for this project is prohibited.

CARGO PREFERENCE ACT:

1.0 Description

The Federal Highway Administration (FHWA) in partnership with the Federal Maritime Administration has mandated the implementation of 46 CFR 381 making the requirements of the Cargo Preference Act (CPA) applicable to the Federal Aid Highway Program.

The requirements apply to items transported by ocean vessel.

The requirements of 46 CFR 381 apply to materials or equipment acquired for a specific federal-aid highway project. In general, the requirements are not applicable to goods or materials that come from inventories independent of FHWA-funded contracts.

Information related to the CPA is presented in "Cargo Preference Requirements – Questions and Answers" available from the FHWA at <https://www.fhwa.dot.gov/construction/cqit/cargo/qa.cfm>.

2.0 Contract Requirements

The contractor shall comply with the requirements of the Cargo Preference Act 46 CFR 381.7(a)-(b). By executing a construction contract for this project, the contractor 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.
- (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 the paragraph above to both the Engineer and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

- (3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

PUBLIC INVOLVEMENT:

All public involvement for this project will be conducted by ADOT Communications, including but not limited to a Community Relations Project Manager and a Senior Community Relations Officer. The contractor will assist in the public outreach program throughout construction.

The contractor will provide prior notice (at least three days and preferably a week when possible) of any upcoming traffic impacts to the ADOT Communications team so that timely traffic alerts can be effectively provided to the public. Any full roadway closures will be communicated at least two weeks in advance to the ADOT Communications team.

Traffic restrictions will not be permitted on national holidays and after 12:00 p.m. noon on the Friday prior to an extended holiday weekend to accommodate increased holiday regional travelers.

Once traffic alerts are distributed to the public, changes will not be incurred in the construction plan, except when weather, material availability or equipment issues require changes.

The contractor shall designate an individual on the contractor's staff to act as the community relations contractor representative. This individual shall attend or contribute the following program elements unless otherwise approved by the Engineer:

- (A) Provide input and review on public outreach materials including, but not limited to, newsletters, fliers, door hangers, e-newsletters, advertising, and news releases;

and

- (B) Weekly updates to the public involvement consortium.

No measurement or direct payment will be made for the contractor's participation in public involvement activities as noted above, the cost being considered included in the prices of the contract items.

VEHICLE PARKING:

Parking of construction vehicles, equipment and personal vehicles belonging to the contractor, subcontractors, or their employees will not be permitted within thirty feet of the pavement along the US 191 and US 70 roadways and City crossroads or on private property outside the ADOT right-of-way unless approved by the Engineer. Parking of construction vehicles and equipment belonging to the contractor's staff will not be permitted in any work zone unless approved by the Engineer. If the contractor vehicle parking or equipment storage

damages any areas, the area shall be repaired by the contractor at no additional cost to the Department.

ADDITIONAL STANDARDS:

In addition to the ADOT Standard Specifications for Road and Bridge Construction (2008), and where specifically referenced by the Plans and these Special Provisions, this project shall be constructed per the requirements of the noted editions of the following documents:

The project plans and these Special Provisions reference certain standard specifications and standard details promulgated by City of Safford, Maricopa Association of Governments Standards (MAG), and City of Tucson Water Standards. When the noted Standard Specifications are specified for certain items of work, the description, materials, construction requirements, methods of measurement, and basis of payment for those items will conform to the requirements of the referenced Standard Specifications and Standard Details except as may be superseded or supplemented by these Special Provisions.

The following is a list of Non-ADOT Standard Manuals and Specifications where they can be obtained. These manuals will be required where Non-ADOT Standards are referenced throughout the project plans. Where a website is provided, the documents can be downloaded.

City of Safford Construction Standards for Public Works and Utilities within Subdivisions and Rights of Way:

City of Safford standards and details are available on the internet at:

<http://www.cityofsafford.us/>

Maricopa Association of Governments Standards (MAG) Uniform Standard Specifications and Details for Public Works Construction and Standard Details:

MAG standards and details are available on the Internet at:

<http://www.azmag.gov>

City of Tucson Water Standard Specifications and Details

City of Tucson Water standards and details are available on the Internet at:

<http://cms3.tucsonaz.gov/water/spec-book>

ENVIRONMENTAL MITIGATION MEASURES:

The project environmental commitments are not subject to change without prior written approval from ADOT Environmental Planning.

- An approved contractor shall develop and implement a Lead-Based Paint Removal and Abatement Plan for the removal of the lead-based paint, Toxicity Characteristic Leaching Procedure testing of the generated waste stream, and proper disposal of the waste stream derived from the removal of the red curb paint at the northeast corner of the railroad crossing and US 191. The contractor shall follow all applicable federal, state, and local codes and regulations, including Arizona Department of Transportation Standard Specifications for Road and Bridge Construction (2008 Edition), related to the treatment and handling of lead-based paint.
- The contractor shall submit a Lead-Based Paint Removal and Abatement Plan for the removal of red curb paint at the northeast corner of the railroad crossing and US 191 to the Engineer and the Arizona Department of Transportation Environmental Planning Group hazardous materials coordinator (602.920.3882 or 602.712.7767) for review and approval at least 10 (ten) working days prior to red paint removal activities at the northeast corner of the railroad crossing and US 191.
- No disturbance of the red curb paint at the northeast corner of the railroad crossing and US 191 shall occur until the Lead-Based Paint Removal and Abatement Plan is approved by the Arizona Department of Transportation Environmental Planning Group hazardous materials coordinator and implemented.
- Visible fugitive dust emissions from paint removal shall be controlled through wet or dry (e.g., vacuum) means during the removal process. If the liquid waste stream generated by a water-blasting obliteration method passes the Toxicity Characteristic Leaching Process analysis, it may be used as a dust palliative or for compaction on the project. If the water is not used on the project, it shall be properly disposed of in accordance with all applicable federal, state, and local regulations.
- The contractor shall notify his employees prior to any disturbance where lead is present in the paint below the 0.5 percent US Department of Housing and Urban Development/US Environmental Protection Agency action levels, but above the US Department of Labor Occupational Safety and Health Administration detection level. As part of the notification, the contractor shall make the US Department of Labor Occupational Safety and Health Administration publication number 3142-12R 2004 lead in Construction (<http://www.osha.gov/Publications/osha3142.pdf>) available to workers.
- For milling activities, the roadway surface preceding the milling machine shall be kept sufficiently wet so as to prevent the generation of any visible fugitive dust particles, but not so wet as to cause excess runoff from the roadway surface onto the roadway shoulder.
- If suspected hazardous materials are encountered during construction, work shall cease at that location and the Engineer will be notified. The Engineer will contact the Arizona Department of Transportation Environmental Planning Group hazardous materials coordinator (602.920.3882 or 602.712.7767) immediately, and make arrangements for assessment, treatment and disposal of those materials.

- If previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location notify the Engineer and shall take all reasonable steps to secure the preservation of those resources. The Engineer will contact the Arizona Department of Transportation Environmental Planning Group, Historic Preservation Team, (602.712.8636 or 602.112.7767) immediately, and make arrangements for proper treatment of those resources.
- To prevent the introduction of invasive species seeds, all hauling and construction equipment shall be washed at the contractor's storage facility. All vehicles and equipment shall be free of all attached soil, mud, vegetation and other debris.
- To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site.
- All disturbed soils not paved that will not be landscaped or otherwise permanently stabilized by construction shall be seeded using species native to the project vicinity.
- The contractor shall comply with all local air quality and dust control rules, regulations and ordinances which apply to any work performed pursuant to the contract.
- The contractor shall not utilize any abrasive tools or methods for the relocating of the fire hydrants that would disturb the lead-based paint. This includes, but is not limited to, sawing, grinding, sanding, or heating. Woven straps (not linked chains) may be used to lift the fire hydrants from the ground.

SEEDING OPERATION:

All disturbed unpaved areas that will not be landscaped or otherwise permanently stabilized, shall be seeded by the contractor with Class II Seeding at no additional cost to the Department. Soil tillage, compost, and fertilizer will not be required for the spot seeded areas. Soil surface roughening, as well as raking, are required prior to seeding at no cost to the Department. All spot seeded areas shall be covered by straw mulch with tacking agent at no additional cost to the Department. Exposure of seeds without mulch cover is not acceptable. The 45 calendar day maintenance period is not required for this type of seeding application. The contractor shall provide the seed mix to the Engineer for approval prior to placing and seeding.

(101ABRV, 02/04/16)

SECTION 101 DEFINITIONS AND TERMS:

101.01 Abbreviations: of the Standard Specifications is modified to add:

ARPA Arizona Rock Products Association

| | |
|-------|--|
| IFI | International Fasteners Institute |
| ISO | International Organization for Standardization |
| ISSA | International Slurry Surfacing Association |
| NICET | National Institute for Certification in Engineering Technologies |
| NEC | National Electrical Code |
| NRMCA | National Ready Mixed Concrete Association |
| NSPS | National Society of Professional Surveyors |
| PPI | Plastic Pipe Institute |
| SSPC | Society for Protective Coatings |

(101DEFN, 02/22/16)

SECTION 101 DEFINITIONS AND TERMS:

101.02 Definitions:

Bidding Schedule: of the Standard Specifications is revised to read:

The prepared schedule containing the estimated quantities of the pay items for which unit bid prices are invited.

Working Day: of the Standard Specifications is revised to read:

A day, exclusive of Saturdays, Sundays and State-recognized holidays, beginning at midnight, extending for a twenty-four hour period, and ending at midnight. Any Saturday, Sunday, or State-recognized holiday on which the contractor has been approved to work will also be counted as a working day. Working days on which weather conditions do not permit work on the project to proceed, as determined by the Engineer, will not be charged.

(102PREQ, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

102.02 Prequalification of Bidders: the title and text of the Standard Specifications is revised to read:

102.02 Prerequisites for Bidding:

(A) General:

To submit a valid bid, the bidder must:

- (1) have prequalification from the Department as necessary for the project, in accordance with paragraph (B) of this Subsection, and
- (2) be included on the project Plansholder List as a Prime in accordance with paragraph (C) of this Subsection.

(B) Prequalification of Bidders:

Prior to submitting a bid, the bidder will (unless waived by the Department) be required to be prequalified with the Department to bid on the project. The submission of Prequalification information and determination of Prequalification shall be in accordance with the requirements of the Rules for Prequalification of Contractors as approved and adopted by the Department.

(C) Plansholder List:

There are two ways for a bidder to be included on the project Plansholder List as a Prime. It is the bidder's responsibility to ensure that it is on the Plansholder List as a Prime prior to submitting a bid.

If a bidder is issued a proposal pamphlet in paper format by the Department, the Department will place the bidder on the project Plansholder List as a Prime.

Firms can register electronically requesting placement on the project Plansholder List as either a Prime or Subcontractor/Vendor as follows:

- (a) Go to the C&S Website.
- (b) Select "Current Advertisements".
- (c) Identify the project of interest.
- (d) Click on the "Register" icon.
- (e) Select the "Bidder" or "Subcontractor/Vendor" radio button.

- (f) Complete all required fields.
- (g) Click “Save”. This submits the request to the Department.
- (h) If all required information is provided, the “ADOT C&S Advertisement Registration Confirmation Screen” will appear. An email will also be sent to the email address provided acknowledging the request.

Requests to be included on the Plansholder List as a Prime will be evaluated by the Department to determine whether the bidder is prequalified for the project. The Department cannot guarantee that requests to be on the Plansholder List will be considered if the request is submitted less than five working days prior to the bid opening. The Department will send an email to the email address provided notifying the contractor of the results of their request.

The Department’s email will state whether the request was approved or denied. More information regarding the Department’s decision may be obtained by contacting the Contracts and Specifications Section.

If an individual from a firm submits a duplicate request to be placed on the Plansholder List, the request will be denied. The Department will register the contact person listed on the duplicate request to receive email notices of updates to the project. The Department will send an email to the email address provided notifying the contractor of the results of their request.

(D) Registration for Notifications:

Firms on the Plansholder List as a Prime or a Subcontractor/Vendor will receive notification of any changes to the project. Other interested parties can register electronically to receive email notification of any changes to the project as follows:

- (a) Go to the C&S Website.
- (b) Select “Current Advertisements”.
- (c) Identify the project of interest.
- (d) Click on the “Register” icon.
- (e) Select the “Other” radio button.
- (f) Select the “Yes” radio button in response to “Are you interested in registering to be notified about any changes made to this advertisement?”
- (g) Complete all required fields.
- (h) Click “Save”. This submits the request to the Department.

- (i) If all required information is provided, the “ADOT C&S Advertisement Registration Confirmation Screen” will appear. An email will also be sent to the email address provided acknowledging the request.

All parties registering to receive notifications will be sent an email when changes are made to the project.

(102NOBID, 09/19/12)

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS:

102.03 **Suspension from Bidding:** of the Standard Specifications is revised to read:

The Department may suspend any person and any subsidiary or affiliate of any person from further bidding to the Department and from being a subcontractor or a supplier or otherwise participating in the work:

- (A) If that person or any officer, director, employee or agent of that person is convicted, in this State, or any other jurisdiction, of a crime involving any of the following elements or actions:
 - (1) Entering into any contract, combination, conspiracy or other unlawful act in restraint of trade or commerce;
 - (2) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device;
 - (3) Making false, fictitious, or fraudulent statements or representations;
 - (4) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry;
 - (5) Misrepresentation or false statement on any application for bonding;
 - (6) Misrepresentation or false statement on any application for prequalification;
or
- (B) If the Department makes a finding of any of the above or finds that the contractor is not a Responsible Bidder or a Responsible Contractor.
- (C) If the Department determines that a contractor, subcontractor, or supplier has repeatedly or willfully failed to comply with federal or state immigration laws.

Under this subsection, a person means any individual, partnership, joint venture, corporation, association or other entity formed for the purpose of doing business as a contractor, subcontractor or supplier.

The signature of the bid proposal by a bidder constitutes the bidder's certification, under penalty of perjury under the laws of the United States, that the bidder, or any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving the administration of federal funds, has not been, or is not currently, under suspension, debarment, voluntary exclusion or been determined ineligible by any federal agency within the past three years. Signature of the bid proposal also certifies, under penalty of perjury under the laws of the United States, that the bidder does not have a proposed debarment pending. In addition, signature of the bid proposal certifies that the bidder has not been indicted, convicted, or had a civil judgment rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

Any exceptions to the above paragraph shall be noted and fully described on a separate sheet and attached to the bid proposal.

(102PRPMT, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.04 Contents of Proposal Pamphlet: the first paragraph of the Standard Specifications is revised to read:

The proposal pamphlet will state the location and description of the contemplated construction and will show the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished and will have a schedule of items for which unit bid prices are invited. The proposal pamphlet will state the time in which the work must be completed, the type and amount of the proposal guaranty and the date, time and place of the opening of proposals. The pamphlet will also include any Special Provisions or requirements which vary from or are not included in the Standard Specifications. Additional contract documents applicable to the specific project are listed in the Special Provisions.

(102ISSPSL, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.05 Issuance of Proposals: of the Standard Specifications is revised to read:

The Department reserves the right to refuse to issue proposal documents or to accept bids for any of the following reasons:

- (A) Lack of competency or adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Subsection 102.02.
- (B) Incomplete work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded.
- (C) Failure to pay or settle satisfactorily all bills due for work on other contracts.
- (D) Failure to comply with any qualification regulations of the Department.
- (E) Default under previous contracts.
- (F) Unsatisfactory performance on previous work.
- (G) Entering into any contract, combination, conspiracy, or other unlawful act in restraint of trade or commerce.
- (H) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device.
- (I) Making false, fictitious, or fraudulent statements or representations.
- (J) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry.
- (K) Misrepresentation or false statement on any application for bonding.
- (L) Misrepresentation or false statement on any application for prequalification.
- (M) Lack of sufficient ability or integrity to complete the contract.

(102EXAM, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

102.07 Examination of Plans, Specifications and Site of Work: the second paragraph of the Standard Specifications is revised to read:

A set of plans, special provisions, and the proposal pamphlet will be on file at Contracts and Specifications, 1651 W. Jackson, Room 121F, Phoenix.

Project plans, special provisions, proposal pamphlets, and other project documents, if available, will be provided in electronic format, at no charge, on the Contracts and Specifications website. Any interested party can access the advertised project documents.

(102LOBY, 10/01/90)

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS:

102.09 Non-Collusion Certification: of the Standard Specifications is modified to add:

(A) Lobbying:

The bidder certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federally 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 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 Federally 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. Copies of Form-LLL, "Disclosure Form to Report Lobbying", are available at ADOT Contracts and Specifications Services, 1651 W. Jackson, Room 121F, Phoenix, AZ 85007.

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 Section 1352, Title 31, U.S. Code. 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.

The bidder also agrees, by submitting his or her bid or proposal, that he or she shall require that the language of this certification be included in all subcontracts and lower tier subcontracts which exceed \$100,000 and that all such subcontractors and lower tier subcontractors shall certify and disclose accordingly.

The Department will keep the prime contractors' certifications on file as part of their original bid proposals. Each prime contractor shall keep individual certifications from all subcontractors and lower tier subcontractors on file. Certifications shall be retained for three years following completion and acceptance of any given project.

Disclosure forms for the prime contractor shall be submitted to the Engineer at the pre-construction conference. Disclosure forms for subcontractors and lower tier subcontractors shall be submitted to the Engineer by the prime contractor along with the submittal of each subcontract or lower tier subcontract, as required under Subsection 108.01, when said subcontracts exceed \$100,000.00. During the performance of the contract the prime contractor and any affected subcontractors shall file revised disclosure forms at the end of each calendar year quarter in which events occur that materially affect the accuracy of any previously filed disclosure form. Disclosure forms will be submitted by the Engineer to the Federal Highway Administration for further processing.

(102IRPSL, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.10 Irregular Proposals: Item (B) of the Standard Specifications is revised to read:

- (B) Proposals will be considered irregular and will be rejected for any of the following reasons:
- (1) If the bidder is not on the project Plansholder List as a Prime.
 - (2) If the proposal, bid bond or bidding schedule is on a form other than that furnished by the Department.
 - (3) If the bidder or surety fails to provide a proposal guaranty as specified in Subsection 102.12.
 - (4) If the bidder fails to sign the proposal when submitting a bid in the paper format.
 - (5) If the bidding schedule does not contain a unit price for each pay item listed except in the case of authorized alternate pay items.
 - (6) If the bidder fails to meet the required goal for Disadvantaged Business Enterprises (DBE) established in the Special Provisions or show good faith effort as determined by the Department.

- (7) If the bidder submits a proposal in both the electronic format and in the paper format.

(103RSBTY, 02/22/16)

SECTION 103 AWARD AND EXECUTION OF CONTRACT:

103.03 Responsibility: the third paragraph of the Standard Specifications is revised to read:

Non-responsibility may also be found for any of the following reasons:

- (A) Anti-competitive acts;
- (B) Lack of competency and adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Subsection 102.02;
- (C) Incomplete work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded;
- (D) Failure to pay or settle satisfactorily all bills due for work on other contracts;
- (E) Failure to comply with any qualification regulations of the Department;
- (F) Default under previous contracts;
- (G) Unsatisfactory performance on previous work;
- (H) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device;
- (I) Making false, fictitious, or fraudulent statements or representations;
- (J) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry;
- (K) Lack of a proper contractor's license; or
- (L) Lack of sufficient ability or integrity to complete the contract.

(103AWARD, 12/14/09)

SECTION 103 - AWARD AND EXECUTION OF CONTRACT:

103.04 Award of Contract: the first paragraph of the Standard Specifications is modified to add:

When a contract is funded, either wholly or in part, by federal funds, an award of contract may be made contingent upon the successful bidder obtaining an appropriate license from the State Registrar of Contractors, in accordance with Arizona Revised Statutes 32-1101 through 32-1170.03. The license must be obtained within 60 calendar days following opening of bid proposals. No adjustment in proposed bid prices or damages for delay will be allowed as a result of any delay caused by the lack of an appropriate license.

Failure to acquire the necessary licensing within the specified period of time shall result in either award to the next lowest responsible bidder, or re-advertisement of the contract, as may be in the best interests of the Department.

Licensing information is available from:

Registrar of Contractors
3838 N. Central
Suite 400
Phoenix, AZ 85012
Phone: (602) 542-1525

SECTION 104 - SCOPE OF WORK:

104.04 Maintenance of Traffic: of the Standard Specifications is modified to add:

(D) General Traffic Control Information:

The project shall be constructed in accordance with Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition, the Arizona Department of Transportation Traffic Control Design Guidelines (TCDG) 2011, and the project plans. The contractor is responsible for establishing the traffic control necessary to provide a safe and efficient work zone without unduly delaying traffic. Alterations and modifications to the traffic control concepts included in the project plans will be considered if they conform to the references listed above. Any changes or revisions to the traffic control plans must be approved in advance by the Engineer.

Should the contractor elect to prepare traffic control plans that deviate from those included in the contract plans, all Traffic Control General Notes shown in the contract plans shall be included with the contractor prepared traffic control plans.

Temporary traffic control devices shall not be set up in advance of a closure unless approved by the Engineer. Traffic control devices shall not be installed more than 30 minutes before

the beginning of a closure, and shall be entirely removed from the roadway and shoulders within 30 minutes of the end of the closure and will not be permitted to remain stockpiled on the shoulder until the next closure.

The contractor shall accommodate pedestrian traffic in the north/south direction along US 191 and east/west direction along US 70 at all times.

(E) Schedules for Daily Traffic Control Activities:

The contractor shall provide schedules of daily activities and corresponding traffic control schemes. This information shall be provided in advance or during the weekly construction meeting in accordance with Subsection 108.03 of these Special Provisions, and shall specify the limits of the work activities and related traffic control plan by location, direction and time.

The construction schedule and associated traffic schemes shall be developed in such a way that access is maintained at all times to local business resident driveways and to each intersecting roadway, unless otherwise approved by the Engineer. The schedules shall be developed in a format suitable for release to other agencies and the public, and shall be updated as necessary.

The contractor shall maintain a minimum of one lane of traffic in each direction on US 191 and US 70 during the daytime between the hours of 7:00 AM and 5:00 PM on a Monday, Tuesday, Wednesday, Thursday and Friday, unless otherwise directed by the Engineer. Additional lane closures and restrictions on US 191 and US 70 will not be allowed at night, during daytime and on weekends, unless approved by the Engineer. On weekends (from Friday at 5:00 PM through Monday at 7:00 AM), at night, on holidays, during special events and as directed by the Engineer, the contractor shall maintain all traffic lanes on US 191 and US 70 within the project limits.

The contractor shall provide the Engineer 48 hours advance notification of any lane closure along US 191 and US 70. This advance notification shall be in writing and state the desired length, termini and duration of said lane closure. The Engineer will prohibit the installation of any lane closure that fails to meet the above restriction on advance notification. No additional contract time will be allowed for failure to complete required work due to the denial of a lane closure for said reasons.

The contractor shall schedule the project work in such a manner as to avoid traffic restrictions during special events. Project accommodations for special events will be coordinated with ADOT Communications, the ADOT Southeast Construction District and the City of Safford. Special events are defined as activities which draw in a sizable number of members of the public and whose attendance/enjoyment may be negatively impacted because of ongoing project traffic restrictions and construction activities. The contractor shall coordinate all closures around the special events. Special events include but are not limited to the following:

- Independence Day Parade – Monday July 4, 2016
- Salsa Festival – Friday September 23 and Saturday September 24, 2016

- Graham County Fair Parade – second weekend of October 2016, specific date to be determined
- Harvest Festival – Saturday October 29, 2016
- Freeport McMoRan Merry Main Street Holiday Event – Saturday November 5, 2016
- Holiday Light Parade – Saturday December 10, 2016

Advanced Notification for Approval of Closures:

The contractor shall submit a traffic control plan for all closures to the Engineer for approval prior to the work. Upon approval of the traffic control plans, the contractor shall provide the Engineer advance notification of all closures as follows:

| Closure Type | Advance Notification Required |
|---------------------|--------------------------------------|
| US 191 | 48 hours prior to closure |
| US 70 | 48 hours prior to closure |
| Non-ADOT Roadways | 2 weeks |

Final approval of any closures will not be given by the Engineer until 48 hours prior to the proposed closure. For closures on non-ADOT roadways, advance notice must be given to the City along with a press release one week prior to closure. The contractor shall install changeable message signs along US 191 and/or US 70 a minimum of 3 business days prior to each closure. Changeable message sign messages shall be approved by the City prior to installation.

(F) Project Specific Traffic Control Requirements:

Lane Shifts on US 191 and US 70:

During work periods, the contractor shall maintain a minimum of one lane of traffic in each direction on US 191 and US 70 within the project limits. All tapers on US 191 and US 70 for lane shifts shall be 20:1 or flatter, unless otherwise permitted by the Engineer. Closures of the right shoulder shall be 6:1 or flatter. Unless otherwise permitted by the Engineer, the contractor shall provide a minimum 11 feet of width for traffic along US 191 and US 70.

For lane shifts on US 191 and US 70, the contractor shall utilize vertical panels for channelizing devices, spaced at 35 feet on center in tapers and 70 feet on center on tangents.

Speed Reduction:

The contractor shall not reduce the speed limit on US 191 and US 70 until it is approved in writing by the Engineer. If the Engineer allows the contractor to reduce the speed limit, the speed reduction shall only be in place during working hours. In addition, for any speed reduction allowed by the Engineer, the contractor shall provide a speed limit sign at the end of the construction which will indicate the speed limit at that location prior to the speed reduction due to the construction operations unless there is an existing, uncovered speed limit sign within 1,000 feet of the end of the work zone. Each speed limit (R2-1) sign shall

have a black legend on a white background and shall be 30 inches x 36 inches on US 191 and US 70 and 24 inches x 30 inches on any other roadway. Any sign indicating a reduction in the posted speed limit shall be positioned as close as practicable to the area where the reduction in speed is necessary, as determined by the Engineer. In addition, the contractor shall position 48 inch x 48 inch W3-5aAZ ("SPEED REDUCED AHEAD") signing in advance of a reduction in the posted speed limit, as approved by the Engineer. Signing for double fines in work zones, when allowed by the Engineer, shall generally conform to Figure SA-12 of the 2011 ADOT Traffic Control Design Guidelines. Such signing shall only be in place during work periods when workers are present in accordance with the guidelines for signing for double fines in work zones. If the contractor violates the guidelines for signing for double fines in work zones, the contractor shall forfeit the ability to include double fines signing as part of the traffic control.

Pedestrian Walkways:

Pedestrian walkway closures along US 191 shall generally conform to Typical Application 28 of the 2009 version of the *Manual on Uniform Traffic Control Devices* (MUTCD) per sidewalk diversion. The contractor shall use Type II barricades for sidewalk closures. Channelized pedestrian walkways must meet current Americans with Disabilities Act (ADA) requirements for Accessible Routes. All business entrances shall be maintained during working hours. The contractor shall work on one ADA ramp at a time at intersections while detouring pedestrians to opposite ramp to allow pedestrian access across US 191. The contractor shall maintain wheel chair access with temporary ramp where necessary. The contractor shall maintain existing street lighting to light pedestrian detours at night.

Paving Operations:

The contractor shall conduct the paving operations so there will be no deeper than a half-inch trench at the end of a work shift. The Engineer may require the contractor to conduct the paving operations to minimize the length of the half-inch drop-off between adjoining lanes of traffic or between the right/travel lane and the adjoining shoulder with the half-inch mill and replacement. Unless otherwise permitted by the Engineer, the contractor shall seal the cracks in the pavement -- after the milling in the lane or shoulder and prior to the replacement of the pavement -- all within the same work shift.

Traffic Control Devices:

While traffic control devices are not in use, the contractor shall turn signs away or cover so public cannot read the legends unless otherwise directed by the Engineer. This includes sign supports without sign panels.

The retroreflective sheeting on all traffic control signs, barricades, vertical panels, and other work zone traffic control devices except orange signs shall meet the criteria established for Type IV, Type IX, or Type XI sheeting in ASTM D4956. In addition, all orange signs shall have fluorescent reflective sheeting and shall meet the criteria established for Type VIII, sheeting in ASTM D4956. The minimum sign mounting height from the bottom of each sign to the near edge of the pavement shall be 7 feet for signs mounted on embedded posts and

5 feet for signs mounted on portable stands. However, all sign panels and their supports shall be installed to meet the current crash testing requirements identified in Section 701 – Maintenance and Protection of Traffic. Except as otherwise permitted by the Engineer, all warning signs placed along US 191 and US 70 used for this project shall be 48 inches x 48 inches. Warning signs placed along crossroads shall be 36 inches x 36 inches. Each sign in place at night shall have an affixed Type A flashing warning light. Each sign shall have 2 warning flags.

104.07 Railway-Highway Provisions: of the Standard Specifications is modified to add:

General:

The contractor is hereby informed that part of the work will be within the right-of-way of Arizona Eastern Railway Company (AZER) which is owned by Genesee & Wyoming Inc. The project will consist of pavement widening, sidewalk, drainage, mill and overlay, chip seal application, traffic signal, signing, pavement marking, and other related work and their work may impact the AZER.

The contractor shall obtain the *Contractor's Occupancy/Access License Agreement* by contacting the AZER General Manager at the phone number shown below. The application form and **SAMPLE** of the *Contractor's Occupancy/Access License Agreement* are contained in Appendix B of these Special Provisions. The contractor shall complete and submit the Contractor's Occupancy/Access License Agreement to AZER.

When approved, the executed agreement will become the contractor's Right of Entry (ROE). The contractor shall not enter or commence work within the railroad's ROW until it has provided a copy of the executed ROE to the Engineer. No excavation within AZER ROW is permitted without the approval of the railroad. The contractor shall comply with all requirements of the railroad concerning access, insurance, and flagging. The contractor shall conduct their work in a safe and orderly manner and according to the plans and specifications.

The contractor is advised that several weeks are required for this review and approval process. The contractor shall anticipate the required time necessary to obtain the ROE. No adjustment to the contract time will be allowed for delays in obtaining a fully executed ROE. The ROE application fee is \$1,500 for a 60 day occupancy license. Monthly extensions will cost \$750 each. The contractor shall make payment of the ROE fees as provided under Subsection 107.02 of the Standard Specifications. The AZER has retained the services of Interstate Management Group to process contractor right of entry agreements. Interstate Management Group is best reached by email. Insurance requirements, application forms, etc. can be obtained at their website.

Any entry or construction activities on railroad right of way must be authorized by the railroad in writing. Written authorization is obtained through a Right of Entry Permit or Contractor Occupancy/Access Agreement. The application is accessible via the link provided below.

The applicant must submit the completed application to the Real Estate Department including a check or money order, to cover the non-refundable fee of \$1,500 made payable to the Railroad. The application must include railroad milepost, railroad subdivision, and scope of work. **If any of these items on the application are incomplete, the application will be immediately rejected.**

The standard term for a Right of Entry Permit or Contractor Occupancy/Access Agreement is sixty (60) days. Longer terms are reviewed on a case by case basis and may be assessed additional fees.

Upon approval of the application, the Real Estate Department will draft an agreement and forward to the applicant for signature. **Application does not guarantee approval.** The applicant must then return the signed document to the Real Estate Department along with the pertinent certificate of insurance outlined in the agreement. Once in receipt of these documents, the agreement will then be executed on behalf of the Railroad.

For "standard processing", the entire process takes between 6-8 weeks. "Expedited processing" will reduce the processing time to between 1-2 weeks and costs an additional \$1,750. If the application and plans require engineering approval, and are returned to applicant for revisions in order to meet required specifications the expedited process could take longer than 2 weeks.

Contact Information:

Mr. Jim Soulia
General Manager, Arizona Eastern Railway
5903 S. Calle de Loma
Claypool, AZ 85532
(928) 473-2447
james.soulia@gwrr.com

Track Master Mainline
Tom McKenna
207-689-5489
tmckenna@gwrr.com

http://www.gwrr.com/operations/railroads/north_america/AZER

Reference following information on correspondence to the AZER:

DOT # 742211V
RRMP: 1137.27
Located near Safford, AZ.

Scheduling:

Upon notice of award and prior to the pre-construction conference, the contractor shall contact AZER to initiate the review and approval process to obtain the ROE. The contractor shall provide AZER with an anticipated schedule to the AZER General Manager a minimum of 30 calendar days in advance of when personnel, equipment or construction activities will be within AZER's right of way. As a minimum requirement, the contractor shall contact AZER's General Manager a minimum of 30 days prior to scheduling any work located within AZER's right of way. After the work schedule has been approved by AZER, the contractor shall contact the AZER 5 working days prior to construction of each element of work. During construction, the contractor shall keep the AZER informed about work progress on a daily basis.

The railroad may require the contractor's work to be during a weekend or early morning hours. The contractor must also have written approval from AZER's General Manager or Track Master prior to performing work involving AZER right-of-way. The contractor shall provide a copy of the written approval to the Engineer before commencing the work.

It is the contractor's responsibility to effectively coordinate his operations to minimize, if not eliminate, impact of the project upon AZER operations. Any loss of service or revenue to the AZER caused by the contractor's operations which is beyond that covered by these specifications shall be the sole responsibility of the contractor at no additional cost to the Department.

Providing Flaggers:

The contractor shall coordinate with AZER with respect to construction schedule and work-related items, as specified herein, for the safe and effective progress of the work. The contractor shall comply with all requirements of the railroad concerning flagging specified in the ROE.

Due to the nature of this project, railroad flagging is needed. AZER retains the right to change the need for flagging during the project.

(104STORM, 11/01/95)

SECTION 104 - SCOPE OF WORK:

104.11 **Damage by Storm, Flood or Earthquake:** Item (D), Idled Equipment and Remobilization, of the Standard Specifications is hereby deleted.

104.11 **Damage by Storm, Flood or Earthquake:** Items (E) and (F) of the Standard Specifications are revised to read:

(D) Payment for Repair Work:

The State will pay the cost of the repair work as determined in Subsection 109.04.

(E) Termination of Contract:

If the Department elects to terminate the contract, the termination and the determination of the total compensation payable to the contractor shall be governed by the provisions of Subsection 108.11, Termination of Contract for Convenience of the Department.

(104ENVIR, 03/17/08)

SECTION 104 - SCOPE OF WORK:

104.12 **Environmental Analysis:** of the Standard Specifications is revised to read:

The contractor shall prepare an environmental analysis for approval by the Engineer, under any of the following conditions:

- (A) If the contractor elects to provide material, in accordance with Section 1001, from a source that involves excavation.
- (B) If the contractor elects to use any site to set up a plant for the crushing or processing of base, surfacing, or concrete materials. The contractor may request an exemption from this requirement to provide an environmental analysis if all of the following conditions apply:
 - (1) the site is exclusively used for the processing of materials,
 - (2) the site will not be used for excavation of borrow material,
 - (3) the site was developed as a processing area on or before January 1, 1999,
 - (4) the site is currently operating as a processing area, and
 - (5) the plant is located within that portion of the site that was disturbed prior to January 1, 1999.
- (C) If the contractor requests that the Engineer approve access to controlled access highway at points other than legally established access points.

The contractor may incorporate an existing environmental analysis approved after January 1, 1999, provided that the analysis is updated as necessary to be in compliance with current regulations and with the contractor's planned activities.

Regulatory changes, specification changes, or other reasons may preclude the approval of a materials source. The contractor acknowledges that the Department may refuse to approve a material source even if the Department had approved the source for other projects.

The environmental analysis shall include all areas of proposed excavation, crushing, processing, and haul roads. For the purposes of Subsection 104.12, a haul road is defined as any road on material excavation, processing, or crushing sites, and any road between the respective site and a public highway that may be used by the contractor.

The contractor shall promptly advise the Engineer that it is preparing the environmental analysis and shall submit it upon completion. The contractor should anticipate needing a minimum of 30 calendar days to prepare the environmental analysis. The contractor shall allow a minimum of 45 calendar days after submittal, or subsequent resubmittal, to the Department for the Department to review the environmental analysis and to consult with the appropriate jurisdictions and/or agencies. At the end of the review period, the Engineer will notify the contractor whether or not the environmental analysis is acceptable.

If the approval of the environmental analysis causes a delay to a controlling activity of the project, the contractor may seek, and the Engineer may grant, an extension of time in accordance with the terms of Subsection 108.08. The time extension shall not exceed 30 working days for a working-day contract, or 45 calendar days for a calendar-day project. The time extension will not be considered unless the contractor can show evidence of due diligence in pursuing the environmental analysis. No time extension will be granted for a fixed completion date contract.

The Environmental analysis shall address all environmental effects, including, but not limited to, the following:

- (1) The location of the proposed source and haul road, and the distance from the source to either an existing highway or an established alignment of a proposed Federal, State or County highway along with vicinity maps, sketches or aerial photographs.
- (2) The ownership of the land.
- (3) The identity and location of nearby lakes, streams, parks, wildlife refuges or other similar protected areas.
- (4) The former use, if known, of the source, and haul road and their existing condition.
- (5) The identification of present and planned future land use, zoning, etc., and an analysis of the compatibility of the removal of materials with such use.
- (6) The anticipated volume of material to be removed; the width, length and depth of the excavation; the length and width of the haul road, and other pertinent features and the final condition in which the excavated area and

haul road will be left, such as sloped sides, topsoil replaced, the area seeded, etc.

- (7) The archaeological survey of the proposed source prepared by a person who meets the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) and possesses a current permit for archaeological survey issued by the Arizona State Museum (ASM). The survey shall be prepared in a State Historic Preservation Office standardized format. The survey shall identify all historic properties within the area of potential effect (APE), as defined by the National Historic Preservation Act (36 CFR 800.4). This includes the materials source, processing area, and the haul road. Additionally, the survey report shall identify the effects of the proposed source on any historic properties within the APE, and recommend measures to avoid, minimize, or mitigate those effects.
- (8) If the proposed source, or haul road will utilize Prime and Unique Farm land or farm land of statewide importance, a description of such remaining land in the vicinity and an evaluation whether such use will precipitate a land use change.
- (9) A description of the visual surroundings and the impact of the removal of materials on the visual setting.
- (10) The effect on access, public facilities and adjacent properties, and mitigation of such effects.
- (11) The relocation of business or residences.
- (12) Procedures to minimize dust in pits and on haul roads and to mitigate the effects of such dust.
- (13) A description of noise receptors and procedures to minimize impacts on these receptors.
- (14) A description of the impact on the quality and quantity of water resulting from the materials operation shall be provided. The potential to introduce pollutants or turbidity to live streams and/or nearby water bodies shall be addressed. Measures to mitigate potential water quality impacts shall be coordinated through the Environmental Protection Agency (EPA) for sites located on tribal land, and the Arizona Department of Environmental Quality (ADEQ) for sites located on non-tribal land.
- (15) A description of the impact on endangered or threatened wildlife and plants and their habitat. The analysis of potential impact to plants and wildlife shall be coordinated through the Arizona Game and Fish Department and U.S. Fish and Wildlife Service. Compliance with the Arizona Native Plant Law

shall be coordinated through the Arizona Commission of Agriculture and Horticulture.

- (16) A discussion of the effects of hauling activities upon local traffic and mitigating measures planned where problems are expected.
- (17) A description of the permits required, such as zoning, health, mining, land use, flood plains (see Section 404 of the Clean Water Act), etc.
- (18) The effect of removing material and/or stockpiling material on stream flow conditions and the potential for adverse impacts on existing or proposed improvements within the flood plain which could result from these activities. Measures to mitigate potential water quality impacts shall be coordinated through the Environmental Protection Agency (EPA) for sites located on tribal land, and the Arizona Department of Environmental Quality (ADEQ) for sites located on non-tribal land.

Guidance in preparing the environmental analysis is available on the Department's Internet Website through the Environmental Planning Group, or by calling Environmental Planning Group at 602-712-7767.

(104MAGDET, 05/03/16)

SECTION 104 SCOPE OF WORK:

104.15(A) General: the first three paragraphs of the Standard Specifications are revised to read:

All new underground utility facilities, including service connections, placed within ADOT right-of-way by the contractor must be magnetically detectable with standard locating instruments. The contractor shall place continuous detectable tracer wire with all those underground utility facilities that lack a continuous and integral metallic component capable of detection by standard locating instruments.

Tracer wire will not be required for power cables and wires, telephonic or electronic communications (other than fiber optic lines), or for landscape irrigation lines smaller than two inches in diameter. For Salt River Valley Water Users Association (S.R.V.W.U.A.) irrigation facilities, no tracer wire will be required if Salt River Project provides their own tracer system.

Tracer wire will be required for non-metallic pipe such as corrugated high density polyethylene plastic pipe (HDPE), steel reinforced high density thermoplastic ribbed pipe, corrugated polypropylene plastic pipe (PP), vitrified clay pipe (VCP), and for polyvinyl chloride pipe (PVC) two inches in diameter and larger. Tracer wire will be required where the metallic component is encased within the pipe, such as reinforced concrete pipe (RCP), rubber gasket reinforced concrete pipe (RGRCP), and steel cylinder concrete pipe.

104.15(B) Materials: the first sentence of the first paragraph of the Standard Specifications is revised to read:

Tracer wire shall be solid copper wire, American Wire Gauge (AWG) No. 12 or larger.

(105PLNS, 10/18/10)

SECTION 105 CONTROL OF WORK:

105.03 Plans and Working Drawings: the thirteenth paragraph of the Standard Specifications is revised to read:

All working drawings or prints shall be 22 inches in height and 34 inches in length. There shall be 1 1/4-inch margins on the left and right sides, and 3/4-inch margins on the top and bottom. A blank space, four inches wide by three inches high, shall be left inside the margin in the lower right hand corner. All drawings shall be made in such a manner that clear and legible copies can be made from them. When half-size copies are required, they shall be provided on standard 11 by 17 inch sheets.

(105FNL, 03/11/11)

SECTION 105 CONTROL OF WORK:

105.20(B) Final Acceptance: the second paragraph of the Standard Specifications is revised to read:

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory or not complete, the Engineer will give the contractor written notice of the unsatisfactory or incomplete work and the contractor shall immediately correct such work. In such case, the Engineer will also give the contractor written notice as to whether or not the work is substantially complete.

(106QCMAT, 05/03/16)

SECTION 106 CONTROL OF MATERIAL:

106.04(A) General: the fourth and fifth paragraphs of the Standard Specifications are revised to read:

The sampling, testing, and acceptance of materials shall be in accordance with the requirements of the specifications, in conjunction with the following:

- The ADOT Materials Testing Manual.

- The ADOT Materials Practice and Procedure Directives Manual.
- Applicable Federal, AASHTO, or ASTM specifications or test designations.
- Applicable specifications or test designations of other nationally recognized organizations.

Unless otherwise specified, whenever a reference is made to an Arizona Test Method or an ADOT Materials Practice and Procedure Directive, it shall mean the test method or practice and procedure directive in effect on the bid opening date.

Any reference to the ADOT Materials Policy and Procedure Directives elsewhere in the contract documents shall be understood to mean ADOT Materials Practice and Procedure Directives.

106.04(B) Contractor Quality Control: the second paragraph of the Standard Specifications is revised to read:

Certain construction items may require additional quality control measures, as specified in Subsection 106.04(C). When so specified, the contractor shall provide all the personnel, equipment, materials, supplies, and facilities necessary to obtain samples and perform the tests listed in the applicable section and as given in Subsection 106.04(C). Specific contractor quality control requirements will be shown in the applicable construction items. Payment for such additional work shall be in accordance with the Special Provisions, and will be included in Bidding Schedule Item 9240170.

When the specifications do not require specific contractor quality control measures, the provisions given in Section 106.04(C) do not apply. Bid Item 9240170 will not be included in the Bidding Schedule.

106.04(C)(2) Quality Control Laboratory: the first paragraph is revised to read:

All field and laboratory sampling and testing shall be performed by a laboratory or laboratories approved by the Department. The requirements for approval of laboratories are specified in ADOT Materials Policy and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories". Approved laboratories, and the test methods for which they are approved to perform, are listed in the "ADOT Directory of Approved Materials Testing Laboratories". Approved test methods listed in the "ADOT Directory of Approved Materials Testing Laboratories" do not include field sampling and testing procedures. When field sampling and testing procedures are performed, the appropriate valid Arizona Technical Testing Institute (ATTI) and/or American Concrete Institute (ACI) certification(s) are required. ADOT Materials Policy and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories" and the "ADOT Directory of Approved Materials Testing Laboratories" may be obtained on the internet from the ADOT Materials Quality Assurance Section website.

106.04(C)(6) Weekly Quality Control Reports: of the Standard Specifications is revised to read:

The contractor shall submit Weekly Quality Control Reports to the Engineer. The weekly reports shall be complete and accurate, and shall state the types of work which have been performed during the report period. The report shall also include the process control measures taken to assure quality. The report shall provide sample identification information for materials tested during the report period, including sample number, date sampled, sample location, first and last name of person obtaining sample, and original source of material. The report shall also provide the results for all required tests and any retests, corrective actions, and other information relevant to quality control. The report shall include daily diaries for each day of testing, a weekly summary, the ADOT TRACS number, and the testing laboratory's project identification number.

Except as stated in the following paragraph, the weekly quality control report shall be prepared using standard forms provided by the Department. The standard forms are available on the Department's website at www.azdot.gov. After accessing the Department's website, select "Business", "Engineering and Construction", "Construction and Materials", "Contractor Information", "Forms and Documents", and then "Weekly Quality Control Forms". Except for the daily diaries, all documentation and information required on the forms shall be typed. Daily diaries may be hand-written if acceptable to the Engineer. The weekly report shall be submitted to the Engineer in paper form with a transmittal letter signed by the contractor's quality control manager.

In lieu of using the standard weekly quality control forms available on the Department's website, the contractor or testing laboratory may prepare the weekly report using proprietary or other software, if acceptable to the Engineer, provided that all required information is included, the format is comparable to the Department's standard format, and the report is submitted in paper form with the required transmittal letter.

The report period shall end at midnight of each Friday, and the report shall be submitted to the Engineer no later than 5:00 p.m. of the following Wednesday. The Engineer will verify that the report is timely, complete, and accurate.

Reports that are not submitted by the above-referenced deadline shall be considered delinquent. Reports that are submitted by the above-referenced deadline, but are not complete and accurate, shall also be considered delinquent. In either case monies shall be deducted from the contractor's monthly estimate in accordance with the requirements for Contractor Quality Control, as specified in these special provisions.

(106CERT, 09/14/12)

SECTION 106 CONTROL OF MATERIAL:

106.05 Certificates: of the Standard Specifications is revised to read:

106.05(A) General:

The contractor shall submit to the Engineer an original or copy of either a Certificate of Compliance or a Certificate of Analysis, as required, prior to the use of any materials or manufactured assemblies for which the specifications require that such a certificate be furnished.

Certificates shall be specifically identified as either a "Certificate of Compliance" or a "Certificate of Analysis".

The Engineer may permit the use of certain materials or manufactured assemblies prior to, or without, sampling and testing if accompanied by a Certificate of Compliance or Certificate of Analysis, as herein specified. Materials or manufactured assemblies for which a certificate is furnished may be sampled and tested at any time, and, if found not in conformity with the requirements of the plans and the specifications, will be subject to rejection, whether in place or not.

Certificates of Compliance and Certificates of Analysis shall comply with the requirements specified herein, the ADOT Materials Testing Manual, and applicable ADOT Materials Policy and Procedure Directives.

106.05(B) Certificate of Compliance:

A Certificate of Compliance shall be submitted on the manufacturer's or supplier's official letterhead, and shall contain the following information:

- (1) The current name, address, and phone number of the manufacturer or supplier of the material.
- (2) A description of the material supplied.
- (3) Quantity of material represented by the certificate.
- (4) Means of material identification, such as label, lot number, or marking.
- (5) A statement that the material complies in all respects with the requirements of the cited specifications. Certificates shall state compliance with the cited specification, such as AASHTO M 320, ASTM C 494; or specific table or subsection of the Arizona Department of Transportation Standard Specifications or Special Provisions. Certificates may cite both, if applicable.

- (6) A statement that the individual identified in item seven below has the legal authority to bind the manufacturer or the supplier of the material.
- (7) The name, title, and signature of the responsible individual. The date of the signature shall also be given.

Each of the first six items specified above shall be completed prior to the signing of the certificate as defined in item seven. No certificate will be accepted that has been altered, added to, or changed in any way after the authorized signature has been affixed to the original certificate. However, notations of a clarifying nature, such as project number, contractor, or quantity shipped are acceptable, provided the basic requirements of the certificate are not affected.

A copy or facsimile reproduction of the original certificate will be acceptable; however, the original certificate shall be made available upon request.

106.05(C) Certificate of Analysis:

A Certificate of Analysis shall include all the information required for a Certificate of Compliance and, in addition, shall include the results of all tests required by the specifications.

(106APL, 02/10/12)

SECTION 106 - CONTROL OF MATERIAL:

106.14 Approved Products List: of the Standard Specifications is revised to read:

The Approved Products List is a list of products which have been shown to meet the requirements of these Standard Specifications. The Approved Products List is maintained by the Department and updated monthly. Copies of the most current version are available on the internet from the ADOT Research Center, through its Product Evaluation Program.

The contractor shall verify that any products chosen for use from the Approved Products List are selected from the version which was most current at the time of the bid opening.

Unless otherwise specified in the Special Provisions, products not appearing on the Approved Products List at the time of the bid opening may be used if they meet the requirements of the plans and specifications.

When the Special Provisions limit product selection to only those listed on the Approved Products List, other products will not be evaluated or approved.

(106DMAT, 2/15/11)

SECTION 106 - CONTROL OF MATERIALS: of the Standard Specifications is modified to add:

106.15 Domestic Materials and Products:

Steel and iron materials and products used on all projects shall comply with the current "Buy America" requirements of 23 CFR 635.410.

All manufacturing processes to produce steel and iron products used on this project shall occur in the United States. Raw materials used in manufacturing the steel and iron products may be foreign or domestic. Steel or iron not meeting these requirements may be used in products on this project provided that the invoiced cost to the contractor for such steel products incorporated into the work does not exceed either one-tenth of one percent of the total (final) contract cost or \$2,500, whichever is greater.

Any process which involves the application of a coating to iron or steel shall occur in the United States. These processes include epoxy coating, galvanizing, painting, or any other coating which protects or enhances the value of covered material.

The requirements specified herein shall only apply to steel and iron products permanently incorporated into the project. "Buy America" provisions do not apply to temporary steel items, such as sheet piling, temporary bridges, steel scaffolding and falsework, or to materials which remain in place at the contractor's convenience.

The contractor shall furnish the Engineer with Certificates of Compliance, conforming to the requirements of Subsection 106.05, which state that steel or iron products incorporated in the project meet the requirements specified. Certificates of Compliance shall also certify that all manufacturing processes to produce steel or iron products, and any application of a coating to iron or steel, occurred in the United States.

Convict-produced materials may not be used unless the materials were produced prior to July 1, 1991 at a prison facility specifically producing convict-made materials for Federal-aid construction projects.

(107INS, 7/10/12)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.14 Insurance: the first paragraph of the Standard Specifications is revised to read:

Prior to the execution of the contract, the contractor shall file with the Department a certificate or certificates of insurance evidencing insurance as required by this contract has been placed with an insurer authorized to transact insurance in the State of Arizona pursuant to ARS Title

20, Chapter 2, Article 1, or with a surplus lines insurer approved and identified by the Director of the Department of Insurance pursuant to ARS Title 20, Chapter 2, Article 5.

All insurers shall have an "A.M. Best" rating of A- VII or better.

The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the contractor from potential insurer insolvency.

The contractor's submission of the required insurance certificates constitutes a representation to the Department that:

1. The contractor has provided a copy of these specifications to every broker who has obtained or filed a certificate of insurance and has communicated the necessity of compliance with these specifications to the broker; and
2. To the best of the contractor's knowledge, each certificate of insurance and each insurance coverage meets the requirements of these specifications.

The contractor shall provide the Department with certificates of insurance (ACORD form or equivalent acceptable to the State of Arizona) as required by the contract. The certificates for each insurance policy shall be signed by a person authorized by that insurer.

107.14 Insurance: of the Standard Specifications is modified to add:

Railroad Insurance:

The contractor's attention is directed to the insurance requirements shown in Exhibit B of the ROE in Appendix B of these Special Provisions. The contractor shall ensure that all insurance requirements have been satisfied before beginning any work within AZER right-of-way.

(107SWRSP, 01/28/03)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.15 Contractor's Responsibility for Utility Property and Services: of the Standard Specifications is revised to read:

(A) General:

The contractor's attention is directed to the requirements of Arizona Revised Statutes Section 40-360.21 through .29 requiring all parties excavating in public streets, alleys or utility easements to first secure the location of all underground facilities in the vicinity of the excavation.

The contractor shall review copies of existing ADOT permits, subject to availability, prior to start of construction, to assist the contractor in determining the location of any utilities, which the Department may have record of and which are not otherwise shown in the contract documents. Utility locations obtained from the Department are for information only and shall not relieve the contractor of responsibility for identifying, locating and protecting any existing utility lines. Copies of permits may be obtained from the ADOT Area Permit Supervisor in the District in which a project is located.

The contractor shall contact the owners of the various utilities prior to the start of construction and shall obtain from them any information pertaining to existing utilities that will either supplement information shown on the project plans or will correct any such information that may be incorrect. The contractor shall furnish the Engineer with evidence that the contractor has contacted the utility companies. Such evidence shall be submitted at the preconstruction conference, and shall include a copy of the information received from each utility as a result of such contacts.

If the contractor learns from either the owner of the utility or from any other source of the existence and location of properties of railway, telegraph, telephone, fiber optics cable, water, sewer, septic tanks or systems, electric, gas and cable television companies either omitted from or shown incorrectly on the project plans, the contractor shall immediately notify the Engineer and shall not disturb the utilities. Relocation or adjustment of such utilities, if deemed necessary, will be either performed by others or shall be performed by the contractor in accordance with the provisions of Subsection 104.02.

The contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum and that services rendered by these parties will not be unnecessarily interrupted.

Temporary or permanent relocation or adjustment of any utility line or service connection desired by the contractor for its convenience shall be its responsibility. The contractor shall obtain the approval of both the Engineer and the utility company and upon approval shall make all necessary arrangements with the utility company and shall bear all costs in connection with such relocation or adjustment. The contractor shall also submit a Sewer Discharge Prevention Plan, as specified in Subsection 107.15(C)(1), describing each anticipated relocation or adjustment involving existing sanitary sewer lines. No work on a particular facility shall begin until all approvals for that facility have been received.

(B) Contractor Qualifications for Water and Sewer Lines:

Breakage of active sanitary sewer lines may result in the potential spread of disease, contamination of the site and any adjacent bodies of water, and other hazards to the public. Substantial cleanup costs may be associated with such breakage, as well as possible major civil and/or criminal penalties. Therefore, the Engineer will closely consider the qualifications of any personnel proposed by the contractor to oversee or perform work involving active sanitary sewer lines. The contractor shall not assume that the personnel assigned to perform

such work will be acceptable to the Department merely because they meet the experience requirements listed herein.

The contractor, or the subcontracting firm assigned to perform the water and sewer work, shall have a minimum of five years of experience in the installation and construction of underground large diameter (18-inch or above) water and sewer improvements.

In addition, the key personnel assigned by the contractor to perform any work on water or sewer lines, whether from the prime contractor or a subcontracting firm, shall also have at least five years of experience in the installation and construction of underground large diameter (18-inch or above) water and sewer improvements. A minimum of two such people shall be designated by the contractor. The designated personnel may have the title of foreman or superintendent; however, at least one of these people shall be present at all times at the location of any work being performed at or near an active sanitary sewer line.

For both the firm and the key personnel, the experience shall include working with and around water and sewer utility lines that are in service. The contractor shall submit the following documentation to the Engineer for review and approval:

- (1) A list indicating that the designated key project personnel have at least five years of applicable experience, as specified above. The list shall be accompanied with resumes for each of the key people. The resumes shall include the following information, and demonstrate compliance with the specified requirements:
 - (a) Detailed relevant experience for a minimum of two projects, including project description, date of work, actual work performed by the individual, and references (a minimum of one for each project).
 - (b) Level of applicable formal training.
 - (c) Number of years of relevant experience in performing like construction.
- (2) A list of water and sewer construction projects completed by the firm performing the water or sewer work, as specified above, indicating a minimum of five years of applicable experience. Include the dates of work, type of work, description of the project, amount of work performed by the contractor/subcontractor, and the name and phone number of a contact with the owning company or agency for which the work was completed.
- (3) List of equipment that will be used for this project. The list shall include, as a minimum, equipment type, date of manufacture, and if contractor-owned or rented.
- (4) A list of all violations and citations in the past five years of applicable water and wastewater laws and statutes for both the prime contractor and the subcontractor responsible for the utility work.

The contractor shall submit this documentation to the Engineer for approval at least 21 calendar days prior to any anticipated work involving active sanitary sewer lines, whether new or existing.

(C) Protection of Existing Utility Lines:

At points where the contractor's operations are adjacent to right-of-way properties or easements for railway, telegraph, telephone, water, sewer, electric, gas and cable television companies, hereinafter referred to as utilities, or are adjacent to other facilities and property, damage to which might result in considerable expense, loss, inconvenience, injury or death, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

The exact locations and depths of all utilities that are underground or the location of those on or near the surface of the ground which are not readily visible shall be determined. Such locations shall be marked in such a manner so that all workmen or equipment operators will be thoroughly apprised of their existence and location. It will be the contractor's responsibility to see that every effort possible has been made to acquaint those actually involved in working near utilities not only with the type, size, location and depth, but with the consequences that might follow any disturbance. No trenching or similar operation shall be commenced until the Engineer is satisfied that every possible effort has been taken by the contractor to protect utilities.

The contractor shall coordinate with others working near new or existing sewer lines or other utilities on the procedures to be followed to prevent damaging of these utilities.

(1) Sewage Discharge Prevention Plan (SDPP):

For any work which may impact active sanitary sewer pipes, whether new or existing, the contractor shall prepare a Sewage Discharge Prevention Plan (SDPP) which shall describe the contractor's procedures and work plan for such lines. The Sewage Discharge Prevention Plan shall also describe the precautions that the contractor shall take to prevent unplanned breakage or spills, and the procedure which the contractor shall follow if breakage or a spill occurs.

The contractor's method of work described in the SDPP shall ensure that any work done in or near any active sewer line is performed in a safe and controlled manner resulting in no accidental discharges. As a minimum, the contractor's equipment and procedures shall be appropriate for the intended work, and shall conform to standard industry practices.

The SDPP shall include information, as specified below, for all portions of the project which involve the following work activities, and for any other element of work which may involve contact with an active sanitary sewer line:

- Interrupt, divert, relocate, plug, or abandon a sewer line or service connection, or

- Brace, or tie into a sewer line or service connection.

Construction activities in the vicinity of active sanitary sewer lines or service connections shall also be included in the SDPP if any of the following conditions exist:

- (1) Any work crossing beneath the pipe, at any angle, regardless of vertical separation.
- (2) Any work crossing over the pipe, at any angle, within two feet of the top of pipe.
- (3) Work located parallel to the pipe within the following areas:
 - (a) For the area from the bottom of the pipe to two feet above the top of the pipe, any work within two feet horizontally of the pipe wall.
 - (b) For the area below the bottom of the pipe, any work located below an imaginary line beginning at the pipe springline and progressing downward at a slope of 1.5 feet vertically to 1.0 feet horizontally.

The contractor's Sewage Discharge Prevention Plan shall address each of the items tabulated below, as applicable, for every location where construction activity will involve an active sanitary sewer line.

(2) Required Elements of the Sewage Discharge Prevention Plan:

The following elements shall be addressed in the SDPP:

- (a) Describe the proposed work in general, including the reasons for the work, scope, objectives, locations, dates, and estimated times the work will be conducted. Include project plan sheets detailing the proposed work, and indicating the peak flowrates of active sewer lines, determined as specified.
- (b) For all existing sanitary sewer pipes, determine whether the lines are active or abandoned, and the peak flowrates of lines in service, as provided by the owner of the utility.
- (c) List the key personnel (crew foreman, superintendent, and manager) and field office that are proposed to perform the work (include phone numbers).
- (d) Describe the work in step-by-step detail for each location, including excavation plans and how both the new and existing structures and utilities will be identified and protected.
- (e) Provide a detailed listing of any hardware, fittings, pipe plugs, flex couplings, tools, and materials needed to accomplish the work, and note the status of these items (on-hand, to-be-fabricated, on-order with expected delivery date, etc.).

- Include any manufacturer's specifications or recommendations, especially for any pipe plugs, sewer line fittings, and patching materials.
- (f) List all major equipment to be used to perform the work. Include in this item any pumps that will be used to perform the work and the rated capacity of the pumps at the anticipated suction head.
 - (g) List all equipment to be used in the event of an unplanned release and specify how the equipment will be used. The locations of standby pumps shall be specified in this item. The plan shall indicate that all standby equipment to be used in the event of an unplanned discharge can be delivered to the site and put into service within two hours of identification of any unplanned flow.
 - (h) List the safety equipment to be used, and describe any unique safety procedures. Cite the applicable OSHA standards covering the work.
 - (i) Describe any contingency plans the contractor will implement in the event of unplanned releases and/or damage to existing facilities. List all personnel and subcontractors that will be responsible for responding to unplanned releases or damaged lines. Provide qualifications for all such personnel and subcontractors, including education, formal training, and relevant experience.
 - (j) Describe how the public will be protected during the work, and include or cite any applicable traffic control plans.
 - (k) Describe the quality control procedures that will be used in the field.
 - (l) Discuss how temporary plugs or flow control devices will be secured, monitored, and removed.

The SDPP shall be in written form, and shall include any diagrams or sketches necessary for clarity. When possible, diagrams and sketches should be shown using the applicable project plan sheets.

The contractor shall modify the SDPP as necessary throughout the project to include any new or revised information relevant to the items listed above. The contractor shall resubmit the revised SDPP to the Engineer for approval in each case.

(3) Sewage Discharge Prevention Plan Approval:

The SDPP shall be submitted to the Engineer at least 21 calendar days before any work involving an active sewer line is to be done. The Engineer will review the plan, solicit comments from the owner/operator of the sewer line, and return the plan to the contractor within 14 calendar days from original submittal.

No work involving active sanitary sewer lines shall be done until a final SDPP meeting all the requirements specified in Subsection 107.15(C)(2) has been approved by the Engineer.

Approval of the contractor's Sewage Discharge Prevention Plans, personnel, or construction methods and operation shall not relieve the contractor from its responsibility to safely perform the work included in this contract, nor from its liability for damage resulting, either directly or indirectly, from its work performed under this contract.

(D) Service Connections:

(1) General:

In the event of interruption to water, sewer, or utility services as a result of accidental breakage or as a result of lines being exposed or unsupported, the contractor shall promptly notify the proper authority and shall cooperate with the said authority in the restoration of service. When service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

(2) Unidentified Water and Sewer Connections:

The contractor shall protect unidentified, undamaged water or sewer service connections encountered during excavation. The contractor shall immediately notify the Engineer when an unidentified service connection is encountered.

The contractor shall immediately repair unidentified water or sewer service connections that are damaged during excavation. Any damaged service connections shall be reported to the Engineer, including all remedial actions taken.

(E) Repairing Damaged Lines:

When the operations of the contractor result in damage to any utility line or service connection, the location of which has been brought to the contractor's attention, the contractor shall assume full responsibility for such damage.

Should an unplanned breakage occur in an active sewer line as a result of the contractor's operations, the contractor shall immediately notify the Engineer, and begin repairs to halt any flows and restore normal service, in accordance with the procedures described in the approved Sewage Discharge Prevention Plan. The contractor shall also immediately notify the affected utility company and the appropriate regulatory agencies. The contractor shall be responsible for repairing the damaged pipe, restoring any interruptions in service, and cleaning up the affected areas within 24 hours of the beginning of the spill. Sewage discharge damage assessments, as specified in Subsection 107.15(F), will be charged to the contractor for any unplanned breakage which results in a discharge.

The contractor shall be responsible to repair any breakage, in accordance with requirements of the broken line's owner/operator, and clean up the site per applicable codes and regulations of the Environmental Protection Agency, OSHA, Arizona Department of Environmental

Quality (ADEQ), and all other agencies' specifications, at no additional cost to the Department.

(F) Sewage Discharge Damage Assessments:

The Department will assess liquidated damages in accordance with the Table 1 below for each 24-hour period, or portion thereof, for each unplanned breakage that occurs in an active sanitary sewer line as a result of the contractor's operation. The rate of liquidated damages assessed is based on the type and quantity of effluent discharged as determined by the Engineer.

These liquidated damages do not relieve the contractor from any of its responsibilities under the contract, including any liquidated damages that may be assessed under Subsection 108.09 for late completion of the project.

Liquidated damages assessed by the Department will be independent of any penalties imposed by others.

The contractor acknowledges that Regulatory agencies may assess or impose civil or criminal penalties on the contractor resulting from sewer discharges.

The Department will not be responsible for any civil or criminal penalties, fines, damages, or other charges imposed on the contractor by any regulatory agency or court for sewage discharges that are a result, directly or indirectly, of the contractor's work performed under this contract.

| Table 1 | | |
|---|--|-------------------------|
| Liquidated Damages (each 24 hour period, or portion thereof) | | |
| Volume of Discharge | Raw Sewage or Industrial Wastewater | Treated Effluent |
| Less than 10,000 gallons | \$5,000.00 | \$1,000.00 |
| 10,000-99,999 gallons | \$10,000.00 | \$2,000.00 |
| 100,000-1 million gallons | \$25,000.00 | \$3,000.00 |
| Greater than 1 million gallons | \$40,000.00 | \$5,000.00 |

Liquidated damages shall be assessed for each 24 hour period, or portion thereof, until the contractor has completed all of the following tasks:

- (A) Stopped the discharge.
- (B) Repaired the damaged pipe.

- (C) Restored normal service.
- (D) Fully cleaned and disinfected the site to the satisfaction of the Engineer.

REDUCTION OF LIQUIDATED DAMAGES: Upon completion of tasks A, B, and C above, and prior to completion of Task D, the liquidated damages assessed for the current 24-hour period shall be at the rate shown in Table 1. However, for each subsequent 24-hour period, the assessment will be one half of the rate shown in Table 1.

Damages will continue at the reduced rate until the site has been fully cleaned and disinfected to the satisfaction of the Engineer.

As an example, the amounts assessed each 24-hour period for an unplanned discharge of 20,000 gallons of raw sewage, in which the contractor completes tasks A, B, and C within the second 24-hour period but does not complete full cleanup until the third 24-hour period, will be as follows:

| | |
|------------------------|-------------|
| First 24-hour period: | \$10,000.00 |
| Second 24-hour period: | \$10,000.00 |
| Third 24-hour period: | \$5,000.00 |

For this example, the total liquidated damage assessment will be \$25,000.00 (\$10,000 + \$10,000 + \$5,000).

(107UTIL, 05/03/16)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.15 Contractor's Responsibility for Utility Property and Services: of the Standard Specifications is modified to add:

The contractor shall be ADOT's Blue Stake field locator, and perform all requirements as prescribed in A.R.S. 40-360.21 through .29, for all underground facilities that have been installed by the contractor on the current project, until the project is accepted by ADOT.

At least two working days prior to commencing excavation, the contractor shall call BLUE STAKE CENTER, between the hours of 7:00 a.m. and 4:30 p.m., Monday through Friday for information relative to the location of buried utilities. The number to be called is as follows:

Projects Outside Maricopa County (800) 782-5348

Copies of existing ADOT permits, subject to availability, may be obtained from the ADOT Area Permit Supervisor as listed below:

SOUTHEAST DISTRICT

(928) 432-4916 2082 East US Hwy. 70
 (928) 402-5608 Safford, AZ 85546

POWER LINES:

Power lines and other utilities may be at various locations throughout the project limits. However, they are not anticipated to be in conflict. All work at or in close proximity to said lines shall be performed in accordance with all Federal, State, and local laws and regulations, including but not limited to:

- (1) Arizona law regarding "Underground Facilities" (A.R.S. 40-360.21, .22, .24, .26 and .28).
- (2) Arizona law regarding "High Voltage Power Lines and Safety Restrictions" (A.R.S. 40-360.41 - .45).
- (3) The Occupational Safety and Health Administration.
- (4) The National Electric Safety Code.

The contractor is cautioned to use care when operating near any utility facilities. It shall be the contractor's responsibility to determine the exact location of any utilities with the project limits prior to any construction.

The following agencies and utility companies have overhead and underground facilities in the area but are not anticipated to be in conflict:

| Utility | Contact | Telephone No. | E-mail |
|--------------------------|----------------|----------------------|-----------------------------|
| Cable One Communications | Chuck Dunlap | 928-651-5849 | Chuck.Dunlap@cableone.biz |
| CenturyLink | Rick Peters | 520-836-1997 | Rick.Peters@centurylink.com |

The following utility company has facilities that will require protection or adjustment by the contractor during construction. The contractor shall perform the work in accordance with the specifications on the plans and the Special Provisions:

| Utility | Contact | Telephone No. | E-mail |
|--|----------------|----------------------|-----------------------|
| City of Safford Water Division Manager | Gale Hedges | 928-432-4217 | ghedges@safford.az.us |

Potential conflicts with a city of Safford fire hydrant and relevant water facilities are at the southwest corner of 11th Street/US 191 intersections due to new sidewalk construction.

Conflicts are resolved by removing an existing fire hydrant, and its feeder line and installing new water line and fire hydrant in coordination and consent with the City of Safford Utility Department. Fire hydrant relocation plan is included in the project plans. Existing fire hydrant

at Sta. 1603+41.11, 34.15' Lt and its feeder to north are removed. A new fire hydrant at Sta. 1603+51.21, 48.12' Lt is installed and connected to existing water main with a new 6" water line. Fire hydrant relocation plan is reviewed and accepted by the City of Safford Public Works Department.

Also, the contractor shall make adjustments to grade of existing manholes, water meter boxes, valve boxes and fire hydrants. All work on the City of Safford utilities shall be done using the Standards for Public Works and Utilities within Subdivisions and Rights-of-Way, which reference MAG standards and Tucson Water standards. The these adjustments will be made under the following bid item numbers: Item 5050202 – Reset Frame and Cover for Manhole (Sewer, MAG Dtl 422; Item 8080645 – Reset Water Meter Box; Item 8080646 – Reset Frame and Cover for Valve Box; and Item 8080658 – Fire Hydrant (Special)(Adjust to Grade).

The following utility company has facilities within the project limits that require adjustment by the utility and coordination between the contractor and the utility.

| Utility | Contact | Telephone No. | E-mail |
|------------------------------|----------------|----------------------|------------------------|
| Valley Telephone Cooperative | Shane Thompson | 520-384-8993 | shane.thompson@vtc.net |

The contractor shall contact Valley Telephone Cooperative at least 10 days in advance of working near their facilities. Valley Telephone Cooperative will adjust their utility box covers to grade at their own expense.

The following Railroad has facilities in the area, and conflicts will be mitigated during construction.

Arizona Eastern Railroad (AZER)
5903 South Calle de Loma
PO Box 2200
Claypool, AZ 85532

Mr. Jim Soulia
General Manager
(928) 473-2447
James.soulia@gwrr.com

AZER owns and operates trains over tracks crossing the project area. This project will involve work in the Railroad R/W and adjacent to AZER live tracks. Conflicts will be mitigated once a Right of Entry (ROE) application has been executed by the ADOT contractor and sidewalk Easement license is obtained by ADOT from the Railroad. See Subsection 104.07 for further details.

(107FINA, 09/19/12)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.19 Federal Immigration and Nationality Act: of the Standard Specifications is revised to read:

(A) General:

The contractor and all subcontractors shall comply with all federal, state and local immigration laws and regulations, as set forth in Arizona Executive Order 2005-30, relating to the immigration status of their employees who perform services on the contract during the duration of the contract. The State shall retain the right to perform random audits of contractor and subcontractor records or to inspect papers of any employee thereof to ensure compliance.

The contractor shall include the provisions of Subsection 107.19 in all its subcontracts.

In addition, the contractor shall require that all subcontractors comply with the provisions of Subsection 107.19, monitor such subcontractor compliance, and assist the Department in any compliance verification regarding any subcontractor.

(B) Compliance Requirements for A.R.S. § 41-4401, Government Procurement, E-Verify Requirement; Sanctions:

By submission of a bid, the contractor warrants that the contractor and all proposed subcontractors are and shall remain in compliance with:

- (1) All federal, state and local immigration laws and regulations relating to the immigration status of their employees who perform services on the contract, and
- (2) A.R.S. Section 23-214, Subsection A (That subsection reads: "After December 31, 2007, every employer, after hiring an employee, shall verify the employment eligibility of the employee through the E-Verify program.").

A breach of a warranty regarding compliance with immigration laws and regulations shall be deemed a material breach of the contract, and the contractor and subcontractors are subject to sanctions specified in Subsection 107.19(D).

Failure to comply with a State audit process to verify the employment records of contractors and subcontractors shall be deemed a material breach of the contract, and the contractor and subcontractors are subject to sanctions specified in Subsection 107.19(D).

(C) Compliance Verification:

The State may, at any time and at its sole discretion, require evidence of compliance from the contractor or subcontractor.

Should the State request evidence of compliance, the contractor shall complete and return the State Contractor Employment Record Verification Form and Employee Verification Worksheet, provided by the Department, no later than 21 days from receipt of the request for such information.

Listing of the compliance verification procedure specified above does not preclude the Department from utilizing other means to determine compliance.

The State retains the legal right to inspect the papers of any employee who works on the contract to ensure that the contractor or subcontractor is complying with the warranty specified in Subsection 107.19(B).

(D) Sanctions for Non-Compliance:

For purposes of this paragraph, non-compliance refers to either the contractor's or subcontractor's failure to follow immigration laws or to the contractor's failure to provide records when requested. Failure to comply with the immigration laws or to submit proof of compliance constitutes a material breach of contract. At a minimum, the Department will reduce the contractor's compensation by \$10,000 for the initial instance of non-compliance by the contractor or a subcontractor. If the same contractor or subcontractor is in non-compliance within two years from the initial non-compliance, the contractor's compensation will be reduced by a minimum of \$50,000 for each instance of non-compliance. The third instance by the same contractor or subcontractor within a two-year period may result, in addition to the minimum \$50,000 reduction in compensation, in removal of the offending contractor or subcontractor, suspension of work in whole or in part or, in the case of a third violation by the contractor, termination of the contract for default.

In addition, if a contractor is in non-compliance three times within a two-year period, the Department will revoke the contractor's prequalification for a minimum of one year. Subcontractors and suppliers who are in non-compliance three times within a two-year period will be prohibited from participating in Department contracts for a minimum of one year.

Subcontractors who are in non-compliance three times within a two-year period, and who are prequalified with the Department as prime contractors, will also have such prequalifications revoked for a minimum of one year.

After the minimum one-year suspension, contractors, subcontractors, and suppliers may be considered eligible to participate in Department contracts, but only after successful demonstration, to the satisfaction of the Department, that their hiring practices comply with the requirements specified herein. If considered eligible, contractors shall be required to re-apply for prequalification and be accepted prior to bidding on Department contracts. Subcontractors interested in bidding on Department contracts as prime contractors shall also be required to re-apply for prequalification and be accepted prior to bidding. For purposes of considering suspension: (1) non-compliance by a subcontractor does not count as a violation by the contractor, and (2) the Department will count instances of non-compliance on other Department contracts.

The sanctions described herein are the minimum sanctions; in case of major violations the Department reserves the right to impose any sanctions up to and including termination, revocation of prequalification, and prohibition from participation in Department contracts, regardless of the number of instances of non-compliance.

Contractors, subcontractors, and suppliers may appeal the sanctions to the State Engineer. That appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. The appeal must be received by the State Engineer no later than seven calendar days after the Department’s determination. The State Engineer shall promptly consider any appeals and notify the interested party of the State Engineer’s findings and decision. The State Engineer’s decision shall be considered administratively final.

Any delay resulting from a compliance verification or a sanction under this subsection is a non-excusable delay. The contractor is not entitled to any compensation or extension of time for any delays or additional costs resulting from a compliance verification or a sanction under subsection 107.19.

An example of the minimum sanctions under this subsection is presented in the following table:

| Offense by: | | | Minimum Reduction in Compensation |
|---|-----------------|-----------------|---|
| Contractor | Subcontractor A | Subcontractor B | |
| First | | | \$10,000 |
| | First | | \$10,000 |
| | Second | | \$50,000 |
| | | First | \$10,000 |
| | Third | | \$50,000 * |
| * Will, in addition, result in removal of the subcontractor, prohibition from participating in Department contracts, and revocation of any Department prequalifications that the subcontractor may have obtained. | | | |

(108SUBLT, 02/22/16)

SECTION 108 PROSECUTION AND PROGRESS:

108.01 Subletting of Contract: the fifth paragraph of the Standard Specifications is revised to read:

The Department may also refuse to approve any entity as a subcontractor or supplier for any of the reasons for which it could refuse to allow an entity to submit a bid, suspend the entity from bidding, or declare the entity non-responsible.

108.01 Subletting of Contract: the sixth paragraph of the Standard Specifications is modified to add:

- (G) Verification that an alternative dispute resolution process to resolve payment and prompt payment disputes is included in each subcontract. The alternative dispute resolution process shall include a means of prompt escalation beyond the project level and provide the opportunity to hire a mediator.

108.01 Subletting of Contract: the seventh paragraph of the Standard Specifications is revised to read:

The Engineer will not consent to subletting of any portion of the contract until:

- (a) The Engineer receives a copy of the subcontract or lower tier subcontract, and
- (b) The AZUTRACS Registration Number for the subcontractor has been provided.

The contractor's schedule shall allow seven calendar days for the Department's subcontract review of each subcontract.

The Engineer's consent shall in no way be construed to be an endorsement of the subcontractor or its ability to complete the work in a satisfactory manner.

If a subcontractor, of any tier, begins work on the contract prior to the contractor submitting the required documentation and receiving consent from the Engineer, the Department will withhold \$1,000 from monies due or becoming due the contractor as liquidated damages. The liquidated damages will be withheld for each subcontractor, of any tier, that starts work without the consent of the Engineer. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

If a subcontractor, of any tier, is found working on the project without an approved contract the Engineer will immediately stop work on the subcontract. Work shall not resume until all required documentation is submitted and approved by the Engineer. The contractor shall not be entitled to additional compensation or an extension of contract time for any delays to the work because of the contractor's failure to submit the required documentation.

(108PRCN, 05/03/16)

SECTION 108 PROSECUTION AND PROGRESS:

108.03 Preconstruction Conference: the seventh paragraph of the Standard Specifications is revised to read:

The contractor shall submit a traffic control plan in accordance with Subsection 701-1. The contractor shall designate an employee who is competent and experienced in traffic control

to implement and monitor the traffic control plan. The qualifications of the designated employee must be satisfactory to the Engineer. Such designated employee shall have successfully completed a recognized traffic control supervisor training program. The traffic control supervisor training provided by the American Traffic Safety Services Association (A.T.S.S.A.) or the International Municipal Signal Association (IMSA) shall be acceptable. Training through other programs must be approved in advance by the Engineer. The contractor shall submit proof that the proposed individual has completed an approved training program at the preconstruction conference. The training shall be current, and must be valid throughout the duration of the project. In order to remain current with the Department, the traffic control supervisor training shall be completed or renewed every four years.

108.03 **Preconstruction Conference:** the fifth paragraph of the Standard Specifications is hereby deleted.

(108TIME, 10/12/01)

SECTION 108 - PROSECUTION AND PROGRESS:

108.08 **Determination and Extension of Contract Time:** the first paragraph of the Standard Specifications is revised to read:

The time allowed for the completion of the work included in the contract will be **110** working days, and will be known as the "Contract Time."

(108FCWT, 7/01/14)

SECTION 108 - PROSECUTION AND PROGRESS:

108.09 **Failure to Complete the Work on Time:** the Schedule of Liquidated Damages table of the Standard Specifications is revised to read:

| SCHEDULE OF LIQUIDATED DAMAGES | | | |
|---------------------------------------|-------------------|-----------------------------|--------------|
| Original Contract Amount | | Liquidated Damages Per Day | |
| From More Than: | To and Including: | Calendar Day or Fixed Date: | Working Day: |
| \$ 0 | \$ 100,000 | \$ 430 | \$ 600 |
| 100,000 | 500,000 | 640 | 900 |
| 500,000 | 1,000,000 | 1,000 | 1,400 |
| 1,000,000 | 2,000,000 | 1,290 | 1,800 |
| 2,000,000 | 5,000,000 | 1,860 | 2,600 |
| 5,000,000 | 10,000,000 | 2,710 | 3,800 |
| 10,000,000 | 20,000,000 | 2,790 | 3,900 |
| 20,000,000 | 30,000,000 | 3,570 | 5,000 |
| 30,000,000 | 60,000,000 | 5,500 | 7,700 |

| SCHEDULE OF LIQUIDATED DAMAGES | | | |
|---------------------------------------|-------------------|-----------------------------|--------------|
| Original Contract Amount | | Liquidated Damages Per Day | |
| From More Than: | To and Including: | Calendar Day or Fixed Date: | Working Day: |
| 60,000,000 | 90,000,000 | 9,430 | 13,200 |
| 90,000,000 | ----- | 9,430 | 13,200 |

(109FORCE, 02/20/08)

SECTION 109 - MEASUREMENT AND PAYMENT:

109.04(D)(3)(a) Rental Rates (Without Operators): of the Standard Specifications is modified to add:

The Rental Rate Blue Book adjustment factor (F) will be 0.933.

(109RET, 7/01/14)

SECTION 109 - MEASUREMENT AND PAYMENT:

109.06(C) Payroll Submittals: of the Standard Specifications is revised to read:

The contractor shall submit payrolls electronically through the internet to the Department's web-based certified payroll tracking system. This requirement shall also apply to every lower-tier subcontractor that is required to provide certified payroll reports.

If, by the 15th of the month, the contractor has not submitted its payrolls for all work performed during the preceding month, the Engineer will provide written notification of the discrepancies to the contractor. For each payroll document that the contractor fails to submit within 10 days after the written notification, the Department will retain \$2,500.00 from the progress payment for the current month. The contractor shall submit each complete and correct payroll within 90 days of the date of written notification. If the payroll is complete and correct within the 90-day time frame, the Department will release the \$2,500.00 on the next monthly estimate. For each payroll that is not acceptable until after the 90-day time frame, the Department will only release \$2,000.00 of the \$2,500.00 retained. The Department will retain \$500.00 as liquidated damages. Such \$500.00 retentions will not relieve the contractor of its responsibility to provide each required payroll, complete and correct, as specified above. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

109.07 Partial Payment for Material on Hand: the fifth paragraph of the Standard Specifications is hereby deleted.

(201CLGB, 10/18/10)

SECTION 201 - CLEARING AND GRUBBING:

201-3.02 Removal and Disposal of Materials: the second and third paragraphs of the Standard Specifications are revised to read:

In the disposal of all tree trunks, stumps, brush, limbs, roots, vegetation and other debris, the contractor shall comply with the requirements of Title 49, Chapter 3, of the Arizona Revised Statutes, and with the Rules and Regulations for Air Pollution Control, Title 18, Chapter 2, Article 6, adopted by the Arizona Department of Environmental Quality pursuant to the authority granted by the Arizona Administrative Code.

Burning will be permitted only after the contractor has obtained a permit from the Arizona Department of Environmental Quality and from any other Federal, State, County or City Agency that may be involved.

SECTION 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

202-3.02 Removal of Pipe: of the Standard Specifications is modified to add:

Existing pipe that is to remain shall be connected to new pipe as shown on the project plans.

Any damage to existing pipe that is to remain caused by the contractor's operations, as determined by the Engineer, shall be repaired by the contractor at no cost to the Department.

202-3.03(B) Bituminous Pavement: of the Standard Specifications is modified to add:

Upon removal, the existing asphaltic concrete material not approved by the Engineer for use on the project, shall become the property of the contractor to dispose of off-site.

202-3.03(D) Bituminous Pavement Removal By Milling (When an Asphaltic Concrete Friction Course is to be Placed on the Milled Surface): is hereby added to the Standard Specifications:

Existing asphaltic concrete shall be removed by milling in accordance with the details shown on the project plans and as specified herein. The milling equipment shall be specifically designed to remove material to a controlled line and grade by means of grinding or chipping. The equipment used shall be capable of removing the existing asphaltic concrete uniformly throughout the milled area at the required cross-slope and within 1/8 inch of the specified removal depth. The specified removal depth of the existing bituminous pavement shall be 1/2 inches. The removal shall be accomplished in a manner which does not destroy the integrity of any pavement that remains. During production milling, the contractor shall verify the actual depth of milling required to remove the ACFC to the desired underlying pavement surface. If

it is determined that the required milling depth is greater than the specified milling depth, the additional material shall be completely removed to the desired underlying pavement surface, as approved by the Engineer, at no additional cost to the Department. The milled material not approved by the Engineer for use on the project, shall become the property of the Department. The contractor shall haul the material to the ADOT Southeast District Safford Maintenance Yard, 3268 US 191, at the intersection of US 191 and Discovery Park Boulevard in Safford and place it in a designated stockpile area. The contractor shall notify ADOT Southeast District Safford Maintenance Supervisor, Brad Smith (928-428-4735), two working days in advance of delivery to coordinate this activity.

The contractor shall remove raised pavement markers prior to milling.

The milled surface shall have a maximum mean macrotexture depth of 4.50 millimeters, as determined in accordance with Arizona Test Method 742 - Mean Macrotexture Depth of Milled Pavement.

At the start of the milling operation, the contractor shall mill a 500-foot test section. The milled surface of the test section shall be evaluated by the Engineer for compliance with the maximum mean macrotexture depth requirement. If the milled surface is in compliance with the macrotexture requirement, the contractor may begin production milling. If the milled surface is not in compliance with the macrotexture requirement, the contractor shall make adjustments to the milling operation and then mill another test section.

During production milling, the mean macrotexture depth shall be determined at a minimum frequency of one test per one-half mile per lane. If, at any time, during the milling operation the Engineer determines that the macrotexture requirement is not being achieved, the contractor shall stop milling. Milling shall not resume until the Engineer is satisfied that the macrotexture requirement can be met or until successful completion of another test section. The forward speed of the milling machine during production milling shall not exceed the speed used for the test section. The forward speed of the milling machine shall be checked throughout each production day, or at the discretion of the Engineer.

The profile of the milled surface, in both the longitudinal and transverse directions, shall not vary by more than 1/8 inch over a distance of ten feet.

Under no circumstances shall the removal of existing asphaltic concrete begin until the mix design for replacement asphaltic concrete has been approved by the Engineer.

The extent of removal of existing asphaltic concrete must be in keeping with the contractor's ability to produce, haul, place and compact replacement asphaltic concrete so that at all times the length of milled surface is at a minimum. If the contractor's production of replacement asphaltic concrete is stopped for any reason, the removal of asphaltic concrete shall either cease or shall be reduced. The Engineer will be the sole judge as to whether the removal shall cease or be reduced. The Engineer's decision will be based on the reason for the stoppage in asphaltic concrete production, the expected length of the stoppage, the type and depth of the material being removed, and the time of day.

Asphaltic concrete shall be placed as soon as possible after the milling. The surface on which the material is to be placed shall be uniform and free of loose material.

The length of milled surface at any one time shall not exceed two miles, or one-half the length of the work, whichever is less. Asphaltic concrete shall be placed on the milled surface before the end of each day's work. The lane shall be opened to traffic at the end of each day's work.

In the event of circumstances beyond the control of the contractor, such as equipment breakdown, or if the production of the replacement asphaltic concrete has been stopped by the Engineer and the contractor is unable to comply with the requirements in the preceding paragraph, the contractor shall provide and maintain such traffic control devices that the Engineer deems necessary under the circumstances in order to provide safe and efficient passage through the work zone.

If the Engineer deems it to be warranted, the Engineer will require that the contractor provide for the surface drainage of areas where the pavement surface has temporarily been removed.

Pavement, to be removed by milling, adjacent to manholes, valve boxes, small radius curbs and other fixed objects that produce confined areas shall be removed with milling equipment specifically designed to operate in restricted areas and capable of removing asphaltic concrete of the specified thickness without damage or displacement of the adjacent object. At the discretion of the Engineer, such areas may be excluded from macrotexture testing.

On projects with existing curb and gutter, any asphaltic concrete buildup in the gutter designated to be removed, shall be removed prior to the pavement removal operation by equipment and methods approved by the Engineer. The equipment and methods used shall be capable of removing the asphaltic concrete buildup without causing damage to the curb and gutter.

202-5 **Basis of Payment:** the first paragraph of the Standard Specifications is revised to read:

Payment for the accepted quantities of removal of structures and obstructions will be made by lump sum or by specific removal items or by a combination of both. Payment for removal of structures and obstructions not listed in the bidding schedule, but necessary to perform the construction operations designated on the project plans or specified in the Special Provisions shall be considered as included in the prices of contract items.

ITEM 2020053 – REMOVE (CATCH BASIN):

Description:

The work under this item consists of furnishing all labor, equipment and materials to remove an existing catch basin at the location shown on the project plans in accordance with Section 202 of the Standard Specifications and as specified herein.

Construction Requirements:

Removal work shall be in accordance with the requirements of Subsections 202-3.01 and 202-3.02. All removals shall become the property of the contractor.

Method of Measurement:

Remove (Catch Basin) will be measured on a per each basis

Basis of Payment:

The accepted quantities of Remove (Catch Basin) measured as provided above, will be paid for at the contract unit price per each, complete in place including excavation, backfilling and compaction, which price shall be full compensation for the work described and specified herein and as shown on the project plans.

ITEM 2020056 - REMOVE AND SALVAGE (TRAFFIC SIGNAL EQUIPMENT):

Description:

The work under this item consists of removing the traffic signal equipment at the US 191 /US 70 intersections as shown on the signal plans, salvage them to ADOT Traffic Signal and Lighting Supervisor. The work shall include the removal of the following traffic signal equipment:

US 191 and US 70

| | |
|--|----------|
| Components in the Traffic Controller Cabinet | 1 Each |
| Conductors | 1 L. Sum |

Construction Requirements:

Removed traffic signal equipment shall be properly handled in accordance with the manufacturer's recommendations and in a manner approved by the Engineer to assure that such traffic signal equipment will continue to be suitable for reuse. Any damage to the traffic signal equipment caused by the contractor's removal or delivery activities, as determined by the Engineer, shall be replaced by the contractor at no cost to the Department.

Holes, cavities, trenches and depressions resulting from the removals shall backfilled and compacted be in accordance with the requirements of Subsection 202-3.01.

The contractor shall contact with Anthony Barcelo, ADOT Traffic Signal and Lighting Supervisor (520-349—0133) two working days prior to the removal of the traffic signal equipment to arrange for the salvaged equipment to be picked up by ADOT.

Method of Measurement:

Remove and Salvage (Traffic Signal Equipment) will be measured as a single unit of work.

Basis of Payment:

The accepted quantities of Remove and Salvage (Traffic Signal Equipment), measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for the work complete in place, as specified herein and shown on the project plans.

ITEM 2020057 – REMOVE AND SALVAGE (SIGN ASSEMBLY):

Description:

The work under this item consists of furnishing all labor, equipment and materials to remove all regulatory, warning and object sign panels, posts, foundations and labor as indicated on the plans. The work shall include any necessary excavation, backfilling and compaction to restore the excavated area to finished grade. The work shall also include the salvage and delivery of removed sign panels to the ADOT Southeast District Safford Maintenance Yard.

Construction Requirements:

The removal of the sign assembly shall be in accordance with the requirements of Subsection 202-3.06. All removed posts and foundations shall become the property of the contractor and disposed of offsite. Holes, cavities, trenches and depressions resulting from the removals shall be backfilled and compacted in accordance with the requirements of Subsection 202-3.01. If a sign is damaged due to the contractor's activities, as determined by the Engineer, the contractor shall replace the sign at no additional cost to the Department. All removed sign panels shall be salvaged and delivered to:

ADOT Southeast District Safford Maintenance Office
3268 US 191, Safford, Arizona 85546

Method of Measurement:

Remove and Salvage (Sign Assembly) will be measured as unit for each sign removed and salvaged.

Basis of Payment:

Remove and Salvage (Sign Assembly) measured as provided above, will be paid for at the contract unit price per each, complete in place, including, excavation, backfilling, compaction, disposal of posts and foundations, and salvaging of sign panels.

ITEM 2020060 – REMOVE AND SALVAGE (FIRE HYDRANT):

Description:

The work under this item consists of furnishing all labor, equipment and materials necessary to remove and salvage of existing fire hydrant, fire hydrant pipe feeder and fittings, and backfilling the resulting cavities at the locations shown on the project plans and in accordance with the requirements of these Special Provisions.

Construction Requirements:

All work shall be performed in coordination with City of Safford Utility Department and subject to their approval. Contractor shall remove, salvage and clean the existing fire hydrant and fittings. Contractor shall deliver and unload salvaged fire hydrant and appurtenances to City of Safford Utility Department - Attn: Gale Hedges. Prior to removing the fire hydrant, contractor shall notify Gale Hedges at (928) 432-4200, a minimum of two working days prior and make arrangements for delivery of the salvaged property. If the existing fire hydrant is damaged due to the contractor's activities, as determined by the Engineer, the contractor shall replace the fire hydrant at no additional cost to the Department.

The contractor shall also remove and dispose a portion of the existing fire hydrant feeder pipe as per project plan accordance with the requirements of all applicable codes and requirements. The removed materials may not be reinstalled on any other ADOT project in place of new materials.

In locations where excavation has occurred, the resulting hole shall be backfilled and compacted in accordance with the requirements of Subsection 202-3.01 of the Standard Specifications to match the surrounding surfaces. All trenches shall be backfilled and compacted in accordance with the requirements of Subsection 202-3.01 of the Standard Specifications to match the surrounding surfaces.

Method of Measurement:

Remove and Salvage (Fire Hydrant) will be measured per each fire hydrant removed and salvaged.

Basis of Payment:

The accepted quantities of Remove and Salvage (Fire Hydrant), measured as provided above, will be paid for at the contract unit price per each, which price shall be full compensation for the work, complete in place including excavating, removal, salvage, cleaning and delivery of fire hydrant, fire hydrant piping, and fittings, and backfilling as described and specified herein and as shown on project plans.

ITEM 2020153 - REMOVE (TRAFFIC SIGNAL EQUIPMENT):

Description:

The work under this item consists of the removal and disposal of traffic signal equipment at the US 191/US 70 intersections as shown on the signal plans. The work shall include the removal of the following traffic signal equipment:

US 191 and US 70

| | |
|----------------------------------|------------|
| No. 3 Pull Box | 1 Each |
| No. 7 Pull Box with Ext | 2 Each |
| No. 7 Pull Box | 2 Each |
| Foundations | 4 Each |
| Conduit | 360 L. Ft. |
| Loop Detector (6' X 70') | 4 Each |
| Traffic Controller Cabinet Shell | 1 Each |
| Battery Backup Cabinet | 1 Each |
| Power Meter Pedestal | 1 Each |
| Type C Signal Pole | 2 Each |
| Type Q Signal Pole | 1 Each |
| Type R Signal Pole | 1 Each |
| Type C Signal Head | 6 Each |
| Type F Signal Head | 6 Each |
| Type Q Signal Head | 1 Each |
| Pedestrian Signal Head | 8 Each |
| Pedestrian Push Button | 4 Each |
| Type II Mounting Assembly | 6 Each |
| Type V Mounting Assembly | 1 Each |
| Type VII Mounting Assembly | 3 Each |
| Type XI Mounting Assembly | 8 Each |
| Luminaires | 4 Each |
| Mast Arms | 8 Each |
| Video Detection | 2 Each |

Construction Requirements:

The removed traffic signal equipment shall become the property of the contractor and disposed of offsite. All equipment shall be disposed of by the contractor in accordance with local ordinances, and may not be reinstalled on any other ADOT project in place of new materials.

Traffic signal pole foundations shall be removed in accordance with the requirements of Subsection 202-3.04.

Holes, cavities, trenches and depressions resulting from the removals shall backfilled and compacted be in accordance with the requirements of Subsection 202-3.01.

Method of Measurement:

Remove (Traffic Signal Equipment) will be measured as a single unit of work.

Basis of Payment:

The accepted quantities of Remove (Traffic Signal Equipment), measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for the work complete in place, as specified herein and shown on the project plans.

ITEM 2020155 - REMOVE (AND REPLACE TEMPORARY TRAFFIC CONTROL DEVICES):

Description:

The work under this item consists of temporarily removing and/or adjusting project related temporary traffic control devices such as barricades, sign panels, etc., that would impede the passage of vehicles transporting oversized loads through the project area and replacing those devices to locations as shown in the traffic control plans after the vehicles have passed.

Construction Requirements:

In coordination with the ADOT Permit Office, the Engineer will notify the contractor of the three day window that an oversize load carrier is anticipated within the project limits. The oversize load carrier will be required to call the Engineer one hour prior anticipated arrival of vehicle(s) transporting oversized loads within the project limits. The Engineer shall notify the contractor immediately upon receipt of notice from the carrier. The contractor shall remove and/or adjust the locations of the temporary traffic control devices within fifteen minutes prior to the arrival of the vehicle(s) and replace and/or adjust the temporary traffic control devices to the proper locations within fifteen minutes after the vehicle(s) has passed.

Method of Measurement:

Remove (And Replace Temporary Traffic Control Devices) will be measured as a unit each for each time the temporary traffic control devices are removed and replaced.

Basis of Payment:

The accepted quantities of Remove (And Replace Temporary Traffic Control Devices), measured as provided above, will be paid for at the contract unit price per each, which price shall be full compensation for the work complete in place as specified herein.

(202SCUT, 07/31/90)

ITEM 2020201 - SAW CUTTING:

The work under this item shall consist of saw cutting the existing pavement where new asphaltic concrete is to match existing bituminous surfaces with no provisions for overlaying the entire section. This item shall also include saw cutting of existing Portland cement concrete pavement, sidewalks, driveways and parking lots where new construction shall match the grade of existing surfaces that are to remain where called for on the project plans or where designated by the Engineer.

Saw cuts shall be made to a minimum depth of 1-1/2 inches and in all cases deep enough to insure a neat vertical joint. Portland cement concrete designated to remain that is damaged by the saw cutting, shall be replaced in kind at the contractor's expense.

Measurement of this work will be made horizontally at each location to the nearest tenth of a linear foot.

Payment for this work will be made at the contract price per linear foot for Item 2020201, Saw Cutting, which price shall be full compensation for the work, as described and specified herein and on the project plans.

Payment will be made on the total length of saw cut to the nearest foot.

ITEM 2020366 - REMOVE LEAD-BASED PAINT MATERIALS:

ITEM 2020370 - DISPOSE OF LEAD-BASED PAINT MATERIALS (FORCE ACCOUNT):

1.0 Description:

The work under these items shall consist of removing and appropriately disposing of lead-based paint materials in accordance with the requirements described herein.

The Department has tested the painting materials on this project and has determined the presence of lead in the striping materials on the northeast corner curb of the railroad crossing and US 191. The approximate quantity of **red** striping materials containing lead is **40** linear feet.

2.0 Lead Abatement Subcontractor:

The contractor shall select a lead abatement subcontractor that has the ability to remove, manage and dispose of lead based materials. All individuals performing lead abatement related work on this contract shall possess at least one of the following certifications:

- EPA Lead Supervisor for lead abatement, or

- EPA Lead Worker Certification for all lead abatement workers/laborers.

The certification shall be current, and must be valid throughout the duration of the project. At least one individual with EPA Lead Supervisor certification shall be on-site when lead abatement work is being performed.

The lead abatement subcontractor shall have three years of documented experience performing related work in the State of Arizona.

The contractor shall submit documentation of the lead abatement subcontractor's certifications for all employees to be working on the project and the qualifications of the firm at the preconstruction conference. The contractor's documentation of qualifications shall provide details indicating the types of relevant experience, and shall provide the number of months of each type of experience to be considered for approval.

The Engineer will approve or reject the abatement subcontractor within 10 calendar days after receipt of documentation of experience and certifications.

The contractor will not be allowed an extension in contract time for any delays to the work because of the failure of the contractor's lead abatement subcontractor to meet the Department's qualifications.

3.0 Removal Plan:

The lead abatement subcontractor shall be responsible for preparation of a comprehensive removal and disposal plan (hereinafter referred to as the removal plan) for removal, handling, storage, testing, and disposal of the lead-based paint materials. The removal plan shall also specify the proposed storage container, and the proposed location at which the removed lead-based paint material is to be stored during testing. The removal plan shall include environmental and safety measures to comply with federal, state and local requirements for the removal and disposal of regulated material.

The contractor shall submit the removal plan to the Engineer for review a minimum of 10 working days prior to any work that will disturb the lead-based paint material.

The Engineer will determine if the removal plan addresses all the required elements, and will return it as approved or disapproved within 10 calendar days after receipt. The pavement and the **curb at the northeast corner of the railroad crossing and US 191** shall not be disturbed in any way until the removal plan has been approved in writing by the Engineer.

4.0 Compliance Responsibility:

All work involved with the removal, handling, temporary storage, testing, and disposal of the lead-based paint materials shall be performed by the contractor's lead abatement subcontractor.

However, the contractor shall be fully responsible for the work, and for the proper disposal of the removed lead-based paint materials as specified herein, all in accordance with the applicable federal, state, and local standards, regulations and requirements, including 29 CFR, Lead Exposure in Construction, Interim Final Rule. The contractor shall bear the responsibility for any non-compliance, and shall hold the Department, its agents, officials, and employees harmless from all liability which may result from non-compliance with such applicable Federal, State and Local standards, regulations and requirements.

5.0 Construction Requirements:

The contractor shall supply potable water for their employees to wash their hands after handling the lead-based paint materials, prior to eating, drinking, or tobacco use of any kind.

The lead-abatement subcontractor shall remove the lead-based paint materials in accordance with the approved removal plan. The lead-based paint materials shall not be abraded in any way including, but not limited to, grinding, sanding, or heating.

The removed lead-based paint materials shall be placed in the approved storage container (barrel, roll-off, etc.) The lead abatement subcontractor shall perform the Toxicity Characteristic Leaching Procedure (TCLP) analysis on the removed lead-based paint materials. The storage container may be temporarily stored at an ADOT Maintenance facility until the final disposal determination is made. Should the lead abatement subcontractor choose to store the container at an ADOT Maintenance facility, the removal plan shall specify which facility, and the contractor shall contact the facility supervisor to schedule delivery of the container with the removed lead-based paint materials.

After completion of the TCLP analyses, the lead abatement subcontractor shall supplement the removal plan with specific requirements for disposal of the lead-based paint materials. The contractor shall submit the revised removal plan to the Engineer for approval within 10 working days of completion of all TCLP analyses, and before disposal of the lead-based paint material.

If the TCLP analyses indicate that the lead-based paint material must be disposed of at a hazardous waste facility, the cost of disposal will be paid under the force account item included in the bid schedule for disposal.

If the TCLP analyses indicate that the lead-based paint material may be disposed of as a non-hazardous construction waste, the disposal shall be included in the cost of this item.

The contractor shall also provide a letter and manifest certifying that the lead abatement subcontractor has disposed of the lead-based paint material in accordance with the final removal plan. Such letter and manifest shall be submitted to the Engineer within 10 working days of final disposal.

The contractor shall not store the lead-based paint materials beyond the duration of the contract time. Notice of substantial completion, as specified in Subsection 105.19, will not be given until the lead-based paint materials are removed from the temporary storage site and

properly disposed of in accordance with the removal plan, and the Engineer has received the above-referenced certification letter and manifest.

A time extension will not be granted due to the contractor's failure to comply with the requirements specified herein.

6.0 Method of Measurement:

Removal of lead-based paint materials from the from the curb face at the northeast corner of the railroad crossing and US 191 will be measured on a lump sum basis.

Disposal of lead-based paint materials at a hazardous waste facility will be measured on a force account basis.

7.0 Basis of Payment:

Payment for removal of lead-based material from the curb face at the northeast corner of the railroad crossing and US 191 will be made at the contract lump sum price, which price shall be full compensation for the work, including development of the removal plan, removal, handling, temporary storage, testing, and, if allowed, disposal of the lead-based paint material as a non-hazardous construction waste.

If the TCLP analyses indicate that the lead-based paint material must be disposed of at a hazardous waste facility, the cost of disposal will be paid under Item 2020370 - Dispose Of Lead-Based Paint Materials (Force Account).

For the force account work, the abatement subcontractor shall complete and submit the Subcontractor Force Account Weekly Data Sheet, available on the Department's Construction Group website. For work performed by the abatement subcontractor, the data sheet shall include the abatement subcontractor's itemized costs for labor, materials and equipment. The payment for the abatement subcontractor's labor, materials and equipment will be calculated in accordance with Subsection 109.04(D) of the Standard Specifications, as shown on the data sheet.

Additional costs of disposal of the lead-based paint materials will be paid based on an invoice, hereinafter called the Hazardous Waste Facility Invoice. A sum equal to five percent of the Hazardous Waste Facility Invoice amount will be added to the Hazardous Waste Facility Invoice amount to calculate Direct Charges.

$$\text{Direct Charges} = \text{Hazardous Waste Facility Invoice} \times 1.05$$

The contractor will be allowed a supplemental markup of five percent of the subcontractor's costs. A Sub-total will be calculated as follows:

$$\text{Sub-total} = \text{Lead Abatement Subcontractor Costs} \times 1.05$$

The Lead Abatement Subcontractor Costs are its labor, materials, equipment and direct charges.

An amount equal to 65 percent of the Sub-total, as determined above, and multiplied by the applicable sales tax rate, will be added to the Sub-total.

Finally, an amount will be added as an allowance for the Performance and Payment Bond, calculated as follows:

$$\text{Bond allowance} = 0.005 \times [\text{Sub-total} + (0.65 \times \text{Sub-total} \times \text{sales tax rate})].$$

The total contractor payment (TCP) will be as follows:

$$\text{TCP} = (\text{Sub-total}) + (0.65 \times \text{Sub-total} \times \text{sales tax rate}) + (\text{Bond allowance}).$$

(207DSP, 02/20/08)

SECTION 209 FURNISH WATER: of the Standard Specifications is hereby deleted.

SECTION 207 BLANK of the Standard Specifications is revised to read:

SECTION 207 DUST PALLIATIVE:

207-1 Description:

The work under this section shall consist of applying all water required for the control of dust as considered necessary for the safety and convenience of the traveling public, and for the reduction of the dust nuisance to adjacent property.

207-2 Blank

207-3 Construction Requirements:

The use of pressure pumps and spray bars on all sprinkling equipment used for the application of dust palliative will be required. The use of gravity flow spray bars and splash plates will not be permitted.

Water applied for dust control shall be as approved or directed by the Engineer. The contractor shall provide appropriate equipment for effective control of dust.

207-4 Method of Measurement and Basis of Payment:

No measurement will be made for application of dust palliative, including furnishing water and all necessary equipment and labor, the cost being considered as included in contract items.

(403ACHP, 5/07/13)

SECTION 403 ASPHALTIC CONCRETE HOT PLANT REQUIREMENTS:

403-2 Requirements: the third paragraph of the Standard Specifications is revised to read:

The mineral admixture shall be added and thoroughly mixed with the mineral aggregate by means of a mechanical mixing device prior to the mineral aggregate and mineral admixture entering the dryer. For all asphaltic concrete mixes except ACFC (Specification Sections 407 and 411) and AR-ACFC (Specification Section 414), the moisture content of the combined mineral aggregate shall be a minimum of three percent by weight of the aggregate during the mixing process. For ACFC and AR-ACFC mixes, the mineral aggregate shall be wet with free moisture on the surface of the aggregate just prior to the mixing process. To ensure that adequate mixing water is available on the surface of the aggregate, the Engineer may require that the mineral aggregate for ACFC and AR-ACFC mixes have a moisture content of up to 1-1/2 percent above the combined water absorption.

403-2 Requirements: the twelfth paragraph of the Standard Specifications is revised to read:

The contractor shall provide daily documentation of the weight and proportion of each individual component (mineral aggregate, mineral admixture, and bituminous material) incorporated into the mix. In addition, when reclaimed asphaltic pavement (RAP) is used, the contractor shall provide daily documentation of the weight, determined by a belt scale, and proportion of material from each individual RAP stockpile incorporated into the mix. The percent moisture content of the RAP material from each stockpile shall also be determined and provided daily by the contractor.

When Warm Mix Asphalt (WMA) technologies are used, the contractor shall provide the percent of water (for WMA water foaming processes) and/or the percent of WMA additive incorporated in the mix. The percent of each WMA technology shall be reported either by weight of total mix or by weight of total binder.

When incorporating WMA technologies, the hot plant shall be modified as required by the WMA technology manufacturer to introduce the WMA technology. Plant modifications may include additional plant instrumentation, the installation of asphalt binder foaming systems and/or WMA additive delivery systems, adjusting the plant burner and/or the mixing drum flights in order to operate at lower production temperatures, and/or reducing the production rate of WMA.

(404BITUM, 01/26/16)

SECTION 404 BITUMINOUS TREATMENTS:

404-1 Description: the first paragraph of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing all materials and constructing or applying a single or multiple course bituminous treatment in accordance with the requirements of the specifications and in reasonably close conformity to the lines shown on the project plans or established by the Engineer.

404-2.02(A) General: the first paragraph of the Standard Specifications is revised to read:

The contractor shall provide a source of aggregate material in accordance with the requirements of Section 1001.

404-3.02(A) Distributor Truck: the second paragraph of the Standard Specifications is revised to read:

Prior to the spreading of bituminous material, all distributor trucks proposed for use shall have been tested for rate of transverse spread, in accordance with the requirements of Arizona Test Method 411, and certified within 12 months prior to the date of spreading in accordance with ADOT Materials Policy and Procedure Directive No. 14, "Testing and Certification of Bituminous Distributor Trucks". However, the Engineer may at any time require that each distributor truck be tested to determine the rate of the transverse spread.

404-3.12 Tack Coat: of the Standard Specifications is revised to read:

Tack coat shall be applied prior to placing a bituminous mixture on a primed surface, an existing bituminous surface, or an existing Portland cement concrete pavement surface. Tack coat shall also be applied between layers of bituminous mixtures. A light coat of bituminous material shall also be applied to edges or vertical surfaces against which a bituminous mixture is to be placed.

The contractor shall choose the bituminous material to be used for tack coat. The Engineer must approve the contractor's choice of bituminous material prior to its use.

The bituminous material used for tack coat shall conform to the requirements of Section 1005.

The rate of application for the specific usage will be specified by the Engineer. The following table shows approximate tack coat application rates:

| Type of Bituminous Material | Approximate Tack Coat Application Rates: Gallons / Square Yard | | Payment Factor |
|--|--|----------------------|----------------|
| | Prior to Placing ACFC or AR-ACFC | All Other Tack Coats | |
| Emulsified Asphalt (Special Type) – See Note Below. | Not Allowed | 0.12 | 0.7 |
| Emulsified Asphalt (Other than Special Type) | 0.08 | 0.08 | 1.0 |
| Asphalt Cement | 0.06 to 0.08 | 0.06 to 0.08 | 1.0 |
| Note: Emulsified Asphalt (Special Type) shall consist of Type SS-1 or CSS-1 emulsified asphalt diluted with water to provide an asphalt content of not less than 26 percent. | | | |

If emulsified asphalt of any type is used, it shall have broken before the bituminous mixture is placed.

If emulsified asphalt of any type is held over night, it shall be reheated and agitated prior to further application.

The Engineer may either adjust the application rate or, except as specified below, eliminate the use of tack coat in any part of the work if, in the Engineer's judgment, the bituminous mixture to be placed will be effectively bonded to the underlying surface. For asphaltic concrete friction course, asphaltic concrete friction course (asphalt-rubber), or asphaltic concrete (asphalt-rubber), application of the tack coat immediately prior to placing such pavements shall not be eliminated, although the Engineer may adjust the application rate.

Tack coat shall be applied only as far in advance of the placement of the bituminous mixture as is necessary to obtain the proper condition of tackiness. In no event shall more tack coat be applied in one day than will be covered by the bituminous mixture during that same day.

404-4 Method of Measurement: the third paragraph of the Standard Specifications is revised to read:

Cover material, when specified, will be measured by the cubic yard. Cover material will be weighed, and the amount in tons of dry material will be converted to cubic yards. The weight of all moisture contained in the cover material will be deducted prior to the conversion of the weight in tons to the volume in cubic yards. The dry weight per cubic yard will be determined in accordance with the requirements of AASHTO T 19 (Shoveling Procedure).

404-5 **Basis of Payment:** the last sentence of the first paragraph of the Standard Specifications is revised to read:

Adjustments will be made in accordance with Section 1005.

(404BIMAT, 01/26/16)

SECTION 404 BITUMINOUS TREATMENTS:

404-5 **Basis of Payment:** of the Standard Specifications is modified to add:

The term "bituminous material" as used herein shall include asphalt cement, liquid asphalt, and emulsified asphalt.

The contract unit price for each item of bituminous material will be considered to include all costs for furnishing, hauling, handling, spreading, and mixing of the material as required, including the "initial cost" of bituminous material, but excluding any difference in the cost of bituminous material that occurs between the date of bid opening and the date that the material is used on the project.

A cost for bituminous material will be determined monthly by the Department based on the selling prices of asphalt cement published by the Asphalt Weekly Monitor, a publication of Poten & Partners, Inc. The cost will be the arithmetic average of the high and low selling prices for asphalt cement shown in the previous four reports for the Arizona/Utah and Southern California regions.

This cost will be deemed the "initial cost" (IC) for bituminous material for projects on which bids are opened during the following month. This cost will also be deemed the "current price" (CP) for bituminous material for the following month for projects in construction.

This value will be effective as of the last Wednesday of each month, and will be posted on the ADOT Contracts and Specifications Section website, on or shortly after the last Wednesday of month.

For each item of bituminous material for which there is a specific pay item, and for the bituminous material used in Asphaltic Concrete (Miscellaneous Structural), an adjustment will be made as follows for each month that a quantity of bituminous material was used on the project.

The "initial cost" (IC) for the month in which the project was bid will be compared with the "current price" (CP) as specified above for the appropriate current month. The "current price" (CP) will be as posted on the Department's website on the last Wednesday of each month, and will be used to adjust costs for bituminous material incorporated into the job during the following month (for example; bituminous material used in May will be adjusted, as specified herein, based on the "current price" (CP) for May as posted on the last Wednesday of April).

Any difference in price between these two values will be applied to the quantity of eligible bituminous material incorporated into the work.

Determination of the eligible quantities of bituminous material will be based on contractor-furnished invoices, except as modified below.

The tons of emulsified products to which the adjustment will be applicable will be the tons of the emulsified asphalt prior to dilution.

Adjustments in compensation for emulsified asphalts will be made at 60 percent of either the increase or decrease.

The tons of Bituminous Material (Asphalt-Rubber) to which the adjustment will be applicable will be 0.80 multiplied times the total quantity of the item used. The adjustment will not apply to the 20 percent of the material which constitutes the crumb rubber additive.

The tons of bituminous material incorporated in Asphaltic Concrete (Miscellaneous Structural) or Asphaltic Concrete (Miscellaneous Structural-Special Mix) to which an adjustment will be applicable shall be as follows:

- (1) For mixes without reclaimed asphalt pavement (RAP), the adjustment will be equal to five percent of the quantity, measured in tons, of asphaltic concrete placed, regardless of the actual percentage of bituminous material incorporated into the mix.
- (2) For mixes with reclaimed asphalt pavement (RAP), the adjustment will be equal to four percent of the quantity, measured in tons, of asphaltic concrete placed, regardless of the actual percentage of bituminous material incorporated into the mix.
- (3) If the quantity of asphaltic concrete is measured by volume, the supplemental agreement establishing the method of measurement will specify the manner in which the tons of bituminous material eligible for the adjustment is determined.

The tons of bituminous materials which are paid for on the basis of testing by nuclear asphalt content gauge, ignition furnace, or other approved methods to which the adjustment will be applicable, are the tons which have been incorporated into the mixture.

When reclaimed asphalt pavement (RAP) is used in asphaltic concrete, only the virgin asphalt cement will be subject to a bituminous material price adjustment. RAP binder is not subject to a price adjustment.

No additional compensation will be made for any additional or increased charges, costs, expenses, taxes, etc., which the contractor may have incurred since the time of bidding and which may be the result of any increase in the "initial cost" of bituminous material.

Adjustment in unit prices of items governed by this provision will be made in the next regular monthly progress payment following actual use or application of the bituminous material.

Any adjustment in compensation made for bituminous material incorporated into the work after the expiration of the specified completion time set forth in the contract, or as may be extended in accordance with the provisions of Subsection 108.08, will be on the basis of the price of bituminous material shown on the Department's website and applicable for the date of the expiration of the specified completion time as hereinbefore specified.

(407ADMIX, 01/26/16)

SECTION 407 ASPHALTIC CONCRETE FRICTION COURSE:

407-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of constructing Asphaltic Concrete Friction Course, hereinafter asphaltic concrete, by furnishing all materials, mixing at a plant, hauling and placing a mixture of aggregate materials, mineral admixture, and bituminous material (asphalt cement) to form a pavement course or to be used for other specified purposes, in accordance with the details shown on the project plans and the requirements of the specifications, and as directed by the Engineer.

407-3 Materials: of the Standard Specifications is modified to add:

For comparative purposes, quantities shown in the bidding schedule have been calculated based on the following data:

| | |
|----------------------------|-------------------------------|
| Spread Rate (lb./ sq. yd.) | 59 |
| Asphalt Cement, % | 6.0 (6.5 when PG TR+ is used) |
| Mineral Admixture, % | 1.0 |

The estimated target spread rate specified above includes **25** percent for leveling to provide a minimum **0.5**-inch thickness above the leveling thickness.

407-3.01 Mineral Aggregate: the first paragraph of the Standard Specifications is revised to read:

The contractor shall provide a source of mineral aggregate in accordance with the requirements of Section 1001 of the specifications.

407-3.02 Mineral Admixture: the last paragraph of the Standard Specifications is revised to read:

Certification and acceptance of Portland cement, blended hydraulic cement, and hydrated lime shall be in accordance with ADOT Materials Policy and Procedure Directive No. 13,

"Certification and Acceptance of Hydraulic Cement, Fly Ash, Natural Pozzolan, Silica Fume, and Lime".

407-3.03 Bituminous Material: the first paragraph of the Standard Specifications is revised to read:

Asphalt cement shall be a performance grade (PG) asphalt binder, conforming to the requirements of Section 1005. The type of asphalt binder shall be **PG 76-22 TR+**.

407-4 Mix Design: the second paragraph of the Standard Specifications is revised to read:

In addition to the mineral aggregate samples, the contractor shall also furnish the Engineer with representative samples of the following materials: three gallons of asphalt cement from the intended supplier, and a one-gallon can of the proposed mineral admixture. These materials must be representative of the material which will subsequently be used in the production of asphaltic concrete.

407-4 Mix Design: the following is added to the Standard Specifications:

The contractor may propose the use of a mix design that has been developed for a previous project. The proposed mix design shall meet the requirements of these specifications. The contractor shall provide evidence that the type and source of bituminous material, the type of mineral admixture, and the source and methods of producing mineral aggregate have not changed since the formulation of the previous mix design. The contractor shall also provide current test results for all specified characteristics of the mineral aggregate proposed for use. The Engineer will determine if the previously used mix design is suitable for the intended use and if the previous use of the mix design was satisfactory to the Department. The Engineer will either approve or disapprove the proposed mix design. Should the Engineer disapprove the use of the previously used mix design, the contractor shall prepare and submit a new mix design proposal in accordance with the requirements of these specifications.

A previously used mix design older than two years from the date it was formulated, sealed, signed, and dated shall not be allowed for use. Once approved for use on a project, a mix design may be used for the duration of the project.

407-5 Mix Design Revisions: the third paragraph of the Standard Specifications is revised to read:

If the contractor elects to change its source or type of bituminous material, the type of mineral admixture, or the source(s) of mineral aggregate, or if the contractor adds or deletes the use of a mineral aggregate stockpile(s) regardless of source, testing to the extent deemed necessary by the Engineer will be performed in order that the Engineer may be satisfied that the mix design criteria will be met.

407-6.03(B) Bituminous Material Content: the last two sentences of the first paragraph of the Standard Specifications are revised to read:

The contractor's technicians performing the testing, including the calibration of the nuclear gauge, shall meet the technician requirements given in ADOT Materials Policy and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories".

407-6 Acceptance of Materials: of the Standard Specifications is modified to add:

407-6.04 Material Spread:

The estimated target spread rate will be as shown in the table in Subsection 407-3. The Engineer may adjust the estimated target spread rate, and establish a new target spread rate, as necessary to maintain a suitable thickness.

The thickness behind the screed shall be measured by the contractor continuously throughout each spread lot to ensure that the minimum compacted thickness specified in Subsection 407-3 is being met.

A spread lot shall be considered to be one-half shift of production. The contractor shall record information pertaining to each spread lot on forms provided by the Engineer. Information shall include the project number, date and period of time that each spread lot was placed, the spread lot number, beginning and ending station, the plans thickness, target spread rate, and tons placed in each spread lot. Completed spread lot forms shall be signed by the contractor and given to the Engineer at the end of each shift.

The Engineer will calculate the quantity required in each spread lot using the target spread rate.

The calculated quantity required in each spread lot will be compared to the actual quantity placed. A spread lot will be considered to be acceptable if the actual quantity placed does not vary by more than +5.0 percent from the required quantity.

407-7.03 Proportioning, Drying, Heating, and Mixing: the third paragraph of the Standard Specifications is hereby deleted.

407-7.03 Proportioning, Drying, Heating, and Mixing: the last paragraph of the Standard Specifications is revised to read:

The temperature of asphaltic concrete or mineral aggregate upon discharge from the dryer shall not exceed 275 degrees F (325 degrees F when PG TR+ asphalt cement is used), unless otherwise approved by the Engineer.

407-7.04(A) General Requirements: the second and third paragraphs of the Standard Specifications are revised to read:

All wheels and tires of compactors and other equipment surfaces shall be treated when necessary with a release agent approved by the Engineer in order to prevent the sticking of asphaltic concrete. Release agents which degrade, dissolve, or in any way damage the bituminous material shall not be used. Diesel fuel shall not be used as a release agent.

Before asphaltic concrete is placed, the surface to be paved shall be cleaned of all objectionable material and tacked with bituminous material in accordance with the requirements of Section 404.

407-7.04(A)(1) Placement Dates and Weather Requirements: the table of the Standard Specifications is revised to read:

| Average Elevation of Project, Feet | Beginning and Ending Dates |
|------------------------------------|----------------------------|
| 0 – 3499 | March 15 – May 31 |
| 0 – 3499 | September 15 – October 31 |
| 3500 – 4999 | April 15 – October 15 |
| 5000 – 5999 | June 1 – September 15 |
| 6000 and over | June 1 – August 15 |

407-7.04(A)(2) Delivery to Screed Unit: of the Standard Specifications is revised to read:

Asphaltic concrete delivered to the screed unit shall be a free flowing, homogeneous mass in which there is no segregation, crusts, lumps, or migration of the bituminous material. Should any of these conditions be evident in the material delivered to the screed unit, the contractor shall take the necessary corrective action to eliminate such conditions. If any of these conditions persist, the Engineer will order the work to be stopped until satisfactory corrective action has been taken.

407-7.04(C) Placing and Finishing Asphaltic Concrete by Means of Self-Propelled Paving Machines: the third paragraph of the Standard Specifications is revised to read:

Self-propelled paving machines shall spread the mixture within the specified tolerances, without segregation or tearing, true to the line, grade, and crown indicated on the project plans. Pavers shall be equipped with hoppers and augers which will distribute the mixture uniformly in front of adjustable screeds.

407-7.06 (A) General Requirements: of the Standard Specifications is revised to read:

The temperature of the asphaltic concrete just prior to compaction shall be at least 200 degrees F (250 degrees F when PG TR+ asphalt cement is used).

407-8 Method of Measurement: the third paragraph of the Standard Specifications is revised to read:

Mineral admixture will be measured by the ton for the mineral admixture actually used in accordance with Subsection 403-2.

407-9 Basis of Payment: the first paragraph of the Standard Specifications is revised to read:

The accepted quantities of asphaltic concrete, measured as provided above, will be paid for at the contract unit price per ton, adjusted if necessary for spread, which price shall be full compensation for the work, complete in place, as specified herein.

If the quantity in a spread lot is found to vary by more than +5.0 percent from the required quantity, as determined in accordance with Subsection 407-6.04, no payment will be made for the material which exceeds the +5.0 percent, including asphalt cement and mineral admixture.

The Engineer may exclude asphaltic concrete from the spread lot if the Engineer determines that the proposed use of the material or the existing surface conditions are not conducive to the use of spread lots.

(409ACMS, 01/26/16)

SECTION 409 ASPHALTIC CONCRETE (MISCELLANEOUS STRUCTURAL):

409-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of constructing Asphaltic Concrete (Miscellaneous Structural), hereinafter asphaltic concrete, by furnishing all materials, mixing at a plant, hauling and placing a mixture of aggregate materials, reclaimed asphalt pavement (RAP) if used, mineral admixture, and bituminous material (asphalt cement) to form a pavement course or to be used for other specified purposes, in accordance with the details shown on the project plans and the requirements of the specifications, and as directed by the Engineer.

The contractor shall acquire and make all arrangements for a source or sources of material, furnish a mix design which will meet the design criteria specified hereinafter, and provide all the equipment, materials, and labor necessary to complete the work.

409-2 Materials: of the Standard Specifications is modified to add:

The bidding schedule quantity of asphaltic concrete is based on an estimated unit weight of **147** pounds per cubic foot.

409-2.01 Mineral Aggregate: “Carbonates” and “Note (1)” are added to the table following the first paragraph of the Standard Specifications:

| Mineral Aggregate Characteristics | Test Method | Requirement |
|--|-------------------------|-------------|
| Carbonates (1) | Arizona Test Method 238 | Maximum 20% |
| (1): Testing for carbonates only applies if either of the following conditions exist: <ul style="list-style-type: none"> (a) The asphaltic concrete is the designed final pavement surface normally used by traffic. (b) The asphaltic concrete, temporary or otherwise, will be subject to traffic for more than 60 days. | | |

409-2.01 Mineral Aggregate: the table following the second paragraph of the Standard Specifications is revised to read:

| Mix Design Grading Limits | | | | | | |
|---------------------------|------------------------------------|----------------|-------------------------------|----------------|--------------------------------------|----------------|
| Sieve Size | Percent Passing | | | | | |
| | Lift Thickness Less Than 1½ Inches | | Lift Thickness 1½ to 2 Inches | | Lift Thickness Greater Than 2 Inches | |
| | Without Admixture | With Admixture | Without Admixture | With Admixture | Without Admixture | With Admixture |
| 1 Inch | | | | | 100 | 100 |
| ¾ Inch | | | 100 | 100 | 90 – 100 | 90 – 100 |
| ½ Inch | 100 | 100 | 90 – 100 | 90 – 100 | --- | --- |
| ⅜ Inch | 90 – 100 | 90 – 100 | 70 – 85 | 70 – 85 | 70 – 85 | 70 – 85 |
| No. 8 | 41 – 55 | 42 – 56 | 41 – 51 | 42 – 52 | 41 – 51 | 42 – 52 |
| No. 40 | 9 – 19 | 10 – 20 | --- | --- | --- | --- |
| No. 200 | 2.0 – 5.0 | 3.0 – 6.5 | 2.0 – 5.0 | 3.0 – 6.5 | 2.0 – 5.0 | 3.0 – 6.5 |

409-2.02 Bituminous Material: the first paragraph of the Standard Specifications is revised to read:

Asphalt cement shall be a performance grade (PG) asphalt binder, conforming to the requirements of Section 1005. The type of asphalt binder shall be **PG 70-10**.

409-2.03 Mineral Admixture: the last paragraph of the Standard Specifications is revised to read:

The certification and acceptance of Portland cement, blended hydraulic cement, and hydrated lime shall be in accordance with ADOT Materials Policy and Procedure Directive No. 13,

"Certification and Acceptance of Hydraulic Cement, Fly Ash, Natural Pozzolan, Silica Fume, and Lime".

409-2.04 **Mix Design:** the third and fourth paragraphs of the Standard Specifications are revised to read:

The mix design shall be prepared by or under the direct supervision of a professional engineer experienced in the development of mix designs and mix design testing. Reclaimed asphalt pavement (RAP) may be used in the mixture if properly designed per Arizona Test Method 833; however, RAP will not be allowed in the mixture when asphalt cement type PG 76-22 TR+ or PG 70-22 TR+ is specified in Subsection 409-2.02. Limits for the usage of RAP shall be per ADOT Materials Policy and Procedure Directive No. 20, "Guidance on the Use of Reclaimed Asphalt Pavement (RAP) in Asphaltic Concrete". The mix design engineer shall meet the requirements given in ADOT Materials Policy and Procedure Directive No. 4, "Asphaltic Concrete Mix Design Proposals and Submittals". The mix design shall be provided in a format that clearly indicates all the mix design requirements and shall be sealed, signed, and dated by the mix design engineer.

The mix design shall be prepared by a mix design laboratory that has met the requirements of ADOT Materials Policy and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories".

If approved by the Engineer, as an alternative to meeting the mix design requirements specified herein, a 1/2 inch or 3/4 inch mix design meeting the requirements of either Section 416 or Section 417 of the specifications may be substituted for use. The type of asphalt binder used in the alternative mix design must be the same as that specified in Subsection 409-2.02. The alternative mix design may include reclaimed asphalt pavement (RAP) if properly designed per Arizona Test Method 833. The lift thickness for the alternative mix design shall conform to the following table.

| Alternative Mix Design | Minimum Lift Thickness |
|-------------------------------|-------------------------------|
| Section 416 (1/2 inch mix) | 1-1/2 inches |
| Section 416 (3/4 inch mix) | 2 inches |
| Section 417 (1/2 inch mix) | 2 inches |
| Section 417 (3/4 inch mix) | 2-1/2 inches |

The contractor may propose the use of a mix design that has been developed for a previous project. The proposed mix design shall meet the requirements of these specifications. The contractor shall provide evidence that the type and source of bituminous material, the type of mineral admixture, and the source and methods of producing mineral aggregate, and RAP material if applicable, have not changed since the formulation of the previous mix design. The contractor shall also provide current test results for all specified characteristics of the mineral aggregate, and RAP material if applicable, proposed for use. The Engineer will determine if the previously used mix design is suitable for the intended use and if the previous use of the mix design was satisfactory to the Department. The Engineer will either approve or disapprove the proposed mix design. Should the Engineer disapprove the use of the

previously used mix design, the contractor shall prepare and submit a new mix design proposal in accordance with the requirements of these specifications.

A previously used mix design older than two years from the date it was formulated, sealed, signed, and dated shall not be allowed for use. Once approved for use on a project, a previously used mix design may be used for the duration of that project.

409-2.04 Mix Design: the last two paragraphs of the Standard Specifications are revised to read:

The mix design shall meet the following criteria when tested in accordance with the requirements of the following test methods:

| Criteria | Requirement | Arizona Test Method |
|--|-------------|---------------------|
| 1. Voids in Mineral Aggregate: %, Range | 14.5 – 18.5 | (See Note) |
| 2. Effective Voids: %, Range | 5.3 – 5.7 | (See Note) |
| 3. Absorbed Asphalt: %, Range | 0 – 1.0 | (See Note) |
| Note: For mixes without RAP, Arizona Test Method 815. For mixes with RAP, Arizona Test Method 833. | | |

The Engineer reserves the right to adjust the asphalt content during production from the mix design value without additional compensation to the contractor in order to obtain desirable effective voids.

409-2.05 Sampling and Testing: of the Standard Specifications is revised to read:

Sampling and testing the materials and mixture for quality control purposes shall be the contractor's responsibility. The contractor shall perform sufficient testing to assure that mineral aggregate and asphaltic concrete are produced which meet all specified requirements. The Engineer reserves the right to sample and test the materials and mixture when necessary to determine that they reasonably conform to the requirements specified herein.

409-3.01 General: the ninth, tenth, eleventh, and twelfth paragraphs of the Standard Specifications are revised to read:

All wheels and tires of compactors and other equipment surfaces shall be treated when necessary with a release agent approved by the Engineer in order to prevent the sticking of asphaltic concrete. Release agents which degrade, dissolve, or in any way damage the bituminous material shall not be used. Diesel fuel shall not be used as a release agent.

Asphaltic concrete immediately behind the laydown machine shall be in a thoroughly mixed, free-flowing, and workable condition, be free of lumps and crusts, and have a minimum temperature of 275 degrees F.

All courses of asphaltic concrete shall be placed and finished by means of self-propelled paving machines except under certain conditions or at certain locations where the Engineer deems the use of self-propelled paving machines impractical.

The speed of the paving machine shall be coordinated with the production of the plant and an adequate number of trucks for hauling asphaltic concrete shall be available in order to achieve, as far as practical, a continuous operation.

Self-propelled paving machines shall spread the mixture within the specified tolerances, without segregation or tearing, true to the line, grade, and crown indicated on the project plans. Pavers shall be equipped with hoppers and augers which will distribute the mixture uniformly in front of adjustable screeds.

409-3.01 General: the seventeenth paragraph of the Standard Specifications is revised to read:

Before asphaltic concrete is placed, the surface to be paved shall be cleaned of all objectionable material and tacked with bituminous material in accordance with the requirements of Section 404.

409-5.02 Reduction for Noncompliance: of the Standard Specifications is revised to read:

A reduction in payment to the contractor for asphaltic concrete will be made for quantities of asphalt cement (bituminous material) that do not meet the requirements of Section 1005 as determined by corresponding test results. Adjustments in payment will be made in accordance with the requirements of Table 1005-1 and the following formula:

$$R = (100 - P) \times \left[\frac{(CP) \times T}{100} \right]$$

Where:

- R = Amount of Reduction in Payment (dollars)
- T = Quantity of asphalt cement in failure (tons, rounded to nearest tenth)
- P = Percent of Contract Unit Price allowed (Table 1005-1)
- CP = Current Price for asphalt cement (bituminous material), as determined by the Department, for the month in which a deficiency was noted. This value will be posted on the ADOT Contracts and Specifications Section website, on or shortly after the last Wednesday of each month.

(501PIPE, 05/03/16)

SECTION 501 PIPE CULVERT AND STORM DRAINS:

501-1 Description: the first paragraph of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing pipe and all other materials required and the installing of pipe, including excavating, and furnishing, placing and compacting backfill material, all in accordance with the details shown on the plans and the requirements of the specifications.

501-1 Description: the last sentence of the third paragraph of the Standard Specifications is revised to read:

Special sections, fittings, elbows, branch connections, tapered inlets, end sections, connectors, coupling, and other such items shall be of the same material and coating as the pipe to which they are attached unless otherwise stated in the specifications.

501-3.03(A) General: the second paragraph of the Standard Specifications is revised to read:

If the Engineer determines that the end of an existing pipe is damaged to the extent that it cannot be repaired sufficiently to be joined properly to the new pipe, the damaged portion shall be removed.

Pipe shall be installed in reasonably close conformity with the lines, grades and dimensions shown on the project plans or specified by the Engineer.

501-3.03(B)(1) General: the seventh paragraph of the Standard Specifications is hereby deleted:

501-3.03(C) Slotted Pipe: the third paragraph of the Standard Specifications is revised to read:

Slotted pipe shall be backfilled with grout in accordance with the details shown on the project plans. The grout shall conform to the requirements of Subsection 1010-3. Grout shall not be placed when a descending air temperature falls below 40 degrees F or until an ascending air temperature exceeds 35 degrees F. Temperatures shall be taken in the shade and away from artificial heat. The grout shall be cured in accordance with the requirements of Subsection 912-3.09.

501-3.03(G) Corrugated High Density Polyethylene Plastic Pipe: the title and text of the Standard Specifications are revised to read:

501-3.03(G) Corrugated High Density Polyethylene Plastic Pipe, Steel Reinforced High Density Thermoplastic Ribbed Pipe, and Corrugated Polypropylene Plastic Pipe:

Corrugated high density polyethylene plastic pipe, steel reinforced high density thermoplastic ribbed pipe, and corrugated polypropylene plastic pipe shall be assembled and installed in accordance with the manufacturer's instructions.

Watertight joints, unless otherwise specified, will not be required for storm drains, culverts, or other drainage pipes. However, joints for these pipes shall be water resistant. Watertight joints shall be provided for siphon and irrigation pipe installations.

Watertight and water resistant joints shall conform to the requirements of Subsection 1010-8.

Tracer wire for magnetic detection shall be placed in accordance with the requirements of Subsection 104.15.

To prevent damage and to assure that proper line and pipe grade are maintained throughout the backfilling operation, special care shall be taken in the handling and installation of corrugated high density polyethylene plastic pipe and fittings, steel reinforced high density thermoplastic ribbed pipe and fittings, and corrugated polypropylene plastic pipe and fittings.

When end sections for the above listed pipes are called for on the plans, the contractor shall use metal safety end sections unless otherwise specified.

ITEM 5050202 – RESET FRAME AND COVER FOR MANHOLE (SEWER, MAG STD DTL 422):

Description:

The work under this item consists of furnishing all labor, equipment, and materials to reset existing frames and covers for sanitary sewer manholes to new finished grade at the locations shown on the project plans and as directed by the Engineer.

Materials:

Materials for frame and cover adjustment shall conform to the requirements the City of Safford Construction Standards and the related Maricopa Association of Government (MAG) Uniform Standard Details for Public Works Construction.

Construction Requirements:

All work shall be in accordance with the locations shown on the project plans and with MAG Standard Detail 422 and the requirements of the City of Safford Construction Standards. Backfill and compaction shall be in accordance with the requirements of Subsection 202-3.01 of the Standard Specifications.

Any damage to the frame and cover caused by the contractor's removal, as determined by the Engineer, shall be replaced by the contractor at no cost to the Department. If an existing frame and cover is damaged and cannot be replaced, the contractor shall notify Engineer prior to removal.

Method of Measurement:

Reset Frame and Cover for Manhole (Sewer, MAG STD DTL 422) will be measured as a unit of work for each frame and cover reset.

Basis of Payment:

The accepted quantities of Reset Frame and Cover for Manhole (Sewer, MAG STD DTL 422), measured as provided above, will be paid for at the contract unit price per each, which shall be full compensation for all materials and work, complete in place, as shown on the project plans and as described herein.

(601PRCST, 03/31/05)

SECTION 601 - CONCRETE STRUCTURES:

601-1 Description: of the Standard Specifications is modified to add:

Pre-cast minor structures shown on the Department's Approved Products List (APL) may be used as alternatives to cast-in-place minor structures. The current list of such pre-cast structures is available on the internet from the Arizona Transportation Research Center (ATRC), through its PRIDE program.

The "H" dimension for catch basins shall be determined in the field prior to casting. The contractor is advised to acquaint itself with conditions peculiar to the project, which might limit the use of precast items.

The use of precast cattle guards for either H-10 or H-20 loading shall be limited to roadway locations with maximum longitudinal grades of six percent.

Pre-cast minor structures not appearing on the APL may be considered for use in accordance with the requirements of Subsection 106.14.

(607POST, 9/08/11)

SECTION 607 ROADSIDE SIGN SUPPORTS:

607-1 Description: the first paragraph of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing and installing roadside sign supports in accordance with the details shown on the plans and the requirements of the specifications.

607-2.05 Concrete: the last paragraph of the Standard Specifications is revised to read:

Reinforcing steel bars for breakaway sign post foundations shall conform to the requirements of ASTM A 615. Unless otherwise specified, steel bars meeting the requirements of ASTM A 706 may be substituted for ASTM A 615 steel bars. When ASTM A 706 bars are used, tack welding of the reinforcement will not be permitted unless approved in writing by the Engineer. Reinforcing steel wire shall conform to the requirements of ASTM A 82.

ITEM 6070038 - SLIP BASE (NEW):

Description:

The work under this item shall consist of furnishing all materials, tools, equipment, and labor necessary to install slip bases in accordance with the project plans and the requirements of these Special Provisions.

Materials:

All materials for the slip bases shall be new.

Method of Measurement:

Slip Base (New) will be measured by the unit for each slip base installed complete in place.

Basis of Payment:

The accepted quantities of Slip Base (New) , measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified herein and as shown on the project plans.

(608PANEL, 01/26/16)

SECTION 608 - SIGN PANELS:

608-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing and installing sign panels in accordance with the details shown on the plans and the requirements set forth herein.

The sign panels shall be of the following types:

- Extruded Aluminum Sign Panels with Direct-Applied, Digitally-Imaged, or Demountable Characters
- Flat Sheet Aluminum Sign Panels With Direct-Applied, Digitally-Imaged, Electronic-Cut, or Screen-Printed Characters
- Warning, Marker, and Regulatory Sign Panels
- Route Shields for Installation on Sign Panels
- EXIT ONLY Panels for Installation on Sign Panels

608-2.01 General: of the Standard Specifications is modified to add:

Signs shall be fabricated in accordance with the recommendations established by the manufacturer of the sign sheeting. All processes and materials used to make a sign shall in no way impact the performance, uniform appearance (day and night), or durability of the sheeting, or invalidate the sign sheeting manufacturers' warranty.

All sheeting used for background and legend shall be from the same manufacturer. Sign panels shall not be overlaid.

All text and numerals shall all be installed at the same orientation: either zero degrees or 90 degrees.

Design of letters and numbers shall be in accordance with the project plans with a tolerance of $\pm 1/16$ th of an inch.

The contractor shall not paint the bolts or the washers unless otherwise specified.

608-2.02 Extruded Aluminum Sign Panels With Demountable Characters: the title of the Standard Specifications is revised to read:

608-2.02 Extruded Aluminum Sign Panels With Direct-Applied, Digitally-Imaged, or Demountable Characters:

608-2.02 Extruded Aluminum Sign Panels With Demountable Characters: the third paragraph of the Standard Specifications is revised to read:

The letters, numerals, symbols, borders and other features of the sign message shall be direct-applied, digitally-imaged, or demountable, and shall conform to the requirements of Subsection 608-2.14, Demountable Characters, Subsection 608-2.15, Screen-Printed, Direct-Applied, or Electronic-Cut Characters, or Subsection 608-2.16, Digitally-Imaged Characters.

608-2.07 Flat Sheet Aluminum Sign Panels With Direct-Applied or Silk-Screened Characters: the title and text of the Standard Specifications are revised to read:

608-2.07 Flat Sheet Aluminum Sign Panels With Direct-Applied, Digitally-Imaged, Electronic-Cut, or Screen-Printed Characters:

Panels shall be fabricated from 0.125-inch thick 5052-H36, or 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209.

Panel facing shall be prepared and covered with retroreflective sheeting in accordance with the recommendations of the sheeting manufacturer. The color of the sheeting shall be as specified on the plans or as shown in the Manual of Approved Signs.

All surfaces not covered shall be etched to reduce glare from reflected sunlight.

The retroreflective sheeting shall conform to the requirements of Section 1007. Splicing of retroreflective sheeting shall not be allowed on sign panels having a minimum dimension up to and including four feet.

Messages shall be reflectorized white or, if called for on the plans, opaque black, and shall be produced by either screen printing, direct-applying, digital imaging, or electronic cutting, as specified under Subsections 608-2.15 and 608-2.16.

608-2.09 Warning, Marker, and Regulatory Sign Panels: of the Standard Specifications is revised to read:

Panels shall be fabricated from flat sheet aluminum and shall be reflectorized as specified herein.

Panels shall be fabricated in one piece from 0.125-inch thick 5052-H36, 5052-H38, or 6061-T6 Aluminum Alloy conforming to the requirements of ASTM B 209.

All surfaces of panels to be covered with retroreflective sheeting shall be prepared in accordance with the recommendations of the sheeting manufacturer. Surfaces not covered shall be etched to reduce glare from reflected sunlight. Retroreflective sheeting shall conform to the requirements of Section 1007.

Warning signs shall be reflectorized with fluorescent yellow retroreflective sheeting.

Regulatory signs shall be reflectorized with white retroreflective sheeting.

Reflectorized red signs shall be reflectorized with white retroreflective sheeting. The red color shall be produced by screen printing.

Regulatory signs with reflectorized red circles and slashes shall be reflectorized with white retroreflective sheeting. The red color shall be produced by screen printing.

Interstate route markers shall be cut to shape. The colors and legend shall be as shown on the plans and shall be reflectorized with white retroreflective sheeting. The Interstate route colors shall be screen-printed. The numerals may be screen-printed, electronic-cut, or direct-applied characters.

United States, State Route, and Cardinal Direction markers shall be reflectorized with white retroreflective sheeting unless otherwise shown on the plans.

Splicing of retroreflective sheeting shall not be allowed on sign panels having the minimum dimension up to and including four feet.

608-2.11 **Route Shields (For Installation on Sign Panels):** of the Standard Specifications is revised to read:

Route shields may be may be demountable, direct-applied, or digitally-imaged.

Demountable route shields shall be cut to shape and shall consist of 0.063-inch thick, 5052-H36, or 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209. The aluminum shall be degreased and etched in accordance with the recommendations of the sheeting manufacturer. Retroreflective sheeting shall be white and shall conform to the requirements of Section 1007. Route shields shall be attached to the sign panel with self-plugging aluminum blind rivets.

608-2.12 **EXIT ONLY (For Installation on Sign Panels):** the title and text of the Standard Specifications are revised to read:

608-2.12 **EXIT ONLY Panels (For Installation on Sign Panels):**

EXIT ONLY panels may be may be demountable, direct-applied, or digitally-imaged. Demountable EXIT ONLY panels shall be attached to the sign panel with self-plugging aluminum blind rivets.

Demountable EXIT ONLY panels shall be fabricated from 0.063-inch thick, 5052-H36 or 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209 with fluorescent yellow retroreflective sheeting adhered to the face side. The aluminum shall be degreased and etched in accordance with the recommendations of the sheeting manufacturer. Retroreflective sheeting shall conform to the requirements of Section 1007.

608-2.13 **Retroreflective Sheeting, Inks and Opaque Film:** the second and third paragraphs of the Standard Specifications are hereby deleted.

608-2.14(A) **General:** the second paragraph of the Standard Specifications is revised to read:

Flat sheet aluminum substrates used for characters and borders shall be either aluminum alloy 3105-H14, 3003-H14, 5052-H36, or 5052-H38 as specified in ASTM B 209. Characters produced from the flat sheet aluminum alloy shall sit flat on the face of the sign panel without visible gap or deformation.

608-2.14(B) **Sheeting and Colors:** the third, fourth, and fifth paragraphs of the Standard Specifications are revised to read:

The color for demountable letters, numbers, symbols, and route shields on green, blue, and brown background signs shall be white, and shall conform to the requirements of Section 1007. Demountable legends on white and yellow background signs shall be black, and shall be opaque and non-reflective. Black characters shall be finished with laminated black opaque acrylic film.

When borders are used with demountable characters, white legend and border shall be used on green, blue, or brown sign backgrounds, and black legend and border shall be used on white or yellow sign backgrounds. Sign sheeting conforming to Section 1007 shall be used for white borders. Black borders shall be laminated black opaque acrylic film.

Laminated black opaque acrylic film to be used for characters or borders, as specified above, shall be applied in accordance with the coating manufacturer's recommendations. The contractor shall provide copies of any warranties provided by the manufacturer to the Engineer.

608-2.15 **Silk-Screened or Direct-Applied Characters:** the title and text of the Standard Specifications is revised to read:

608-2.15 **Screen-Printed, Direct-Applied, and Electronic-Cut Characters:**

Screen-printed letters, numerals, arrows, symbols, and borders, shall be applied on the retroreflective sheeting background of the sign by direct or reverse screen process. Messages and borders of a color darker than the background shall be applied to the retroreflective sheeting by direct process. Messages and borders of a color lighter than the sign background shall be produced by the reverse screen process.

Opaque or transparent colors, inks, and paints used in the screen process shall be of the type and quality recommended by the manufacturer of the retroreflective sheeting.

The screening shall be performed in a manner that results in a uniform color and tone, with sharply defined edges of legends and borders and without blemishes on the sign background that will affect intended use.

Signs, after screening, shall be air dried or baked in accordance with the manufacturer's recommendations to provide a smooth hard finish. Any signs on which blisters appear during the drying process will be rejected.

Direct-applied letters, numerals, symbols, borders, and other features of the sign message shall be cut from black opaque or retroreflective sheeting of the color specified and applied to the retroreflective sheeting of the sign background in accordance with the instructions of the manufacturer of the retroreflective sheeting.

Direct-applied legend may be moved vertically 1/2 inch to avoid placing only a small amount of material over the adjacent extruded panel. The bottom of all characters for a line of legend shall line up within 1/8 of an inch.

Electronic-cut characters shall be cut from translucent acrylic sheeting using computerized automated cutting processes.

608-2 **Materials:** of the Standard Specifications is modified to add:

608-2.16 **Digitally-Imaged Characters:**

Digitally-imaged characters shall consist of characters produced through ultraviolet jet-printing or thermal transfer. Signs with digitally-imaged characters shall be manufactured using matched component ink, transparent electronic-cuttable film, and/or overlay film as supplied by the reflective sheeting manufacturer. For digitally-imaged copy on white sheeting, the coefficient of retroreflection shall be not less than 70 percent of the original values for the corresponding integral color. When characters are spread over two adjacent extruded panels, the characters shall align with each other within 1/16th of an inch.

608-3.01 **Fabrication:** of the Standard Specifications is modified to add:

During fabrication of the sign panels, the contractor shall ensure the bolt holes on each sign panel are placed so the holes will not coincide with any legend and any bolts, washers, or other hardware used will not cover any portion of the legend. If the bolt holes on a sign panel do not comply with these requirements, the Engineer may reject the sign panel or accept the sign panel and require the contractor to paint the bolts, washers, and any hardware coinciding with the sign legend to match the color of the legend.

608-3.02 **Installation of Sign Panels:** of the Standard Specifications is revised to read:

The sign panels shall be installed on overhead sign structures and roadside sign supports in accordance with the details shown on the plans and in accordance with the recommendations of the manufacturers of the sign panel components.

Minor scratches and abrasions resulting from fabrication, shipping and installation of panels may be patched; however, patching shall be limited to one patch per 50 square feet of sign area with the total patched area being less than five percent of the sign area. Panels requiring more patching than the specified limit will be rejected. Patches shall be edge sealed by a method approved by the retroreflective sheeting manufacturer.

Sign panels shall be attached to the posts with hex head bolts as shown in the Standard Drawings; slotted head bolts shall not be used. A cadmium-plated or zinc-plated fender washer shall be placed between the bolt head and panel face.

For flat sheet panels, bolts shall be fastened with a cadmium-plated or zinc-plated fender washer and two standard nuts. Nylon washers shall not be used. The fender washer shall be placed against the sign post, the first nut shall be tightened against the fender washer, and the second nut shall be tightened against the first nut. Bolts shall be tightened from the back by holding the bolt head stationary on the face of the panel. Twisting of the bolt head on the panel face will not be allowed.

The contractor shall provide two copies of a detailed list of all new signs installed on the project to the Engineer. The list shall include the sign identification code, the date each sign was installed (month and year), the fabricator of the sign, and the materials used to make the sign (manufacturer, type of sheeting, ink and film). The list shall be provided in a commonly used electronic spreadsheet format, such as EXCEL, and the two copies shall be submitted on CD-ROM disks. Signs shall be listed in numerical order by route, direction, and milepost and, where more than one sign is installed at the same general location, a letter subscript.

Sign panels within the same sign assembly shall be placed at the same orientation along the roadway so that the entire legend of the signs appear uniform under normal viewing conditions, both day and night.

Upon fabrication or installation of each sign, the contractor shall place information on the back of the sign showing the sign identification code, the sign fabricator, the manufacturer of the sheeting used, and the month and year of the installation. The formatting of the required information shall be as shown on the standard drawings. The information shall be positioned to be readily visible from a vantage point outside the flow of traffic and not obstructed by sign posts, extrusions, stringers or brackets. All letters shall be made of a long life material such as a black opaque acrylic film. Signs not marked as required will not be eligible for payment.

Temporary traffic control signs are exempt from the installation information requirement unless noted otherwise on the project plans.

608-3.04 **Inspection:** the second paragraph of the Standard Specifications is revised to read:

Each sign panel face shall be cleaned thoroughly just prior to the inspection by a method recommended by the manufacturer. The cleaning material shall in no way scratch, deface or have any adverse effect on the sign panel components.

608-4 Method of Measurement: of the Standard Specifications is revised to read:

Sign panels will be measured by the square foot for each type or types of sign panels furnished and installed. Individual sign panels will be measured to the nearest 0.1 square foot. The total area of each type of sign panel will be summed and rounded to the nearest square foot.

The area of each sign panel, except for warning, regulatory and marker sign panels, will be measured per plans dimensions.

For warning, regulatory and marker sign panels, the area of each sign panel will be determined as follows:

The areas of each rectangular, square or triangular sign panel will be determined from the dimensions shown on the plans.

The area of irregular shaped signs, such as stop signs and route markers, will be determined by multiplying the maximum height in feet by the maximum width in feet, using the dimensions shown on the plans.

Miscellaneous Work (Sign Panels) will be measured on a lump sum basis.

608-5 Basis of Payment: first and second paragraphs of the Standard Specifications are revised to read:

The accepted quantities of each type of sign panel designated in the bidding schedule, measured as provided above, will be paid for at the contract unit price per square foot, complete in place, regardless of the type of sheeting or type of character used on the sign panel. Payment shall be made on the total area of each type of sign panel to the nearest square foot.

No additional payment will be made for signs with sheeting applied to both sides, the cost being considered as included in the contract unit price for the sign panel.

No measurement or payment will be made for Route Shields and EXIT ONLY Panels (for installation on sign panels), the cost being considered as included in the contract unit price for the sign panel.

ITEM 6080050 - SIGN PANEL (REPLACE):

Description:

The work under this item consists of furnishing all materials, labor and equipment required to remove existing regulatory, flat sheet aluminum and warning sign panels and install new sign

panels at the locations designated on the project plans. The work includes salvage and delivery of existing sign panels to the ADOT Southeast District Maintenance Yard in Safford.

Construction Requirements:

The contractor shall dismantle the existing sign panels and remove them from the posts at the locations shown on the plans. The existing posts and foundations are to remain and the new sign panels mounted on them. Any damage to the posts and foundations to remain, as determined by the Engineer, shall be replaced by the contractor at no cost to the Department. All removed sign panels shall be salvaged and delivered by the contractor to:

ADOT Southeast District Maintenance Office
3268 US 191, Safford, Arizona 85546

Method of Measurement:

Sign Panel (Replace) will be measured to the nearest square foot for each panel installed.

Basis of Payment:

The accepted quantities of Sign Panel (Replace), measured as provided above, will be paid for at the contract unit price per square foot, which price shall be full compensation for the work complete as described herein and on the project plans.

(701PDMPT, 05/03/16)

SECTION 701 - MAINTENANCE AND PROTECTION OF TRAFFIC:

701-1 Description: the first and third paragraphs of the Standard Specifications are revised to read:

The work under this section shall consist of providing flagging services and pilot trucks, and furnishing, installing, maintaining, moving and removing barricades, warning signs, lights, signals, cones, and other traffic control devices to provide safe and efficient passage through and/or around the work and to protect workers in or adjacent to the work zone. The work shall be done in accordance with the requirements of Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the associated Arizona Department of Transportation supplement. When referred to herein, these documents will be referred to as MUTCD and associated ADOT Supplement.

When a traffic control plan is included in the project plans, this plan shall govern unless an alternate plan, acceptable to the Engineer, is submitted by the contractor. If no traffic control plan is provided or if the contractor desires to deviate from the provisions for maintaining traffic as described in this section, it shall submit to the Engineer for approval a proposed sequence of operations and a compatible method of maintaining traffic.

The contractor's submittal shall be prepared by an individual meeting one of the following criteria:

- (a) Has successfully completed a recognized traffic control supervisor training and certification program. The traffic control supervisor training and certification provided by the American Traffic Safety Services Association (A.T.S.S.A.) or the International Municipal Signal Association (IMSA) shall be acceptable. Training and certification through other programs must be approved in advance by the Engineer. The individual's training and certification shall be current and must be valid throughout the duration of the project. In order to remain current with the Department, training and certification shall be completed or renewed at least once every four years.
- (b) Be a licensed professional engineer registered in the State of Arizona and have completed an approved traffic control supervisor training program, as specified in Subsection 108.03. The training shall be current and must be valid throughout the duration of the project. In order for the training to remain current with the Department, it shall be completed or renewed every four years.

The contractor shall submit proof of the proposed individual's credentials at the preconstruction conference. The contractor bears all responsibility for any such contractor-submitted traffic control plan, whether prepared by its direct employee or other individual.

The contractor's proposal shall be submitted early enough to allow at least two weeks for review and approval before use of the proposed traffic control plan.

701-2.01(B)(1) General Requirements: item (d) of the second paragraph of the Standard Specifications is revised to read:

- (d) The name, title and signature of a person having legal authority to bind the manufacturer or supplier of the Category I and II devices. The binding authority shall be in accordance with the applicable requirements of Subsection 106.05(B).

701-2.03 Temporary Concrete Barrier: the second paragraph of the Standard Specifications is revised to read:

The contractor shall provide, at the preconstruction conference, a certificate of compliance, conforming to the requirements of Subsection 106.05, stating that any temporary concrete barrier to be used on the project conforms to Signing and Marking Standard Drawing C-3. The contractor shall include the project number on the submittal.

701-2.04 Temporary Impact Attenuation Devices: the second paragraph of the Standard Specifications is revised to read:

Temporary impact attenuation devices shall also meet evaluation criteria for Test Level 3-per NCHRP (National Cooperative Highway Research Program) Report 350, or for Test Level 3 per MASH (AASHTO Manual for Assessing Safety Hardware). The contractor shall provide,

at the preconstruction conference, a certificate of compliance, conforming to the requirements of Subsection 106.05, certifying that any temporary impact attenuation devices to be used on the project will meet the above requirement. The contractor shall include the project number on the submittal.

701-2.08 Barricades: the title and second paragraph of the Standard Specifications are revised to read:

701-2.08 Barricades and Other Channelizing Devices:

All sheeting for barricades and other channelizing devices shall conform to the requirements of Section 1007.

701-3.05 Temporary Pavement Markings (Application and Removal):

(C) Preformed Pavement Markings: the first paragraph of the Standard Specifications is revised to read:

Preformed pavement markings for temporary applications shall be Type II (Temporary-Removable) and III (Temporary-Nonremovable) and shall conform to the requirements of Section 705 of the specifications.

701-3.07 Truck-Mounted Attenuator: the title and text of the Standard Specifications are revised to read:

701-3.07 Truck-Mounted and Trailer-Mounted Attenuators:

The contractor shall provide trucks and truck-mounted attenuators, or trailer-mounted attenuators and host vehicles, at the locations shown on the project plans and/or as directed by the Engineer.

Attenuators shall meet either NCHRP Report 350, Test Level 3 criteria, or MASH (Manual for Assessing Safety Hardware), Test Level 3 criteria, passing both mandatory and optional tests. The truck and attenuator combination shall only be used in the configuration tested. Either the truck or attenuator shall have a sequential arrow display panel or changeable message board.

Attenuators that require chocking or blocking of the vehicle to meet NCHRP Report 350 or MASH certification shall not be used.

Attenuators shall have rear-mounted, retroreflective chevron stripes and a standard trailer lighting system, including brake lights, turn signals, ICC-bar lights, and two yellow rotating beacons, or strobe lights, or LED lights mounted on opposite rear corners of the truck or attenuator approximately 4-1/2 feet above the bottom of the tires. A Type C arrow panel or changeable message board shall be provided and shall be installed in accordance with the NCHRP 350/ MASH Crashworthiness Certification or FHWA Letter of Acceptance. There shall be a minimum of seven feet from the roadway to the bottom of the panel or board. Frame

work shall be an integral part of the truck and be permanently mounted in such a way as to prevent the unit from separating from the truck in the case of a collision.

For each proposed truck-mounted or trailer-mounted attenuator, the contractor shall provide a Certificate of Compliance, in accordance with Subsection 106.05, to the Engineer for approval prior to use. For truck-mounted attenuators, the certificate shall also include the certified weigh bill for the truck, and for trailer-mounted attenuators the certificate shall state the minimum weight for the host vehicle. The certificate shall state that the attenuator meets the specified criteria, and shall clearly state the roll-ahead distance. A copy of this documentation shall be kept in the truck cab or host vehicle, available for immediate inspection when requested by the Engineer.

When in use for attenuation, trucks shall be used exclusively for attenuators. When in use for attenuation, such trucks shall not be used to carry or store equipment or devices, secured or unsecured. No modification in configuration or use shall be allowed without a resubmitted certified weigh bill for the Engineer's approval.

Truck-mounted or trailer-mounted attenuators used as shadow vehicles per the MUTCD shall be positioned at a distance greater than the roll-ahead distance in advance of the workers or equipment being protected so that there will be sufficient distance, but not so much that errant vehicles will travel around the shadow vehicle and strike the protected workers and/or equipment.

The contractor shall cease operations when a truck-mounted or trailer-mounted attenuator is damaged. The contractor shall not resume operations until the attenuator has been repaired or replaced, unless authorized by the Engineer.

701-3.08 **Changeable Message Board:** of the Standard Specifications is revised to read:

Changeable message boards shall be furnished and maintained by the contractor at the locations shown on the plans and as specified by the Engineer. The operations and messages programmed into the board controller shall be as directed by the Engineer. The changeable message board shall be a complete and operational portable unit which shall consist of a wheeled trailer with an adjustable, changeable message board, board message controller and self-contained power supply.

The power supply for the changeable message board shall be a fully independent self-contained trailer-mounted system. The changeable message board power supply shall be battery operated and rechargeable from a solar panel mounted above the changeable message board.

The message characters shall be delineated by either electromagnetically actuated reflective dots or optically enhanced light emitting diode pixels (LED) operating under the control of a digital computer.

The contractor shall submit, at the pre-construction conference, a Certificate of Compliance that the changeable message board to be used on this project shall be as described herein.

The character formation system and components shall conform to the following requirements:

- (1) The changeable message board shall be programmable, and shall be capable of displaying a minimum of three lines of message copy, with a minimum of eight characters per line, in various alphanumeric combinations.
- (2) The changeable message board matrix configuration shall be 35 dots or pixels per character in a five horizontal by seven vertical arrangement of the dots or pixels.
- (3) The dot or pixel size shall be a 2.5-inch high by 1.625-inch wide rectangle (minimum), or equivalent area.
- (4) Each character shall be 18 inches in height and 12 inches in width (minimum).
- (5) The horizontal character separation shall be three inches or more.
- (6) Dot color shall be fluorescent yellow upon activation and flat black when not activated. The LED pixels shall emit amber light upon activation and be dark when not activated.
- (7) The line separation shall be five to 12 inches.
- (8) Changeable message boards shall be protected with a clear lexan-type or equivalent shield that shall not interfere with or diminish the visibility of the sign message.
- (9) The programmable message board shall be capable of displaying moving arrow patterns as one of the operator-selected programs.
- (10) The message board shall also be capable of displaying up to two messages in sequence, with variable timing in a minimum of quarter-second increments.
- (11) The message board shall be clearly visible and legible from a distance of 800 feet under both day and night conditions. The dot-matrix board shall have an internal illumination system that shall automatically activate under low light conditions to achieve the visibility requirements. The LED-pixel matrix board shall adjust light output (pulse width modulation) to achieve the visibility requirements.
- (12) The power supply achieved from the battery and solar panel recharging system shall have sufficient capacity to operate the changeable message board for a minimum of 20 days without direct sunshine. The solar panel array shall be capable of recharging the batteries such that 2.5 to 3.5 hours of direct sunshine shall provide for a minimum of one 24-hour period of usage. Additionally, the

battery recharging controller shall have an ambient temperature sensing device which will automatically adjust the voltage supplied from the solar panels to the batteries. The sensing device shall ensure that the batteries are properly charged in hot or cold weather and shall provide the sign with sufficient power to operate the sign as specified.

When in operation, the changeable message board trailer shall be offset a minimum of eight feet from the nearest edge of pavement. If the trailer is located behind temporary concrete barrier, a minimum offset of six feet will be required. Should the specified shoulder width not be available, a minimum two-foot offset from the nearest edge of pavement or temporary concrete barrier shall be required. When positioned on the highway, the changeable message board trailer shall be delineated with a minimum of 10 Type II barricades or vertical panels with Type C steady burn lights at a spacing of 10 to 20 feet, or as shown on the approved traffic control plan.

When not in operation, the changeable message board shall be moved a minimum of 30 feet from the edge of pavement.

The changeable message board trailer shall be placed on a level surface and be secured as recommended by the manufacturer and as directed by the Engineer. The contractor shall provide any necessary incidental grading and clearing work required to provide a level surface and clear area for the sign.

701-3.10 Sign Sheetings: of the Standard Specifications is revised to read:

Sign sheeting for all temporary work zone signs shall conform to the requirements of Section 1007.

701-3.13 Flagging Services: of the Standard Specifications is revised to read:

Flagging services shall consist of either civilian, local enforcement officers and their vehicles, or DPS (Department of Public Safety) officers and their vehicles. The Engineer will determine the type of flagger needed, and may adjust the relative number of hours of each type of flagger specified in the traffic control plan.

If available, only DPS officers shall be used on Interstate Highways and Urban Freeways. DPS officers shall also be used on other construction projects except when a local law enforcement agency has jurisdiction, in which case a local law enforcement officer and vehicle shall be used.

The contractor shall be responsible to procure civilian flaggers, DPS officers, and local enforcement officers. When procuring DPS officers, the contractor shall contact DPS at least two business days before flagging services will be required. Such contact must be made between the hours of 7:00 A.M. and 5:00 P.M. (M.S.T.).

In the event that local enforcement officers or DPS officers are temporarily unable to provide flagging services, the contractor shall ensure that traffic control is maintained and all

personnel are protected, either by providing civilian flaggers or through other means as approved by the Engineer. No adjustments to the contract will be allowed for any delays resulting from the unavailability of local enforcement officers or DPS officers.

A DPS or local enforcement officer shall not work more than 12 consecutive hours unless an emergency situation exists which, in the opinion of the Engineer, requires that the officer remain in the capacity of a flagger.

The contractor shall furnish verification to the Engineer that all civilian flaggers have completed a recognized training and certification program. Flaggers certified by the American Traffic Safety Services Association (A.T.S.S.A.) or by the National Safety Council shall be acceptable. Certification through other programs offering flagger training must be approved by the Engineer. Flagger certification must be current. Training and certification shall be required at least once every four years.

701-4.03(E) Limitation of Measurement: the second paragraph of the Standard Specifications is revised to read:

Measurement will be made after the initial installation and once weekly thereafter for items in continuous use and at any other times changes are made in the use of traffic control elements listed under Subsection 701-4.01(B). The contractor shall notify the Engineer when any changes are made in the use or location of traffic control elements.

701-4.04 Measurement of Work Elements: Sub-paragraph (A) of the Standard Specifications is revised to read:

- (A) Temporary concrete barrier will be measured by the linear foot along the center line of the uppermost surface upon its initial installation (Complete-in-Place), and upon any subsequent relocations, as defined in Subsection 701-5.01. Barrier will be measured by linear foot for each 24-hour day for the "In-Use" condition.

701-4.04 Measurement of Work Elements: Sub-paragraph (C) of the Standard Specifications is revised to read:

- (C) Truck-Mounted Attenuators, including driver, and Trailer-Mounted Attenuators, including host vehicle and driver, will be measured by the day for each 24-hour day that a truck-mounted or trailer-mounted attenuator and operator are used to protect the work site.

701-4.04 Measurement of Work Elements: Sub-paragraph (F) of the Standard Specifications is revised to read:

- (F) Civilian flagging services will be measured by the hour for each hour that a civilian flagger is provided. Flagging services by DPS officers and local enforcement officers will be measured for each hour that a uniformed, off-duty DPS officer or law enforcement officer with vehicle is employed directly by the contractor as a

flagger within the project limits, when authorized in advance by the Engineer. Quantities will be rounded to the nearest 0.5 hour.

Civilian, DPS, or local enforcement flagging services and traffic control devices required to permit contractors' traffic to enter safely into normal traffic within the project limits will be paid under their respective items. Flaggers required by a written local permit agreement will be measured for payment under this item. Additional civilian, DPS, or local enforcement flagging services used within the project limits shall be measured for payment under this item, subject to the approval of the Engineer.

Civilian, DPS, or local enforcement flagging services and traffic control devices used outside the project limits will be measured under their respective items. The Department will pay 50 percent of the unit bid price for such flaggers and traffic control devices used as described in this paragraph, subject to the approval of the Engineer. The project limits are defined as the construction work zone as shown on the approved traffic control plan for the specific section of highway under construction.

701-5.01 Temporary Concrete Barrier (Installation and Removal): of the Standard Specifications is revised to read:

Temporary concrete barrier, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified herein and as shown on the plans, including furnishing, placing, dismantling, and removal. The price bid shall also include any required connection devices, barrier markers, and glare screen.

Fifty percent of the contract unit price for temporary concrete barrier will be paid upon satisfactory installation.

Should it be necessary to dismantle, pick up and relocate a portion of the barrier installation during construction, whether laterally or vertically, that portion of the removed and relocated barrier will be considered a new installation and paid for at 100 percent of the contract unit price.

Fifty percent of the contract unit price will be paid upon final removal.

No payment will be made for portions of the barrier which the contractor can adjust or realign without dismantling and picking up, such cost being considered as included in the bid price for Temporary Concrete Barrier "Installation and Removal." The Engineer will be the sole judge as to whether devices are to be dismantled, picked up and reinstalled, or are to be adjusted or realigned.

701-5.02 Temporary Impact Attenuators (Installation and Removal): of the Standard Specifications is revised to read:

Temporary Impact Attenuation Devices shall include Sand Barrels and Energy Absorbing Terminals. Temporary Impact Attenuation Devices, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified herein and as shown on the plans, including furnishing the devices with replacement parts, installing, removing and stockpiling the devices.

Fifty percent of the contract unit price for temporary impact attenuators will be paid upon satisfactory installation.

Should it be necessary to dismantle, pick up and reinstall attenuation devices during construction, the work of removing and reinstalling the devices will be considered a new installation and paid for at 100 percent of the contract unit bid price.

Fifty percent of the contract unit price will be paid upon final removal.

The Engineer will be the sole judge as to whether devices are to be dismantled, picked up and reinstalled or are to be adjusted or realigned. No additional payment will be made for devices which are adjusted or realigned, the cost being considered as included in the contract unit price paid for Temporary Impact Attenuator "Installation and Removal."

Measurement and payment for furnishing materials, equipment and labor and repairing attenuation devices that are damaged by the traveling public will be made in accordance with the requirements of Subsection 109.04 of the specifications.

No measurement or direct payment will be made for furnishing replacement parts and repairing devices damaged by other than the traveling public.

701-6.05 Truck-Mounted Attenuators: of the Standard Specifications is revised to read:

The accepted quantities of truck-mounted attenuators or trailer-mounted attenuators, measured as provided above, will be paid for at the unit bid price for truck-mounted attenuators per day of work site protection, which rate shall be full compensation for the work, complete, including, but not limited to, furnishing all materials; equipment; attached arrow panel or changeable message board; and labor (including the operator); and maintaining and repairing the truck and truck-mounted attenuator, or trailer-mounted attenuator and host vehicle, as specified herein and on the project plans. No adjustment to the unit bid price for truck-mounted attenuators will be made when trailer-mounted attenuators are provided, such price being considered as full compensation for the work, as specified herein, regardless of which type of attenuator is used to protect the work site. It shall be the contractor's responsibility to replace any damaged or destroyed parts of the truck-mounted attenuator or trailer-mounted attenuator and host vehicle at no additional cost to the Department.

701-6.06 Flashing-Arrow Panels, and Changeable Message Boards: the second paragraph of the Standard Specifications is revised to read:

The accepted quantities of changeable message boards, measured as provided above, will be paid for at the unit bid price per day, which price shall be full compensation for the work, complete, including incidental grading; furnishing, operating, maintaining, and relocating the boards on the work site; and providing all necessary labor. Signs, sign stands, Type II barricades, or vertical panels and lights that are used to delineate changeable message boards shall be paid for at the respective unit bid prices.

701-6.07 Pilot Services, and Flagging Services: the last paragraph of the Standard Specifications is revised to read:

The accepted quantities of flagging services provided by the DPS officers, measured as provided above, will be paid for at the predetermined hourly rate of \$65.26, as shown in the bidding schedule. Of this amount, \$44.00 per hour shall be remitted to the DPS officer, and \$12.75 per hour shall be remitted to DPS. The remaining \$8.51 per hour represents profit and overhead for both the prime contractor and subcontractor. Such price shall be considered full compensation for the work. No additional payment will be made for costs in excess of the predetermined rate, for overtime hours, and for travel time to and from the project, such costs being considered as included in contract items.

(704THRMO, 8/24/11)

SECTION 704 - THERMOPLASTIC PAVEMENT MARKINGS:

704-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of cleaning and preparing pavement surfaces and furnishing and applying either white or yellow thermoplastic reflectorized pavement markings using extrusion or ribbon dispensing devices of the required shape and thickness to the prepared pavement surface at the locations and in accordance with the details shown on the project plans, the manufacturer's specifications, and the requirements of these specifications.

704-2.02 **Composition:** of the Standard Specifications is revised to read:

(A) General:

The thermoplastic composition shall conform to the following requirements:

| Component | Percent by Weight | |
|--|-------------------|---------|
| | White | Yellow |
| Binder (Min.) | 20 | 20 |
| Titanium dioxide (Min.) | 10 | ----- |
| Yellow Lead-Free Pigment (Min.) | ----- | 1.5 |
| Reflective glass inter-mix beads | 30 – 45 | 30 – 45 |
| Calcium carbonate or equivalent filler | 20 – 42 | 20 - 42 |

The ingredients of the thermoplastic composition shall be thoroughly mixed and in a solid or sectionalized block, or free-flowing granular form. When heated in a melting apparatus, the material shall readily liquefy into a uniform solution. This solution shall be free from all skins, dirt, foreign objects or any other ingredient which would cause bleeding, staining, blotting, or discoloration when applied to the bituminous or concrete pavement surfaces.

The thermoplastic formulation shall utilize an alkyd binder. The alkyd binder shall consist of a mixture of synthetic resins, at least one of which is solid at room temperature, and of high-boiling-point plasticizers. At least one third of the binder composition and no less than eight percent by weight of the entire material formulation shall be solid maleic-modified glycerol ester resin or solid maleic-modified pentaerythritol ester resin. The alkyd binder shall not contain any petroleum-based hydrocarbon resins.

(B) Reflective Glass Beads:

In addition to incorporating glass beads in the thermoplastic mix, glass beads shall be evenly applied to the surface of the molten material as specified in Subsection 704-3.02(G).

(C) Filler:

The filler shall be a white calcium carbonate or equivalent filler with a compressive strength of at least 5,000 pounds per square inch.

(D) Titanium Dioxide:

Titanium Dioxide shall conform to the requirements of ASTM D 476 for Type II (92 percent).

(E) Yellow Pigment:

The yellow pigment shall be heat resistant and lead free. The type of yellow pigment shall be at the option of the manufacturer provided that the material conforms to all color requirements in a stable and durable fashion as specified herein.

704-2.03(C) Retroreflectance: of the Standard Specifications is revised to read:

The white and yellow thermoplastic materials shall have the following minimum retroreflectance values at 86.5 degrees illumination angle and 1.5 degrees observation angle as measured by the Department, using an LTL-X Delta Retrometer or similar device, within 30 days after application to the roadway surface:

| Product | Retroreflectance (millicandelas) |
|---------|----------------------------------|
| White | 350 |
| Yellow | 200 |

704-2.03(E) Water Absorption and Specific Gravity: the last paragraph of the Standard Specifications is revised to read:

The specific gravity of the material, as determined by Section 16 of AASHTO T 250, shall be between 1.85 and 2.15.

704-2.03 Physical Characteristics of the Composition: of the Standard Specifications is modified to add:

(P) Color Stability:

Using accelerated weathering per ASTM G 155, Cycle 1, white color stability shall be measured for no color change after 500 hours of exposure, and yellow color stability shall be measured for no color change after 1000 hours of exposure.

704-2.04 Physical Requirements for Glass Beads: the second paragraph of the Standard Specifications is revised to read:

The inter-mix beads shall conform to AASHTO M 247 Type I, and may be coated or uncoated as recommended by the manufacturer. If uncoated beads are used, the thermoplastic formulation shall be configured to minimize settling of the intermix beads when the material is heated and applied.

Drop-on beads shall conform to the gradation requirements of AASHTO M 247 for Type I and Type III beads.

704-3.02(B) Material Selection and Compatibility: the second, third, and fourth paragraphs of the Standard Specifications are revised to read:

All materials shall be properly packaged and stored. Each container to be used on the project shall be clearly labeled to indicate the following information:

- Nature, type, and formulation of the material;
- Manufacturer, batch number, and date of manufacture;
- Application requirements and constraints; and

Compatibility requirements and constraints, particularly those pertaining to equipment, storage, and other materials to be used.

Preparation and application equipment shall be in accordance with the plans and specifications, and shall conform to the recommendations of the materials manufacturer.

704-3.02(G) Thermoplastic Application: the first and second paragraphs of the Standard Specifications are revised to read:

The thermoplastic pavement marking material shall be extruded on to the pavement surface at a material temperature between 385 and 415 degrees F, depending on manufacturer's recommendations, ambient air and pavement temperatures, and the nature of the pavement surface. The contractor shall verify temperature requirements with a non-contact infrared thermometer as directed by the Engineer.

The thermoplastic material temperatures shall not exceed 450 degrees F. Material temperatures exceeding 440 degrees F shall be allowed for short periods of time; however, in no case shall the material be held for more than four hours at temperatures above 440 degrees F. Total heating time for any batch of material shall not exceed six hours. The contractor shall note in the temperature log the time when each batch of thermoplastic material is first heated. The start of heating time shall also be marked on the side of the kettle to which it applies.

704-3.02(G) Thermoplastic Application: the fifth and sixth paragraphs of the Standard Specifications are revised to read:

Drop-on glass beads shall be mechanically deposited into the thermoplastic material immediately after the thermoplastic marking is applied, using a double drop method. Each drop shall be comprised of a minimum of six pounds of glass beads per 100 square feet of line (200 linear feet of six-inch stripe). One drop shall be Type I glass beads and the other drop shall be Type III glass beads. The contractor shall determine which type of glass bead is to be applied in each drop; however, both types shall be used. Double drop methods using all Type I or Type III beads will not be allowed.

The dispensers shall evenly distribute the beads in the thermoplastic material. Both Type I and Type III glass beads shall be embedded in the surface of the thermoplastic to a depth of between 50 and 60 percent of the bead diameter. If the glass beads do not adhere to the thermoplastic marking, operations shall be stopped until the problem has been corrected. All markings which do not meet the requirements of Subsection 704-2.03(C), as determined by the Engineer, shall be removed by the contractor and replaced at no additional cost to the Department.

Unless otherwise specified, all thermoplastic pavement markings shall be extruded, and shall be 0.090 ± 0.002 inches thick. The thermoplastic thickness shall be uniform and consistent throughout the total length of the marking project.

704-3.02(G) Thermoplastic Application: the last two paragraphs of the Standard Specifications are revised to read:

The finished thermoplastic line shall have well defined edges and be free from waviness. Lateral deviation of the thermoplastic line shall not exceed one inch in 100 feet. The longitudinal deviation of a painted segment and gap shall not vary more than six inches in a 40-foot cycle. The actual width of line shall be within the limits specified in the following table, according to the width of line called for on the plans:

| Plan Width | Actual Width |
|---------------|-------------------|
| 4 inches | 4 to 4-1/2 inches |
| 8 inches | 8 to 9 inches |
| Over 8 inches | ± 1 inch |

After application and sufficient drying time, the thermoplastic marking shall show no appreciable deformation or discoloration under local traffic conditions with air and road temperatures ranging from -10 to 180 degrees F. The drying time shall be defined as the minimum elapsed time, after application, when the thermoplastic pavement markings shall have and retain the characteristics required herein, and after which normal traffic will leave no impression or imprint on the newly applied marking. When applied within a temperature range of 400 ± 15 degrees F and thickness of 0.090 inches, the material shall set to bear traffic in not more than two minutes when the air and pavement surface temperatures are approximately $50 \pm$ three degrees F and not more than 10 minutes when the air and road surface temperatures are approximately $90 \pm$ three degrees. The Engineer may conduct field tests in accordance with ASTM D 711 to verify actual drying times.

(708PPM, 6/15/09)

SECTION 708 - PERMANENT PAVEMENT MARKINGS:

708-2.02(B) Physical Requirements: of the Standard Specifications is modified to add:

(6) Heavy Metal Concentration:

Heavy metal concentration in glass beads shall be as specified in the following table, when tested by an independent laboratory, approved by the Engineer, using EPA Method 3052 and EPA Method 6010B. A Certificate of Analysis conforming to Subsection 106.05 shall be furnished to the Engineer prior to use.

| Heavy Metal | Concentration |
|-------------|---------------|
| Arsenic | < 75 ppm |
| Antimony | < 75 ppm |
| Lead | < 100 ppm |

708-3.02 **Application:** the last paragraph of the Standard Specifications is revised to read:

Tolerances for Placing Paint, Beads, and Primer:

The length of painted segment and gap shall not vary more than six inches in a 40-foot cycle.

The finished line shall be smooth, aesthetically acceptable and free from undue waviness.

Painted lines shall be four, eight, or 12 inches wide as shown on the plans with a tolerance of $\pm 1/8$ inch and shall be placed at a minimum rate of 16 gallons per mile for a solid four-inch line and four gallons per mile for a broken four-inch line, based on a 10-foot stripe and a 30-foot gap (40-foot cycle aggregate).

Glass reflectorizing beads shall be applied on the wet paint at a minimum rate of eight pounds per gallon of paint.

Wet thickness shall not be less than 15 mils, unless otherwise shown on the plans.

SECTION 732 - ELECTRICAL UNDERGROUND MATERIAL:

732 - 2.01 **Electrical Conductors:** of the Standard Specifications is modified to add:

All electrical conductors that are left un-terminated shall be coated by a waterproofing method that is approved by the Engineer.

732-2.03 **Pull Boxes:** of the Standard Specifications is revised to read:

Polymer concrete fiberglass reinforced pull boxes, lids and extensions shall be installed and located as shown on the project plans and shall be the size specified. All pull boxes shall be heavy duty in accordance with ADOT Standard Drawing Number T.S. 1-2.

Concrete pull boxes, lids and extensions shall not be used.

The traffic signal pull boxes shall be marked "TRAFFIC SIGNAL".

Markings shall be clearly defined and uniform in depth and shall be placed parallel to the long side of the cover. Letters shall be one inch high.

Pull boxes shall have locking lugs, or an Engineer-approved mechanism to lock the pull box lid in place.

The polymer concrete fiberglass reinforced pull boxes shall be from the Department Approved Product List.

732-3.01 Installation of Electrical Conduit and Pull Boxes: of the Standard Specifications is modified to add:

The contractor shall positively identify all exposed power and communication cables in each pull box using color coded labels attached within 3 ft. of the cable entry into a pull box, and on both sides of a splice.

732-5.04 Pull Boxes: is revised to read:

The accepted quantities for pull boxes, measured as provided above, will be paid for at the contract unit price each, which price shall be full compensation for the work, complete in place, including any excavation, installation of new bricks and stone sump.

- ITEM 7320050 - ELECTRICAL CONDUIT (2") (PVC):**
- ITEM 7320070 - ELECTRICAL CONDUIT (3") (PVC):**
- ITEM 7320073 - ELECTRICAL CONDUIT (2 -3") (PVC):**

Description:

This work under these items consists of furnishing and installing electrical conduits as shown on the plans. The work shall include excavation, installation of conduit, removal of spoil, backfill, warning tape, pull tape, connectors and fittings, and restoration of the surface to match the surrounding area.

The work under this section shall also consist of furnishing and installing conduit, as shown on the plans. This work includes excavating, backfilling, compacting, warning tape, detectable pull tape, connectors and fittings, and restoration of the surface to existing condition, including the replacement of irrigation and other landscaping items where appropriate, in accordance with the details shown on the plans and the requirements of these Special Provisions.

Materials:

All conduit shall be PVC in accordance with Subsection 732-2.02 of the Standard Specifications.

Unless otherwise shown on the plans, bends, conduit fittings, expansion joints, 36 inch sweeps and other conduit accessories not specifically mentioned shall be from a material similar to the connecting conduit.

Construction Requirements:

Conduit shall be placed in accordance with the lines, grades, details and dimensions as shown on the Plans or as otherwise approved by the Engineer. Unless otherwise shown on the Plans, underground conduit shall be installed with a minimum cover depth of 30 inches. Where conduit cannot be installed at the minimum depths, it shall be encased in concrete.

Prior to any trenching, the contractor shall verify, with utility as-builts, the existence of any cathodic protection in all existing utilities and take all possible precautions to maintain existing cathodic protection.

For all conduits that require pull tape, the pull tape shall terminate at the bell end of the conduit with a minimum of two feet of coiled slack in each pull box.

The contractor is alerted to the fact that hand digging may be required in the installation of trenches and pull boxes.

The use of ABC slurry to meet utility company specifications may be required at locations of existing utilities.

Method of Measurement:

Electrical Conduit will be measured by the linear foot for each diameter size in accordance with Subsection 732-4 of the Standard Specifications.

Basis of Payment:

The accepted quantities of Electrical Conduit, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place, including excavation, backfill, and restoration of the surface to match with the surrounding area.

No measurement or direct payment will be made for tracer wire, pull tape, vertical conduits and conduit sweeps, conduit in pull boxes, conduit in foundations, expansion joints, clearing and grubbing, hand digging if required, concrete encasement, felt paper or use of ABC slurry (if required to meet utility company requirements), the costs being considered as included in the contract price for the conduit items.

ITEM 7320274 - ELECTRICAL CONDUIT (2-3") (DIRECTIONAL DRILL):

Description:

The work under these items consists of furnishing all materials, labor and equipment to install electrical conduit by horizontal directional drilling at the locations shown on the project plans. The contractor shall use an approved drilling method to install the conduit. The work shall

include installation of conduit, detectable pull tape, connectors and fittings, and restoration of the surface to match the grade of the surrounding area.

Materials:

PVC conduit shall be Schedule 40 in accordance with Subsection 732-2.02 of the Standard Specifications.

Construction Requirements:

Conduit shall be placed in accordance with the lines, grades, details and dimensions as shown on the plans or as otherwise approved by the Engineer. Unless otherwise shown on the plans, underground conduit shall be installed with a minimum cover depth of 30 inches.

All directional drill traffic signal system conduit shall be PVC.

The contractor's directional drill operations shall utilize the "walkover" locating system or other Engineer approved equivalent for determining the location of the bore head. A sonde, behind the bore head shall register the depth, angle, rotation and directional data. At the surface, a receiver compatible with the sonde shall be used to gather the data and relay the information to the directional drill equipment operator.

Upon completion of joining conduit sections and setting the pull boxes, the contractor shall clean the conduit with compressed air. The contractor shall demonstrate by pulling a cleaning mandrel or ball mandrel, correctly sized for the conduit, that the conduit was not deformed during installation. If the mandrel encounters a deformity in the conduit, the contractor shall replace the entire segment of conduit between pull boxes with new conduit at no cost to the Department.

For electrical service conduit the contractor shall install detectable pull tape with a minimum of 2,500 lbs pulling tension. For all conduits that require detectable pull tape, the detectable pull tape shall terminate at the bell end of the conduit with a minimum of two feet of coiled slack in each pull box. The detectable pull tape traveling through conduit that terminates in a pull box, shall have its wire ends connected together to allow for a continuous locating signal to be used for the entire conduit run.

Method of Measurement:

Electrical Conduit (2-3") (Directional Drill) will be measured by the linear foot from the nearest edge of drill pit to the nearest edge of drill pit.

Basis of Payment:

The accepted quantities for Electrical Conduit (2-3") (Directional Drill), measured as provided above, will be paid for at the contract unit price per linear foot complete as specified herein and as shown on the project plans. The contract unit price per foot shall be full compensation for the work, complete in place, including the conduits, drill pit excavation and backfilling

necessary to complete the work, and restoration of the surface to match the grade of the surrounding area. No payment will be made for aborted drills or drills that are not at the minimum depth.

No measurement or direct payment will be made for detectable pull tape, the cost being considered as included in the contract price for the conduit items.

SECTION 733 - SIGNAL INDICATIONS AND MOUNTING ASSEMBLIES:

733-2.01(A) Standard Signal Faces: of the Standard Specifications is modified to add:

All traffic signal indications shall be Light Emitting Diode (LED) modules. This will include all red, yellow, and green balls, all arrow indications, and green/yellow combination arrow indications.

733-2.01(C) Fiber Optic Turn Arrow Signal: of the Standard Specifications is revised to read:

733-2.01(C) Light Emitting Diode (LED) Module:

(1) General:

All new traffic signal heads installed on new, or revamped traffic signal systems shall have Light Emitting Diode (LED) modules for all indications. This includes all arrow indications, or combination arrow indications on four section traffic signal heads.

LED traffic signal modules shall meet all the requirements identified in the 1998 Interim LED Purchase Specification of the Institute of Transportation Engineers except as listed below. LED traffic signal modules shall be designed to fit traffic signal housings that meet the specifications established in Section 733. Installation as a retrofit shall require only removal of the existing lens, lamp, lamp socket, and reflector. The module shall be weather tight and fit securely in the housing and shall have wire leads long enough for easy connection to the traffic signal head wire terminal block. The wire shall have crimped on terminal connectors. The LED signal module shall be a single, self-contained device. The power supply shall be integral to the sealed LED module.

(2) Module Identification:

The manufacturer shall label each LED module. The label shall contain all information listed in Section 3.6 of the ITE Interim LED Specification. In addition to the requirements of Section 3.6, the Department shall require that the label contain the date of manufacture, the date of installation (this information will be filled in by the installing technician), and the following statement "Manufactured in Conformance with the 1998 Interim Purchase Specification of the ITE for LED Vehicle Traffic Signal Modules".

(3) LED Environmental Requirements:

Two ambient operating temperature ranges are being identified. The Department may, on certain projects in high heat desert areas, require the contractor to supply units that are rated to operate in the high temperature range. The contractor and material vendor shall carefully review the project plans and special provisions for LED temperature range requirements. LED signal modules shall be rated for use in the ambient operating temperature range of -40°C (-40°F) to $+74^{\circ}\text{C}$ (164°F) and /or in the ambient operating temperature range of -40°C (-40°F) to $+81^{\circ}\text{C}$ (178°F). If not indicated on the plans or in the special provisions the LED module shall be rated for the -40°C (-40°F) to $+74^{\circ}\text{C}$ (164°F) temperature range. The manufacturer shall provide independent environmental testing verification that the product has operated successfully in the rated temperature range, or ranges that the manufacturer is proposing to supply.

(4) LED Module Photometric Requirements:

The Department requires the light output of the LED modules supplied by the contractor to meet the requirements of Section 4 of the ITE Interim LED Purchase Specification, the 44-point test identified in paragraph 6.4.2.1 and the single point test identified in paragraph 6.4.2.2.

(5) LED Module Electrical Requirements:

The LED module shall use two color-coded copper wires. The wire shall be No. 20 AWG with 30 mil jacketed insulation. The wires shall be a minimum of 36 inches long with crimped on fork connectors. The wire shall be rated for 600 volt AC. The insulation shall be rated for 105°C (220°F).

(6) LED Dimming:

All LED modules purchased, as part of a Department construction project shall not include dimming circuitry.

(7) Failed State Impedance:

The Department requires the manufacturer to include the option listed in Section 5.8 of the ITE Interim LED Purchase Specification.

(8) LED Module Compatibility:

The Department has adopted the recommendation stated in Technical Note #2 of the Institute of Transportation Engineers 1998 Interim LED Purchase Specification.

Currently the Department uses the following brand and model load switches and conflict monitors:

Load Switches

1. PDC model SSS-83
2. PDC model SSS-87
3. PDC model SSS-88
4. IDC/SSD model 200K
5. IDC/SSD model 200K I/O
6. TSC C/N 82A049
7. TSC C/NSP 4300
8. EDI 510 m

Conflict Monitors

1. Eagle model LT-222
2. Econolite model SSM-12E
3. EDI model NSM-12L
4. EDI model SSM-18LE
5. Solid State Devices model NM(NP)-12L
6. Solid State Devices model Guardian LCD 18P

All LED manufacturers shall insure that LED modules are compatible with Department load switches and conflict monitors. The contractor shall include in the material submittal a list of all control equipment known to be incompatible with the submitted LED module. This shall include equipment not currently listed or used by the Department.

733-2.04 Mounting Assemblies: The second paragraph of the Standard Specifications is revised to read:

Terminal Compartments: A terminal compartment shall be assembled in the mounting brackets as shown in the Standard Drawings. The terminal compartment shall be manufactured of bronze.

(734PATSC, 7/01/14)

SECTION 734 - TRAFFIC CONTROLLER ASSEMBLY:

734-2.01(D) Pre-Approval of Controller Equipment: of the Standard Specifications is modified to add:

The following includes all traffic signal controller units that have been tested and preapproved as specified by the Department as per the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction.

The following controller equipment has been pre-approved by the Department as of January 2014:

(1) Type MPS Controllers: Special Programmable and System Applications (TS2, Type 2 - Downward Compatible TS1):

(a) Siemens Corporation:

EPAC M53 with the following special programs:

| | |
|---------|---|
| MPS-SI | Computer Supervised Unit |
| MPS-P | Pre-emption |
| MPS-T-C | Time Base and Traffic-Actuated Coordination |
| MPS-M | Arterial Master Controller |

(b) Econolite Control Products Inc:

ASC/3 with the following special programs:

| | |
|---------|---|
| | ADOT Basic Program Configuration |
| MPS-SI | Computer Supervised Unit |
| MPS-P | Pre-emption |
| MPS-T-C | Time Base and Traffic-Actuated Coordination |
| MPS-M | Arterial Master Controller |

ASC/2-1000 with the following special programs:

| | |
|---------|---|
| MPS-SI | Computer Supervised Unit |
| MPS-P | Pre-emption |
| MPS-T-C | Time Base and Traffic-Actuated Coordination |
| MPS-M | Arterial Master Controller |

Colbalt with the following special programs:

| | |
|---------|---|
| | ADOT Basic Program Configuration |
| MPS-SI | Computer Supervised Unit |
| MPS-P | Pre-emption |
| MPS-T-C | Time Base and Traffic-Actuated Coordination |
| MPS-M | Arterial Master Controller |

(c) Intelight Inc:

NEMA Controller X series with the following special programs:

| | |
|---------|---|
| MPS-P | Pre-emption |
| MPS-T-C | Time Base and Traffic-Actuated Coordination |
| MPS-M | Arterial Master Controller |

(d) McCain ATC ex:

ATC eX with the following special programs:

| | |
|---------|---|
| MPS-SI | Computer Supervised Unit |
| MPS-P | Pre-emption |
| MPS-T-C | Time Base and Traffic-Actuated Coordination |

(2) NEMA Conflict Monitors:

(a) Eagle

| | |
|------------|--------|
| 3 Channel | LT-213 |
| 6 Channel | LT-216 |
| 12 Channel | LT-222 |

(b) Econolite

| | |
|------------|---------|
| 3 Channel | NCMU-3 |
| 6 Channel | NCMU-6 |
| 12 Channel | NCMU-12 |

(c) E.D.I.

| | |
|------------|-----------|
| 3 Channel | NSM-3L |
| 6 Channel | NSM-6L |
| 12 Channel | NSM-12L |
| 16 Channel | MMU-16LE |
| 16 Channel | MMU2-16LE |

(d) Solid State Devices

| | |
|------------|------------|
| 3 Channel | NM(NP)-3L |
| 6 Channel | NM(NP)-6L |
| 12 Channel | NM(NP)-12L |
| 18 Channel | LCD-18P |

(e) Transyt Corporation

| | |
|------------|------------|
| 3 Channel | Model 300 |
| 6 Channel | Model 600 |
| 12 Channel | Model 1200 |

(f) Traffic Control Technologies

| | |
|------------|---------|
| 3 Channel | LSM-3 |
| 6 Channel | LSM-6 |
| 12 Channel | LNM-12E |
| 12 Channel | LMN-12E |

(3) Other Controllers:

NEMA Controllers:

| Software | Protocol |
|----------------------------|----------|
| Econolite ASC/2 and ASC/2S | NTCIP |
| Econolite ASC/3 | NTCIP |
| Econolite ASC/2 | AB3418 |
| Peek 3000/3000E ATC-1000 | NTCIP |
| Eagle M50/M52 | NTCIP |

Type 2070 and ATC Controllers:

| Software | Protocol |
|--------------------------------|----------|
| US Traffic ATC | NTCIP |
| Econolite 2070 ASC/2 and ASC/3 | NTCIP |
| Eagle SEPAC | NTCIP |
| Siemens NextPhase | NTCIP |
| Fourth Dimension D4 | NTCIP |
| NWS Voyage | AB3418E |
| Intelight | NTCIP |
| McCain Omni eX (basic status) | NTCIP |

(735LOOP, 2/07/13)

SECTION 735 DETECTORS: of the Standard Specifications is revised to read:

735-1 Description:

The work under this section shall consist of furnishing and installing traffic signal loops, preformed loop detectors, complete or partial traffic data loop and weigh-in-motion (WIM)

systems, and pedestrian detectors at the locations shown on the project plans and in accordance with the details shown on the plans and the requirements of the specifications.

735-2 Materials:

735-2.01 Vehicle Detectors:

(A) General:

Detectors shall conform to the minimum acceptable design and operating requirements of these specifications for detecting the presence, passage, speed, weight, and classification of vehicles.

Except as specified in Subsection 735-2.01(F), all materials shall be furnished by the contractor. The contractor shall submit a complete list of all required project material for approval, as specified in Subsection 730-4 of the specifications.

(B) Loop Detectors:

The detector loop dimensions shall be as specified on the Standard Drawings.

Loop detector wire shall be 14 AWG HDPE polyethylene insulated conductors conforming to IMSA 51-7, as shown on the Standard Drawings.

(C) Lead-in Cable:

For Type SA and SB speed/classification detectors specified in Subsection 735-3.02(D), lead-in cable from the pull box to the cabinet shall conform to IMSA specification 50-2, except as modified on the Standard Drawings.

(D) Conduit:

Conduit shall be rigid nonmetallic PVC conforming to the requirements of Subsection 732-2.02 of the specifications. Conduit shall be large enough to contain the number of wires required, but not less than the diameters shown on the Standard Drawings.

(E) Cabinets:

Traffic monitoring site cabinets for Type SA and SB speed/classification and WIM detectors shall be pole-mounted Type MPD control cabinets as shown on the Standard Drawings, and as specified in Subsection 734-2.03 of the specifications, except that no pre-wiring for AC or DC electric, police panel, or provisions for fan or light shall be required.

Warranties shall comply with Subsection 106.13 of the specifications.

(F) Department Furnished Materials:

When required, the Department will furnish detectors for speed/classification systems (piezoelectric sensors-Class 2) and weigh-in-motion systems (piezoelectric sensors–Class1, or quartz piezoelectric sensors) with pre-attached lead-in cables. For such installations, the Department will also furnish the piezo grout sealant for the sensor portion of speed/classification and weigh-in-motion detectors. The contractor shall furnish all other sealants.

The contractor shall notify the Traffic Monitoring Team of the Multimodal Planning Division (MPD) at (602) 712-8598 a minimum of 15 working days prior to scheduled installation of the Department-furnished piezoelectric sensors. The required sensors and grout will be provided at the Department's central Phoenix location, at 2501 W. Georgia, Phoenix, AZ 85017, or at the appropriate District Office, as specified by the Department at the time of contact.

735-2.02 Pedestrian Push-Button Detectors:

The pedestrian detector shall be a push-button switch mounted inside an approved push-button housing, as shown on the Standard Drawings.

Pedestrian push-button signs shall be made with porcelain enameled 20 gage sheet steel, 9 inches by 12 inches in size. Corners of the sign shall be finished round for safety and neat appearance. Each hole shall be provided with a brass grommet. Instructions on the signs shall be black enameled letters or symbols on a white enamel background. The legend shall be as shown on the plans or as specified in the Special Provisions.

735-2.03 Blank

735-2.04 Saw Cut Sealant:

Saw cut sealants shall be a flexible encapsulant intended for sealing and protecting vehicle detector loop wires installed in saw cuts.

(A) Two-Part Epoxy Filler Sealant:

Two-part epoxy joint filler sealant shall be a 100-percent solids, flexible, two-component, solvent free, epoxy resin/hardener system for use as a saw cut sealant in asphaltic concrete pavements and Portland cement concrete pavements.

Materials shall comply with the requirements of Subsection 1015-1 of the Specifications.

The epoxy system shall be specifically designed for the intended application according to the product literature provided by the manufacturer.

The epoxy system shall be of sufficient strength and hardness to withstand stress and abrasion from vehicular traffic, while remaining flexible enough to provide stress relief under

thermal movement and protect the loop wire from moisture penetration. It shall also be moisture insensitive to allow effective application to damp pavements. No standing water is permitted on the surfaces to which the epoxy system is to be applied.

The epoxy system shall be designed to enable vehicular traffic to pass over properly filled saw cuts immediately after installation without tracking or stringing of the material.

Properly installed and cured epoxy systems shall exhibit resistance to the effects of weather, motor oils, gasoline, anti-freeze solution, brake fluid, deicing chemicals, and salt in such a manner that the performance of the vehicle detector loop wire is not adversely affected.

The epoxy system shall be designed for roadway installation when the surface temperature is a minimum of 40 degrees F and rising. The cured epoxy system shall be temperature stable and exhibit no degradation in performance throughout the ambient pavement temperature ranges experienced within the State of Arizona.

The components of the epoxy system shall have a minimum shelf life of 12 months in original unopened, undamaged containers, when stored in a cool dry environment, as recommended by the manufacturer.

The epoxy system shall meet the following requirements:

| Property | Test Method | Requirements |
|--------------------------------------|----------------|--------------------------|
| Mixing Ratio; Part A to Part B | - | 1 to 1 by volume |
| Viscosity, centipoises | ASTM D 2393-86 | 4000 to 8000 |
| Pot Life, minutes | ASTM C 881 | 12 to 20 |
| Cure Time, minutes | ASTM C 679 | 60 maximum, Tack Free |
| Hardness (Shore D) | ASTM D 2240 | 35 to 65 |
| Tensile Elongation, % | ASTM D 638 | 50 minimum |
| Water Absorption, % (24 hrs) | ASTM D 570 | 1 maximum |
| 3% Salt Water Absorption, % (24 hrs) | - | 0.03 to 0.20 |
| Oil Absorption, % (24 hrs) | ASTM D 471 | 0.01 to 0.02 |
| Gasoline Absorption, % (24 hrs) | - | 0.05 to 0.90 |

(B) One-Part Elastomeric Sealant:

One-part elastomeric sealant may be used to seal saw cuts in Portland cement concrete pavement and lean concrete base.

The sealant shall provide compressive yield strength to withstand normal vehicular traffic as well as sufficient flexibility to withstand normal movement in concrete pavements, while protecting the loop wire from moisture penetration.

The encapsulant shall be a one-part elastomeric compound requiring no mixing, measuring or application of heat prior to or during its installation.

The encapsulant shall, within its stated shelf life in original undamaged packaging, cure only in the presence of moisture. The rate of cure will, therefore, depend upon temperature and relative humidity at the time of installation. Cool dry weather will slow curing whereas warm, humid weather will accelerate curing.

The encapsulant shall be designed to enable vehicular traffic to pass over the properly filled saw cut immediately after installation without tracking or stringing of the material. The encapsulant shall form a surface skin allowing exposure to vehicular traffic within 30 minutes at 75 degrees F and completely cure to a tough, rubber-like consistency in two to seven days after installation.

Properly installed and cured encapsulant shall exhibit resistance to effects of weather, vehicular abrasion, motor oils, gasoline, anti-freeze solution, brake fluid, deicing chemicals and salt normally encountered, in such a manner that the performance of the vehicle detector loop wire is not adversely affected.

The cured encapsulant shall be temperature stable and exhibit no degradation in performance throughout the ambient pavement temperature ranges experienced within the State of Arizona.

The encapsulant shall exhibit minimal shrinkage during or after its installation, and in no manner affect the performance characteristics of the material.

The encapsulant shall be designed to permit clean-up of material and application equipment, prior to curing of the encapsulant, with a suitable non-flammable solvent. Should any encapsulant material be allowed to cure in the application nozzle, it shall be able to be pulled out as a solid plug.

The encapsulant shall have a minimum 12-month shelf life in undamaged original containers when stored in a cool, dry environment.

The encapsulant shall be designed for roadway installation when the surface temperature is between 40 and 140 degrees F.

The encapsulant shall have the following physical properties in its uncured and cured states.

| Uncured (Wet) Encapsulant | | |
|----------------------------------|--|--|
| Property | Requirement | Test Procedures |
| Weight | 10.1 ± 0.3 pounds/gallon | A. Weight/Gallon |
| Total Solids by Weight | 75 – 85% | B. Determination of Non-Volatile Content |
| Viscosity | 10,000 - 85,000 centipoise | C. Dynamic Viscosity |
| Drying Time | Touch: 24 hrs. maximum Complete: 30 hrs. max. | D. Tack-Free Time |

| Cured Encapsulant | | |
|--------------------------|--------------------|-------------------------|
| Property | Requirement | Test Procedure |
| Hardness (Indentation) | 65 – 85 | E. Rex hardness |
| Tensile Strength | 500 psi minimum | F. Tensile & Elongation |
| Elongation | 300% minimum | |

(C) Hot Applied Rubberized Sealant:

Hot applied rubberized sealant may be used to seal saw cuts in asphaltic concrete and in lean concrete base. It shall be suitable for use as a sealant for traffic loop saw cuts and be non-tracking under traffic. At application temperatures, the traffic loop sealant shall be a thin, free flowing fluid which penetrates saw cuts and self-levels permitting uniform application. The sealant shall be melted and applied to pavements using a pressure feed melter unit. Pour pot application is not acceptable. The sealant shall be a relatively stiff sealant but shall remain flexible at low pavement surface temperatures. The test results shall conform to the following specifications for the loop detector sealant.

| Test | Specification |
|--|--------------------------|
| Penetration: 125 °F, 50g, 5s | 50 maximum |
| Penetration: 77 °F, 100g, 5s | 10 – 25 |
| Softening Point: | 210 °F minimum |
| Ductility: 77 °F | 15 cm minimum |
| Mandrel Bend: 0 °F, 90° Arc, 10s, 3/4 inch diameter | Pass 2 of 3 |
| Recommended Pour Temp: | 380 °F |
| Safe Heating Temp: | 420 °F |
| Brookfield Viscosity: 400 °F | 7,500 centipoise max. |
| Unit Weight: | 8.5 pounds per gallon |
| Coverage; 1/2 by 1/2 inch crack | 11.0 pounds per 100 feet |

735-3 Construction Requirements:

735-3.01 Detector Installation:

(A) General:

Detectors shall be installed as shown on the project plans, as shown in the Standard Drawings, and as directed by the Engineer. The installation of the detectors shall be such that the operation shall not be affected by temperature changes, water, ice, rain, snow, chemicals, or electromagnetic noise.

Vehicle detectors shall be installed prior to any chip seal or friction course for asphaltic concrete pavements, and prior to any friction course for Portland cement concrete pavements.

(B) Saw Cut Sealants:

Saw cuts shall be sealed as specified in the Standard Drawings, with the following exceptions:

- Two-part epoxy filler sealant shall be used instead of pre-mixed emulsified crack filler sealant, and
- Department-furnished piezo grout shall be used to seal the piezo sensor portion of speed/classification and weigh-in-motion detectors.

Before the sealant sets up, the surplus sealant shall be removed from the road surface without the use of solvents. Sand blotter shall be applied as directed by the Engineer.

(C) Splices:

Except for piezoelectric or quartz piezoelectric sensors, detector sensor conductors shall run continuous and unspliced to the adjacent pull box. Lead-in cables from the controller cabinet shall be spliced to the detector sensor conductors in the pull box. Splicing of the lead-in cables between the controller cabinet and pull box will not be allowed.

Piezoelectric sensor and quartz piezoelectric sensor lead-in cables used in speed/classification detectors and weigh-in-motion detectors shall run continuous and unspliced through the pull box to the controller cabinet. Splicing of the lead-in cables will not be allowed.

Wire splices in the pull box shall be soldered using resin-core solder with 60 percent tin and 40 percent lead. The splices shall be sealed as specified in the Standard Drawings. A weather proof bond shall form with a dielectric strength of 500 volts per mil, and water absorption shall be less than 6.5 percent. The detector lead-in cable shield shall only be grounded on one end in the control cabinet.

(D) Detector Loop Field Tests:

Detector loop field tests shall be in accordance with the Standard Drawings.

Any loop that fails to meet the specified requirements or cannot be tuned to the Engineer's satisfaction shall be replaced at no additional cost to the Department.

For the traffic data detectors specified in Subsection 735-3.02, the contractor shall also FAX the complete test results to ADOT's Multimodal Planning Division (MPD) at (602) 252-8313, Attention: Traffic Monitoring Team, within two weeks of completion of the second test. As an alternate, the contractor may email the test results to the Department at MPDtrafficmonitoringteam@azdot.gov, also within two weeks of completion of the second test. In either case, the contractor shall also mail two copies of all such required information to ADOT MPD at 1324 S. 22nd Ave., Mail Drop 070R, Phoenix, AZ 85009, Attention: Data Collection. The test results shall identify the project number and detector location.

For pull boxes used with data detector systems, the contractor shall provide GPS latitude and longitude coordinates, \pm five feet, for each installed pull box. Such GPS information shall be transmitted along with the test data required above for all pull boxes installed with each tested data detector loop system.

735-3.02 Traffic Data Detectors:

(A) General:

Counter (Type C), speed/classification (Types SA and SB), and weigh-in-motion (WIM) detector systems shall be installed in accordance with the Standard Drawings and as specified herein.

The contractor shall use a 3/4-inch wide saw blade to cut the channel for piezoelectric sensors in pavement. Multiple passes using a thinner blade will not be acceptable.

When new conduit is required under any existing pavement, the contractor shall install conduit beneath the roadway using horizontal directional drilling methods approved by the Engineer.

Pull boxes shall be as shown on the Standard Drawings.

As specified above in Subsection 735-3.01(D), the contractor shall provide GPS latitude and longitude coordinates, \pm five feet, for all pull boxes installed with each traffic data detector loop system.

(B) Installation of Piezoelectric Sensors:

The contractor shall install the Department-furnished piezoelectric or quartz piezoelectric sensors, and piezo grout, as specified herein and shown on the plans. An ADOT traffic signal technician must be present during all elements of the piezoelectric sensor installation (to the point where the pre-attached lead-in cable begins), including layout, groove saw-cutting, sensor placement, and application of piezo grout. The contractor shall notify the Engineer at least 15 working days prior to its scheduled installation of any piezoelectric sensors. Any

piezoelectric sensor installation work performed without full time inspection by the Department's traffic signal technician may not be eligible for payment.

Lead-in runs of cable from all piezoelectric sensors and quartz piezoelectric sensors to the controller cabinet shall be continuous; splices will not be acceptable.

(C) Traffic Counter Detectors:

A complete new traffic counter system (Type C) shall include all loops and pull boxes for the specific location for both directions of traffic, as shown on the Standard Drawings. A divided roadway shall require a pull box on each shoulder. Loop detector traffic counter systems shall include all necessary conduits from edge of pavement to the roadside pull box(es).

The contractor shall provide a trench and install conduit from the edge of pavement to the pull box. Wiring, conduit, and pull box installation shall be in accordance with Subsections 732-3.01 and 732-3.02 of the specifications.

When a full replacement of an existing traffic counter system is indicated on the plans and bidding schedule, the contractor shall remove the existing facilities, and furnish and install new loops, pull boxes, and conduit.

The total number of loops for each complete traffic counter system specified above (new or full replacement) shall be the number of loops required for all traffic lanes in both travel directions at the specified location.

(D) Speed/Classification Detectors:

A complete new speed/classification system (Type SA or Type SB) shall include all loops, pull boxes, control cabinet, A-pole, pole foundation, the necessary conduits under the roadway and from pull boxes to control cabinets, and Department-furnished piezoelectric sensors with attached lead-in cables, all as shown on the Standard Drawings. When shown on the plans, an additional control cabinet, pull box, A-pole, and pole foundation shall be required.

The contractor shall provide trenches and install conduits from the edge of pavement to the pull box and from the pull box to the control cabinet. Wiring, conduit, and pull box installation shall be in accordance with Subsections 732-3.01 and 732-3.02 of the specifications.

Installation of Department-furnished piezoelectric sensors shall be in accordance with Subsection 735-3.02(B).

The cabinet(s) shall be grounded in accordance with the requirements of Subsections 732-3.03 and 734-3.03 of the specifications. The contractor shall keep the ground wire from the cabinet ground bus bar to the ground rod assembly or array as short as possible.

When a full replacement of an existing speed/classification system is indicated on the plans and bidding schedule, the contractor shall remove the existing facilities, and furnish and install new loops and pull boxes, a new control cabinet, A-pole and foundation, all necessary

conduits under the roadway and from pull boxes to control cabinets, and Department-furnished piezoelectric sensors with attached lead-in cables. When shown on the plans, an additional control cabinet, pull-box, A-pole, and pole foundation shall be required.

When a partial replacement of an existing speed/classification system is indicated on the plans and bidding schedule, the contractor shall furnish and install new loops and pull boxes, and new Department-furnished piezoelectric sensors with attached lead-in cables. The contractor shall use the existing cabinet(s), A-pole(s) and foundation(s), and all conduit connections under the roadway and from pull boxes to the cabinet.

The total number of loops for each complete speed/classification system specified above (new, full replacement, or partial replacement) shall be the number of loops required for all traffic lanes in both travel directions at a specified location.

(E) Weigh-in-Motion (WIM) Detectors:

A complete new weigh-in-motion (WIM) system shall include all loops, pull boxes, control cabinet, A-pole, pole foundation, the necessary conduits under the roadway and from pull boxes to control cabinets, and Department-furnished sensors (piezoelectric or quartz piezoelectric as shown on the plans) with attached lead-in cables, all as shown on the Standard Drawings. When shown on the plans, an additional control cabinet, pull box, A-pole, and pole foundation shall be required.

The contractor shall provide trenches and install conduits from the edge of pavement to the pull box and from the pull box to the control cabinet. Wiring, conduit, and pull box installation shall be in accordance with Subsections 732-3.01 and 732-3.02 of the specifications.

Installation of Department-furnished piezoelectric sensors shall be in accordance with Subsection 735-3.02(B).

The cabinet(s) shall be grounded in accordance with the requirements of Subsections 732-3.03 and 734-3.03 of the specifications. The contractor shall keep the ground wire from the cabinet ground bus bar to the ground rod assembly or array as short as possible.

When a full replacement of an existing new WIM system is indicated on the plans and bidding schedule, the contractor shall remove the existing facilities, and furnish and install new loops and pull boxes, a new control cabinet, A-pole and foundation, all necessary conduits under the roadway and from pull boxes to control cabinets, and Department-furnished piezoelectric sensors with attached lead-in cables. When shown on the plans, an additional control cabinet, pull-box, A-pole, and pole foundation shall be required.

When a partial replacement of an existing WIM system is indicated on the plans and bidding schedule, the contractor shall furnish and install new loops and pull boxes, and new Department-furnished piezoelectric sensors with attached lead-in cables. The contractor shall use the existing cabinet(s), A-pole(s) and foundation(s), and all conduit connections under the roadway and from pull boxes to the cabinet.

The total number of sensors for each complete new WIM system specified above (new, full replacement, or partial replacement) shall be the number of sensors required for all traffic lanes in both travel directions at a specified location.

735-3.03 Traffic Signal Detectors:

Traffic signal detectors shall be as shown on the Standard Drawings, and shall include the specified loop, wiring, and conduit required to terminate the wiring in the pull box.

The contractor shall provide a trench and install conduit from the edge of pavement to the pull box. Wiring, conduit, and pull box installation shall be in accordance with Subsections 732-3.01 and 732-3.02 of the specifications.

735-3.04 Preformed Traffic Detectors:

Preformed loop detectors for ramp metering and counting shall comply with the Standard Drawings, and shall include the specified loop, wiring, and conduit required to terminate the wiring in the pull box.

Preformed loop detectors in Portland cement concrete pavement shall comply with the Standard Drawings, and shall include the specified loop, wiring, and conduit required to terminate the wiring in the pull box.

The contractor shall provide a trench and install conduit from the edge of pavement to the pull box. Wiring, conduit, and pull box installation shall be in accordance with Subsections 732-3.01 and 732-3.02 of the specifications.

Preformed loop detectors in bridge deck shall comply with the Standard Drawings, and shall include the specified loop, wiring, and conduit required to terminate the wiring in the junction box.

735-4 Method of Measurement:

Traffic signal detectors, preformed loop detectors, and pedestrian detectors will be measured as a unit for each type of detector furnished and installed.

Traffic data detectors, consisting of counter loop detectors (Type C), speed/classification detectors (Type SA or Type SB), and weigh-in-motion (WIM) detectors will be measured as a complete system for each type of traffic data detector furnished and installed, including all loops required for both directions of traffic. Speed/classification detectors, regardless of type, and weigh-in-motion detectors will be measured as a new system, full system replacement, or partial replacement, as specified herein and indicated on the bidding schedule. Counter detectors will be measured as a new system or full system replacement, as specified herein and indicated on the bidding schedule.

Speed/classification and weigh-in-motion detectors that include two cabinets, A-poles, and pole foundations (two-cabinet systems) will be also be measured as a complete new system, including all loops in both directions of traffic, regardless of the distance between both directions of traffic.

735-5 Basis of Payment:

Traffic signal detectors, preformed loop detectors, and pedestrian detectors, measured as provided above, will be paid for at the contract unit price each for the type detector designated in the bidding schedule, complete in place, which price shall be full compensation for the work described and specified herein and on the plans.

Traffic data detectors, measured as provided above, will be paid for at the contract unit price for each complete type of data detector system designated in the bidding schedule, complete-in-place, regardless of the number of loops, including all conduit, wiring, pull boxes and, when specified, cabinets, poles, and pole foundations, which price shall be full compensation for the work described and specified herein and on the plans.

No measurement or payment will be made for horizontal directional drilling, the cost being considered as included in contract items.

(736HSL, 11/04/13)

SECTION 736 HIGHWAY AND SIGN LIGHTING:

736-2.01(D)(1) Photo Electric Controls: of the Standard Specifications is revised to read:

The photo electric controls, hereinafter referred to as PEC, shall comply with the electrical requirements specified in the standard drawings.

The nominal dimensions shall be as shown on the standard drawings. The operating temperature range shall be from -40 to +158 degrees F with zero to 100 percent relative humidity. A time delay shall be incorporated into the circuit to prevent the lights from being turned off at night by transient lights which might be focused on the control. The PEC shall be a conventional glass faced, hermetically sealed cell.

When the north sky illumination in the area falls to the pre-set value, the lighting load shall be turned on.

A switch to permit manual operation of the lighting circuit shall be provided for each PEC.

The PEC shall work in conjunction with an external auxiliary load relay for handling the required lighting loads unless specified otherwise.

The PEC shall have a built-in lightning arrester. The encapsulated surge protector shall have a spark-over value of two kilovolts and shall interrupt up to 10 kiloamperes of follow-through current without affecting the operating characteristics.

ITEM 7360104 - LUMINAIRE (HORIZONTAL MOUNT) (LED TYPE 25L):
ITEM 7360105 - LUMINAIRE (HORIZONTAL MOUNT) (LED TYPE 40L):

Description:

The work under this item shall consist of furnishing all equipment, materials and labor necessary to install horizontal mount light emitting diode (LED) luminaires in accordance with the project plans, the applicable requirements of Section 736 of the Standard Specifications and as specified herein.

Materials:

General:

All horizontal mount LED luminaires supplied on this project shall be 120 - 240 volt fixtures with a 3,000 °K correlated color temperature, shall be supplied with a shorting cap and shall meet the requirements of this specification. Only luminaires as shown on the Department's Approved Products List (APL) will allowed for use. Copies of the most current version of the APL are available on the internet from the Arizona Transportation Research Center (ATRC), through its PRIDE program.

Method of Measurement:

Luminaire (Horizontal Mount) (LED Type 25L) and Luminaire (Horizontal Mount) (LED Type 40L) will be measured as a unit for each luminaire type furnished and installed.

Basis of Payment:

The accepted quantities of Luminaire (Horizontal Mount) (LED Type 25L) and Luminaire (Horizontal Mount) (LED Type 40L), measured as provided above, will be paid for at the contract unit price each type of luminaire, which price shall be full compensation for the item complete in place, as described and specified herein and as shown on the project plans.

ITEM 7360160 - POWER SUPPLY (BATTERY BACKUP):

Description:

An Uninterruptible Power Supply (UPS) battery backup system shall be furnished and installed by the contractor in accordance with the project plans and these specifications.

The UPS system shall protect the 120 volt circuits supporting the traffic signal controller, controller cabinet, vehicular signal indications, pedestrian signal indications and pushbuttons. The UPS system is not intended to support any roadway lighting or sign lighting unless otherwise specified on the project plans.

Materials:

The UPS system shall consist of a UL-listed UPS controller unit, manufacturer recommended batteries of sufficient amp-hour ratings to support the specified load and operating duration, manual bypass switch, and manufacturer specified surge protection devices.

The UPS system shall be combined in a single cabinet containing the meter pedestal components and UPS system components, as designated on the project plans.

The UPS system shall conform to the following requirements:

- Provide a minimum of six hours of full operation and two hours of flash mode operation at 500 watts, when batteries are fully charged.
- When system is running on battery power, the UPS shall allow the user to select a voltage at which the UPS transfer from full operation mode to flash mode.
- The inverter and the batteries must be hot swappable. There shall be no disruption of power to the traffic signal, when removing the UPS batteries.
- Can be remotely programmed, monitored and retrieve logs.
- During back up operation, the voltage output shall be 120 V AC $\pm 2\%$ with a frequency of 60 ± 0.3 Hz.
- The maximum transfer time, from utility power disruption to stabilized inverter line voltage shall not exceed 8 milliseconds. The same shall apply when switching from the inverter line voltage to utility power.
- The system shall operate over a temperature range of -40 to 165 degrees Fahrenheit.
- UL 1778 listed.
- ANSI/IEEE C62.41 Category A & B Lightning surge protection compliant.

The following includes manufacturers of UPS systems that have been tested and pre-approved by the Department per the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction:

UPS system in combined UPS/meter pedestal cabinet:

US Traffic Corporation
9603 John Street
Santa Fe Springs, Ca. 90670
(800) 733-7872
www.ustraffic.net

TESCO Controls Inc.
3409 52nd Avenue
P.O. Box 239012
Sacramento, Ca. 95823-9012
(916) 395-8800
www.tescocontrols.com

The contractor shall verify that the specific proposed UPS equipment models are approved by the Department. Products or models not specifically pre-approved by the Department must be approved by the Department prior to use.

The contractor is responsible for obtaining approval of the specific UPS equipment models and cabinets from the utility company providing electrical service, when utilizing a combined UPS/meter pedestal cabinet.

Cabinet:

The cabinet shall be of tamperproof construction with piano-hinged doors and provisions for padlocks. The housing shall be of a NEMA 3R weather resistant construction. There shall be no exposed nuts, bolts, screws, rivets or other fasteners on the exterior of the enclosure.

Combination UPS/meter pedestal cabinet shall be furnished with cast-in-place concrete foundation of a size and dimensions as specified by the manufacturer.

A maintenance pad of the same width as the cabinet foundation, four inches in thickness and extending a minimum of 36 inches out from the face of the cabinet shall be provided.

The cabinet shall be equipped with:

- Stainless steel piano hinged door with two locking positions, 90° and 180°.
- ¾" - diameter stainless steel handle with padlock fitting.
- Three point door latch, with integrated Corbin Type 2 lock with two keys. Nylon rollers for top and bottom strikers.
- A neoprene door gaskets
- Louvers in main door with 12"x16"x1" fiberglass air filter held with thumbscrews.
- Thermostat controlled, 100 cfm or better fan; ON at 120°F.
- Door switch to activate an LED light fixture.
- A GFI Protected Receptacle shall be mounted on the door and wired to the load side of the UPS for maintenance use.
- Two shelves for the batteries shall be provided. These shelves shall be adjustable within the cabinet. These shelves shall be removable without the use of tools.
- Permanent labels shall be located inside the enclosure. All labels shall be engraved or silk-screened. No paper or plastic labels shall be allowed.
- An aluminum pocket shall be provided for the cabinet prints and manuals.
- Two sets of cabinet wiring prints and the latest instruction/operation/maintenance manual shall be provided with each cabinet.
- Line/Load Lugs: Shall be installed for AC+, AC- Chassis Ground. Lugs shall be capable of terminating #8 - #10 Copper Wire. Service Lugs from Utility Power shall be clearly marked LINE. Service Lugs to the Traffic Signal Control Equipment shall be clearly marked LOAD.

Conduits in the foundation shall be as specified on the project plans.

Exact location and orientation of the cabinet shall be field determined by the Engineer.

The UPS system cabinet shall not be attached to the traffic signal controller cabinet, and shall be located a minimum of five feet from any other cabinet, wall, fence or other physical obstruction.

UPS Controller Unit:

The UPS controller unit shall provide sufficient output power to support the traffic signal system (Cabinet, vehicular signals, pedestrian faces and push buttons).

The UPS controller unit shall be provided with an industry standard RS-232 serial port. The UPS controller unit shall be provided with an internal Ethernet, RJ45 port. All configuration and system menus shall be accessible and programmable from RS-232 and RJ45 ports.

The UPS system shall have a manual bypass switch for maintenance or servicing purposes without affecting continuous power output to the traffic signal controller, or tripping the conflict monitor/malfunction management unit.

Batteries:

Batteries shall have a minimum 5 years non-prorated warranty, shall be of sufficient amp-hour ratings to meet the requirements of these specifications. The contractor shall furnish calculations or other supporting documentation bearing evidence that the proposed batteries will meet or exceed this provision.

The batteries shall be completely sealed and maintenance-free; comprised of float cycle, GEL VRLA (Valve Regulated Lead Acid) or AGM (Absorbed Glass Mat), certified to operate at temperatures from -40 to 165 degrees Fahrenheit.

Batteries shall have terminal covers to protect from accidental contact with metallic terminal components.

Construction Requirements:

The power supply battery backup system shall be installed in accordance with the requirements of section 736.3 of the Standard Specifications and the battery backup system manufacturer's recommendations.

Method of Measurement:

Power Supply (Battery Backup) system will be measured as a unit for each system furnished and installed including the cabinet and foundation.

Basis of Payment:

The accepted quantities of Power Supply (Battery Backup) systems, measured as provided above, will be paid for at the contract unit price each, which price shall be full compensation for the work complete in place, as designated and specified herein and shown on the project plans including furnishing, assembling, installing and testing Power Supply (Battery Backup) system, combined UPS/meter pedestal cabinet, cabinet foundation, conduit, elbows, anchor bolts, maintenance pad, UPS controller unit, serial cable, surge protection devices, batteries

and all other components necessary to provide a complete functional UPS system for controlling the operation of traffic control signals in the manner specified herein.

ITEM 7370202 - TEMPORARY TRAFFIC SIGNAL (PORTABLE):

Description:

The work under this item shall consist of furnishing all materials, labor and equipment necessary to install and maintain a portable temporary traffic signal on the southwest corner of the intersection of US 191 and US 70 that will be utilized during the removal of the existing and installation of the new traffic signal equipment. The temporary signal shall be wired to the existing signal controller by splicing new conductors to the existing conductors in the existing pull box on the southwest corner of the intersection. A temporary signal with at least one 12" overhead indication and one 12" side-mount indication is required. The contractor shall remove the temporary signal when the new signal equipment has been installed and operational.

The temporary traffic signals equipment shall be listed on ADOT's Approved Product List, and conform to Subsection 737-3.02 of the Standard Specifications, the MUTCD, and the requirements of these Special Provisions.

Materials:

The contractor shall furnish Certificates of Compliance to the Engineer in accordance with Subsection 106.05 of the Standard Specifications. All materials used for the temporary signal must be determined by the Engineer or Inspector to be serviceable and in good working order. The materials need not be new.

Construction Requirements:

Maintenance of the temporary signals will be the responsibility of the contractor. The signals shall be maintained in proper working condition at all times. Any damage caused by the motoring public, severe weather or other acts of nature shall be repaired by the contractor under force account. Any damage to the signals as a result of construction activities, construction personnel, or equipment associated with this project shall be repaired by the contractor at no additional cost to the Department.

Repositioning of the temporary signal to accommodate construction activities or changes to the traffic control shall be considered part of the cost of the temporary traffic signal installation. The conductors running from the pull box to the temporary signal shall be protected in PVC conduit that is either laid directly on the ground surface or buried if site conditions or safety concerns dictate that the conduit should be buried.

The Engineer shall be notified a minimum of 48 hours prior to any portable signal installation. The temporary signal shall be activated at a date and time approved by the Engineer. The contractor shall have an off duty police officer present for traffic control during the transition

from existing traffic flow to the temporary signal operation. The contractor shall provide a qualified journeyman electrician that is IMSA level II certified to oversee all work related to the installation of the temporary signal. If, at any time, it is determined that a certified electrician is not present, the Inspector may issue a stop work order to the contractor.

Method of Measurement:

Temporary Traffic Signal (Portable) shall be measured on a lump sum basis as a single complete unit of work.

Basis of Payment:

Temporary Traffic Signal (Portable), measured as provided above, will be paid for at the contract lump sum price, which shall be full compensation for the work, complete in place, as specified and described herein.

ITEM 8080645 – RESET WATER METER BOX:

Description:

The work under this item consists of furnishing all materials, equipment, tools and labor to reset existing water meter boxes to final grade at the locations shown on the project plans and as directed by the Engineer.

Materials:

Materials for frame and cover adjustment shall conform to the requirements the City of Safford Construction Standards and the related Maricopa Association of Government (MAG) Uniform Standard Details for Public Works Construction.

Construction Requirements:

All work shall be in accordance with the locations shown on the project plans and with MAG Standard Detail 320 and the requirements of the City of Safford Construction Standards. Backfill and compaction shall be in accordance with the requirements of Subsection 202-3.01 of the Standard Specifications.

The contractor shall protect all existing meter boxes during the course of the work. If an existing meter box is damaged due to the contractor's activities, as determined by the Engineer, the contractor shall replace the box with a new meter box at no additional cost to the Department. If an existing meter box is damaged and cannot be replaced, the contractor shall notify Engineer prior to removal.

Method of Measurement:

Reset Water Meter Box will be measured as a unit each, complete in place.

Basis of Payment:

The accepted quantities of Reset Water Meter Box, measured as provided above, will be made at the contract unit price per each, which price shall be full compensation for the work, complete in place, as described and specified herein and shown on the project plans.

ITEM 8080646 – RESET FRAME AND COVER FOR VALVE BOX:

Description:

The work under this item consists of furnishing all materials, equipment, tools and labor to reset existing valve boxes to final grade at the locations shown on the project plans and as directed by the Engineer.

Materials:

Materials for frame and cover adjustment shall conform to the requirements the City of Safford Construction Standards and the related Maricopa Association of Government (MAG) Uniform Standard Details for Public Works Construction.

Construction Requirements:

All work shall be in accordance with the locations shown on the project plans and with MAG Standard Detail 391 and the requirements of the City of Safford Construction Standards. Backfill and compaction shall be in accordance with the requirements of Subsection 202-3.01 of the Standard Specifications.

The contractor shall protect all existing valve boxes during the course of the work. If an existing valve box is damaged due to the contractor's activities, as determined by the Engineer, the contractor shall replace the box with a new valve box at no additional cost to the Department. If an existing valve box is damaged and cannot be replaced, the contractor shall notify Engineer prior to removal.

Method of Measurement:

Reset Frame and Cover for Valve Box will be measured as a unit each, complete in place.

Basis of Payment:

The accepted quantities of Reset Frame and Cover for Valve Box, measured as provided above, will be made at the contract unit price per each, which price shall be full compensation for the work, complete in place, as described and specified herein and shown on the project plans.

ITEM 8080651 – FIRE HYDRANT:

Description:

The work under this item consists of furnishing all material, equipment, tools and labor to install new fire hydrants. Including pipe, reducer, restrained joint connections, excavation and backfilling, bedding and cover material, thrust blocking, and all miscellaneous pipe hardware complete in place and tested at the location designated on the project plans and in accordance with the requirements of these Special Provisions.

Materials:

All materials shall conform to the requirements described in City of Safford Construction Standards for Public Works and Utilities within Subdivisions and Rights Of Way, current edition and Tucson Water Standard Specifications and Details, City of Tucson, current edition.

Construction Requirements:

Installation of the fire hydrant shall conform to City of Safford Construction Standards for Public Works and Utilities within subdivisions, right-of-way, and City of Tucson Water Standard Specifications and Details. All work shall be coordinated with City of Safford Utility Department and be subject to their inspection and approval. The contractor shall notify the City of Safford two working days prior to commencing construction. Excavation in vicinity of a gas line shall be by hand digging. Water line shall be installed with minimum one-foot clearance of existing utilities. Fire hydrant shall be installed within twenty-four (24) hours of removing existing fire hydrant described in item No. 2020060 - Remove and Salvage (Fire Hydrant).

Method of Measurement:

Fire Hydrant will be measured by the unit each installed.

Basis of Payment:

The accepted quantities of Fire Hydrant, measured as provided above will be paid for at the contract unit price per each, complete in place, including hydrant, piping, fittings, reducer, appurtenances, testing, disinfection, excavation and backfilling and pavement replacement.

ITEM 8080658 – FIRE HYDRANT (SPECIAL)(ADJUST TO GRADE):

Description:

The work under this item consists of furnishing all materials, equipment, tools and labor to adjust existing fire hydrants to final grade at the locations shown on the project plans and as directed by the Engineer.

Materials:

Materials for frame and cover adjustment shall conform to the requirements the City of Safford Construction Standards and the related Maricopa Association of Government (MAG) Uniform Standard Details for Public Works Construction.

Construction Requirements:

All work shall be in accordance with the locations shown on the project plans and shall conform to City of Safford Construction Standards for Public Works and Utilities within subdivisions, right-of-way, and City of Tucson Water Standard Specifications and Details. All work shall be coordinated with City of Safford Utility Department and be subject to their inspection and approval. The contractor shall notify the City of Safford two working days prior to commencing construction.

The contractor shall not utilize any abrasive tools or methods for the adjustment of the fire hydrants that would disturb the lead-based paint. This includes, but is not limited to, sawing, grinding, sanding, or heating. Woven straps (not linked chains) may be used to lift the fire hydrants from the ground.

The contractor shall protect all existing fire hydrants during the course of the work. If an existing fire hydrant is damaged due to the contractor's activities, as determined by the Engineer, the contractor shall replace the fire hydrant with a new fire hydrant at no additional cost to the Department. If an existing fire hydrant is damaged and cannot be replaced, the contractor shall notify Engineer prior to removal.

Method of Measurement:

Fire Hydrant (Special) (Adjust to Grade) will be measured as a unit each, complete in place.

Basis of Payment:

The accepted quantities of Fire Hydrant (Special) (Adjust to Grade), measured as provided above, will be made at the contract unit price per each, which price shall be full compensation for the work, complete in place, as described and specified herein and shown on the project plans.

(901MOBE, 09/18/12)

SECTION 901 MOBILIZATION:

901-5 Basis of Payment: of the Standard Specifications is revised to read:

Payment for mobilization, measured as provided above, will be made at the contract lump sum price, which shall be full compensation for supplying and furnishing all materials, facilities and services and performing all the work involved as specified herein.

Partial payments under this item will be made in accordance with the following provisions. Reference herein to the adjusted contract shall mean the original contract amount exclusive of mobilization:

The first payment of the lump sum price for mobilization will be paid after the Preconstruction Conference provided that all submissions required under Subsection 108.03 are submitted by the contractor at the Preconstruction Conference to the satisfaction of the Engineer. The amount paid for the first partial payment will be in accordance with Table 901-1.

The second payment of the lump sum price for mobilization will be made when the Engineer has determined that a significant amount of equipment has been mobilized to the project site which will be used to perform portions of the contract work. The amount paid for the second partial payment will be in accordance with Table 901-1.

The third payment of the lump sum price for mobilization will be made on the first estimate following completion of five percent of the adjusted contract. Such percentage determination will not include partial payments for material on hand. The amount paid for the third payment will be in accordance with Table 901-1.

The fourth payment of the lump sum price for mobilization will be made on the first estimate following completion of 10 percent of the adjusted contract. Such percentage determination will not include partial payments for material on hand. The amount paid for the fourth payment will be in accordance with Table 901-1.

The total sum of all payment shall not exceed the original contract lump sum price for mobilization, regardless of the fact that the contractor may have, for any reason, shut down its work on the project or moved its equipment away from the project and back again.

| TABLE 901-1 AMOUNT ALLOWED FOR MOBILIZATION DURING THE LIFE OF THE CONTRACT | | |
|---|--------------------------|--|
| Contract Amount: \$ | % Of Contract | Basis Of Payment |
| 0 - 5,000,000 | 12% * | 25% of the lump sum price for mobilization or 3% of the original contract amount, whichever is less. |
| 5,000,000 + | 10% * | 25% of the lump sum price for mobilization or 2.5% of the original contract amount, whichever is less. |
| * If the price bid for mobilization exceeds this percentage, any excess will be paid to the contractor upon completion of the contract. | | |

The adjustment provisions in Section 104 and the retention of funds provisions in Section 109 shall not apply to the item of mobilization.

When other contract items are adjusted as provided in Section 104, and if the costs applicable to such items of work include mobilization costs, such mobilization costs will be considered as recovered by the contractor in the lump sum price paid for mobilization, and will be excluded from consideration in determining compensation under Section 104.

When mobilization is not included as a contract item, full compensation for any necessary mobilization required will be considered as included in the prices paid for the various contract items involved and no additional compensation will be made.

SECTION 908 - CONCRETE CURBS, GUTTERS, SIDEWALKS AND DRIVEWAYS:

908-3 Construction Requirements: of the Standard Specifications is modified to add:

In locations where utility poles are to remain and new sidewalk is to be placed, half inch preformed expansion joint material or felt paper shall be placed around the poles prior to the sidewalk construction.

908-4 Method of Measurement: of the Standard Specifications is modified to add:

For the purpose of measuring single curb to curb and gutter, or one type of curb and gutter to a different type of curb and gutter, no consideration will be given to transitions, measurement of which will be as curb or curb and gutter. Should such transitions lie between curb or curb and gutter representing different bidding schedule items, the total length of the transition will be considered to be the type of curb or curb and gutter, which has the larger cross-sectional area. Curb and gutter transitions in accordance with C-05.12, Type 9 will be measured as a unit each.

908-5 Basis of Payment: of the Standard Specifications is modified to add:

The accepted quantities of concrete curb and gutter transitions measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place, including furnishing and placing embankment material, excavating, removing unsuitable material, backfilling and compacting. The accepted quantities of C-05.12, Type 9 transitions will be paid for at the contract unit price per each, which shall be full compensation for the work complete in place.

No measurement or direct payment will be made for placing bond break material around utility poles prior to sidewalk construction, the cost being considered included in the price of the contract items.

ITEM 9080289 - CONCRETE WHEEL CHAIR RAMP (SIDEWALK RAMP DETAIL B):
ITEM 9080290 - CONCRETE WHEEL CHAIR RAMP (SIDEWALK RAMP DETAIL D):

Description:

The work under this item consists of furnishing all materials, labor and equipment required to construct concrete sidewalk ramps at the locations indicated on the project plans in accordance with ramp Details B and D.

Materials:

All materials shall comply with the requirements described in Section 908-2 of the Standard Specifications.

Construction Requirements:

Sidewalk and sidewalk ramps shall be constructed in conformance to the requirements described in Section 908-3 of the Standard Specifications with the following additional requirements:

- Forms shall be set in reasonably close conformity to the dimensions, lines and grades shown on the project plans subject to the approval of the engineer.
- Care will be taken to protect existing sidewalk to remain.
- Existing sidewalk deemed to be in an unacceptable condition by the Engineer shall be repaired, ground or removed and replaced as directed by the Engineer.
- When abutting existing concrete sidewalk to remain, the new sidewalk ramp shall match the elevation of the existing edge of the sidewalk. The edge of the concrete shall be tooled to a ¼ inch radius.
- The pedestrian access route shall provide a continuous clear width a minimum of four foot wide.

Method of Measurement:

Concrete Wheel Chair Ramp (Sidewalk Ramp Detail B) and Concrete Wheel Chair Ramp (Sidewalk Ramp D) will be measured by the unit each for each type of ramp constructed.

Basis of Payment:

The accepted quantities of Concrete Wheel Chair Ramp (Sidewalk Ramp Detail B) and Concrete Wheel Chair Ramp (Sidewalk Ramp D), measured as provided above, will be paid for at the contract unit price each, which price shall be full compensation for the work, complete in place, including detectable warning strip.as described herein and on the project plans.

(921MEDPA, 07/31/90)

ITEM 9210011 - MEDIAN PAVING:

The work under this item consists of constructing the median paving with Portland cement concrete at the locations and in accordance with the details shown on the project plans and these special provisions.

The surfaces upon which the base material is to be placed shall be fine graded and compacted to a density of not less than 95 percent of the maximum density as determined in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, as directed and approved by the Engineer.

Aggregate base shall conform to the requirements of Section 303 of the Specifications for Class 1, 2 or 3. Aggregate base shall be compacted to a density of not less than 95 percent of the maximum density in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, as directed and approved by the Engineer. The final surface need not be finished with a leveling device.

Portland cement concrete shall conform to the requirements of Section 1006 of the Specifications for Class B concrete. Curing shall be as specified under Subsection 1006-6 of the Specifications, except that any method that will permanently discolor the concrete shall not be used. The concrete shall be scored for a depth of one inch transversely to match the joints in concrete curb and longitudinally when the width of the concrete exceeds 15 feet.

Joint filler shall conform to the requirements of Subsection 1011-6 of the Specifications.

Finish on the slab shall be a transverse coarse broom finish.

Measurement of this work will be made by the square yard of concrete placed.

Payment for this work will be made at the contract price per square yard, which price shall be full compensation for the item complete, in place, including the furnishing and placing of aggregate base, as described and specified herein and on the project plans.

ITEM 9240012 - FORCE ACCOUNT WORK (RAILROAD FLAGGING SERVICES):

Description:

Pursuant to FRA Regulation 49 CFR Part 214, flagging protection is required in accordance with the Railroad's standard safety procedures. The necessity for flagging protection is determined by the Railroad, and when necessary, the Railroad may require one or more flaggers to be present when the contractor is working on Railroad property. The work under this item consists of coordination with the Arizona Eastern Railroad (AZER) to provide flaggers. AZER will furnish all flagging services required by the Railroad for the contractor's work within the AZER right-of-way, as specified in the Special Provisions. The contractor

shall reimburse AZER for Railroad-provided flaggers. The Department will reimburse the contractor for such costs as specified below. The contractor shall provide written notice to AZER Manager of Industry and Public Projects when flagging services are no longer needed.

Railroad-provided flagging service will be required during construction of any element of the project, either temporary or permanent, that occurs when the contractor personnel or equipment will be within 25-feet of the track centerline, when cranes or similar equipment are positioned outside of 25-feet horizontally from track centerline but could tip and impact the track, or as specified in the Right of Entry Agreement. There is a minimum 12-foot horizontal clearance requirement for any temporary construction. Temporary vertical clearances as measured from the top of the highest rail shall not be less than 21-feet. The contractor shall be required to notify the Manger Track Maintenance and the Engineer whenever the 25-foot horizontal and 21-foot vertical clearances would be violated. Notification of such work shall be made at least 15 business days in advance of the date the work is to be performed.

The contractor shall communicate all activities to the Manger Track Maintenance that may affect safety or railroad operations. Any work to be performed by the contractor, which requires flagging protection, shall be deferred until flagging protection is available at the job site.

The Department has estimated 15 working days as the number of days flagging may be required for the work within the AZER right of way. The contractor shall coordinate with the Engineer when ordering flagging service. The contractor shall schedule his work such that all work within the Railroad right of way to be completed safely within the estimated 15 days.

Measurement and Payment:

The AZER daily estimated rate for flagging is **\$800.00** for an eight-hour weekday. The Department will not reimburse the contractor any amount that exceeds the total amount established in the force account for this railroad flagging item. If the contractor requires/desires using additional railroad flagging services that exceeds 15 working days it shall be at no cost to the Department.

The contractor shall submit all invoices from the AZER for providing the flagging service to the Engineer.

Payment for Item 9240012 – Force Account Work (Railroad Flagging Services) will be the actual cost as shown on each invoice, plus a five percent mark-up, as follows:

Sub-total = Invoice x 1.05

Also, an amount equal to 65 percent of the Sub-total, as determined above, multiplied by the applicable sales tax rate will be added to the Sub-total. Finally, an amount equal to 0.50 percent of the Sub-total will be added for the Performance and Payment Bond. The total contractor payment (TCP) for each invoice will be as follows:

$$\text{TCP} = (\text{Sub-total}) + (0.65 \times \text{Sub-total} \times \text{sales tax rate}) + (0.005 \times \text{Sub-total}).$$

Such payment shall be full compensation for railroad flagging service as specified herein.

No additional payment will be made for coordination with the Railroad, the costs being considered as included in contract items.

ITEM 9240103 - MISCELLANEOUS WORK (ELECTRICAL RECORD DRAWINGS):

Description:

The contractor shall provide "redline" drawings of all installed electrical equipment on project plan sheets of completed electrical system work items that have received partial acceptance in accordance with Subsection 105.20(A) of the Standard Specifications. The record drawings shall be submitted on a monthly basis. All measurements made for dimensioning shall be to the nearest 0.1 feet. All record drawings shall be 22" x 34" in size with red ink used to indicate dimensions or electrical items that are not as shown on the original plan sheets. Record drawings shall be made in such a manner that clear and legible copies can be made. The record drawings shall include all accumulated work that is performed from start of project up to and including the current monthly estimate duration.

The contractor shall determine the record location for all lighting pull boxes based on station, offset from edge of pavement, mile post, and differential GPS measured latitude and longitude. These values shall be recorded on the appropriate schedules provided in the plans. Distance from pull box to pull box, and/or pull box to foundation shall be dimensioned. Loop detectors shall be dimensioned from edge of roadway to center of loop with station number at the front of the loop. Loop tail conduits should be dimensioned from pull box to end of conduit showing length and direction.

Underground conduit shall be dimensioned from edge of roadway, starting and ending point station number.

All pull boxes and foundations shall indicate station number and offset from edge of roadway. Distance from pull box to pull box (along traffic signal and lighting conduit runs), and/or pull box to foundation shall be dimensioned. Loop detectors shall be dimensioned from edge of roadway to center of loop with station number at front of loop. Homerun conduits should be dimensioned from pull box showing length and direction.

Any changes to any diagram or detail in the Plans shall be documented in the record drawings.

The contractor shall attach a five character decal 42 inches above the base-plate at 45 degrees in the direction of oncoming traffic. The number represents the maintenance unit device. Each electrical cabinet, signal and lighting pole, and sign structure shall receive a maintenance unit number. The pole schedule in the plans will contain a column to indicate the number/letter combination that will be installed on each specific electrical device. The supervisor at ADOT traffic operations will provide the numbers for the column at the pre-construction meeting. The contractor shall not install any decal until the device has been installed in its final configuration and inspected and approved by the project electrical inspector. Any existing device that is relocated will require a new device number as indicated on the plans or as provided by ADOT Electrical Operations.

The decals will be provided by the ADOT Electrical Warehouse. Pickup of decals by the contractor can be arranged by contacting the ADOT Electrical Inspector.

Plan sheet conductor and pole schedule shall reflect any changes made, such as phase number, number of conductors, size of conductors, circuit number, type of signal head or mount or maintenance unit number.

Five complete sets of record electrical plan sheets consisting of two full size sets and three half size sets shall be submitted to the Engineer prior to final acceptance of electrical equipment on the entire project. Distribution of record drawings shall be the following:

- one full size set to the Field Office
- one full size set to Electrical Design
- one half size set to Electrical Inspection
- one half size set to the Traffic Operations Section
- one half size set to Electrical Blue Stake.

Final acceptance of all electrical work in accordance with Subsection 105.20(B) of the Standard Specifications will not be made until the complete sets of electrical record plans sheets have been submitted and approved by the Engineer.

Method of Measurement:

Miscellaneous Work (Electrical Record Drawings) will be measured on a lump sum basis for the "red-lined" drawings of electrical system work completed and maintenance unit numbers installed.

Basis of Payment:

Miscellaneous Work (Electrical Record Drawings), measured as provided above, will be paid at the contract lump sum price and shall be full compensation for the work described herein.

No measurement or direct payment will be made for the final completed two full size and three half size electrical plan sets, or the distribution of those sets as described herein, the cost being considered as included in the cost of the record drawings.

ITEM 9240119 - MISCELLANEOUS WORK (DETECTABLE WARNING STRIP, C-05.30):

Description:

The work under this item consists of furnishing and installing detectable warning strips in new concrete at the existing sidewalk and sidewalk ramp locations shown on the project plans and as specified herein.

Materials:

Detectable warning strips color shall be approved by the Engineer.
Detectable warning strips shall conform to the requirements of Subsection 908-2.04 of the Standard Specifications.

Construction Requirements:

Construction shall be in accordance with the requirements of Subsection 908-3 of the Standard Specifications.

The contractor shall sawcut the existing ramp the full depth of where the new detectable warning strip is to be installed, remove the concrete and pour new concrete to the top surface height above sidewalk ramp surface requirements as specified in the last paragraph of Subsection 908-3 of the Standard Specifications. The contractor shall secure the detectable warning strip using anchors as recommended by the manufacturer and to satisfaction of the Engineer.

Concrete shall conform to the requirements of Section 1006 of the Standard Specifications.

Method of Measurement:

Miscellaneous Work (Detectable Warning Strip, C-05.30) will be measured as a unit each for location shown on the plans or directed by the Engineer.

Basis of Payment:

The accepted quantities of Miscellaneous Work (Detectable Warning Strip, C-05.30), measured as provided above, will be paid for at the contract unit price per each, which price shall be full compensation for the work complete in place including sawcutting existing concrete, removal of concrete, furnishing and installing new concrete and furnishing and installing the detectable warning strip.

No measurement or direct payment will be made for detectable warning strips furnished and installed with the construction of new sidewalk ramps, the cost considered as included in the respective sidewalk ramp pay items.

ITEM 9240122 - MISCELLANEOUS WORK (SIGN FASTENER):

Description:

The work under this item shall consist of furnishing all materials, tools, equipment, and labor necessary to install sign fasteners to signal and lighting poles and to install signs to the fasteners identified on the project plans to be clamped to poles in accordance with the requirements of these specifications.

Materials:

All materials for the new sign fasteners shall be new. Except as otherwise indicated, all stringers and associated hardware shall conform with ASTM A 325 and subsections 607-2.02 and 607-2.03 of the standard specifications.

Construction Requirements:

The fasteners, which shall attach to signal poles, as indicated on the project plans, using two clamps or bands, shall have sufficient diameters even if the nominal diameters differ from the nominal diameters indicated on the project plans and Std. Dwg. S-9. The Engineer may require an offset of the stringers relative to the poles. The fasteners shall be installed so that the bottom of each attached sign will be at least seven feet above the roadway and at least seven feet above the sidewalk/median paving or ground under the sign. The required signing shall be attached to each fastener and each fastener shall be attached to a pole to ensure there will be no slippage after the installation. The fastener and signing shall be attached to preclude interference with the lighting and signal components.

The installation of the signing to the poles, using sign fasteners, shall be coordinated with Xavier Casillas (520-838-2825) of Southern Regional Signing & Striping or his designee.

Method of Measurement:

Miscellaneous Work (Sign Fastener) will be measured by the unit for each sign fastener furnished and installed complete in place. Each installation shall include all clamps or bands, stringers, welds, and associated hardware indicated on Std. Dwg. S-9.

Basis of Payment:

The accepted quantities of Miscellaneous Work (Sign Fastener), measured as provided above, will be paid for at the contract unit price each for each sign fastener, which price shall be full compensation for the work, complete in place, as specified herein and as shown on the project plans. Payment for this item will only occur for signing indicated on the project plans to be clamped to poles. There will be no payment for this item for signs indicated on the project plans to be banded to poles (typically, signs 6 sq. ft. or less in area), the cost being included in the cost for the sign panels.

(925SRVY, 02/20/08)

SECTION 925 - CONSTRUCTION SURVEYING AND LAYOUT:

925-5 **Basis of Payment:** the first two sentences of the second paragraph of the Standard Specifications are revised to read:

If additional staking and layout are required as a result of additional work ordered by the Engineer, such work will be paid under ITEM 9250101 - ONE-PERSON SURVEY PARTY at the predetermined rate of \$65 per hour, ITEM 9250102 - TWO-PERSON SURVEY PARTY at the predetermined rate of \$100 per hour, ITEM 9250103 - THREE-PERSON SURVEY PARTY at the predetermined rate of \$135 per hour, ITEM 9250106 – SURVEY MANAGER at the predetermined rate of \$100 per hour, and ITEM 9250105 - OFFICE SURVEY TECHNICIAN at the predetermined rate of \$70 per hour.

(1001MATL, 12/14/09)

SECTION 1001 MATERIAL SOURCES: of the Standard Specifications is revised to read:

1001-1 **Description:**

The work under this section shall consist of the procuring of borrow, topsoil, subbase and base materials, mineral aggregates for concrete structures, surfacing, and landscape plating, from sources either designated on the project plans or in the Special Provisions or from other sources.

1001-2 **General:**

The contractor shall determine for itself the type of equipment and work required to produce a material meeting the specifications.

Sites from which material has been removed shall, upon completion of the work, be left in a neat and presentable condition. Where practicable, borrow pits, gravel pits, and quarry sites shall be located so that they will not be visible from the highway.

The contractor shall provide an Environmental Analysis, as specified in Subsection 104.12, for any source proposed for use regardless of whether an approved Environmental Analysis exists for the site.

In accordance with Subsection 104.12, the contractor may incorporate an existing Environmental Analysis approved after January 1, 1999, provided that the analysis is updated as necessary to be in compliance with current regulations and with the contractor's planned activities.

It shall be the responsibility of the contractor to conduct any necessary investigations, explorations, and research, on-site and otherwise, before and after submitting the bid

proposal, to satisfy itself that the specified quantity and/or quality of material exists in any proposed material source.

The Department makes no representation regarding quality or quantity of materials in any source.

1001-2.01 Material Sources in Flood Plains:

Any material source located in a flood plain and proposed for use on the project shall be reviewed by the appropriate agency having flood plain management jurisdiction for the area in which the proposed source is located. The contractor shall obtain a letter from the governing flood plain agency addressed to the Engineer, certifying that the location of the proposed source conforms to the requirements of the floodplain management agency.

Contractors seeking a flood plain material source are cautioned that Section 404 of the Clean Water Act may prevent use of the source unless an appropriate permit is first obtained from the U.S. Army Corps of Engineers.

Except for surplus material from agency-administered flood control management projects, borrow material shall not be obtained from any area situated in the 100-year flood plain of any stream or watercourse, and located within one mile upstream and two miles downstream of any highway structure or surfaced roadway crossing. Surplus material from agency-administered flood control management projects may be used as borrow material only if the contractor submits written evidence to the Engineer that the flood control agency project was fully designed and funded prior to the date of advertisement for bids on the Department project.

Material sources in flood plains located on Native American Indian Reservations will be considered for use based on an individual analysis. The analysis shall include a review of applicable land use plans, flood plain management plans, environmental plans, applicable laws and regulations pertaining to Indian Reservations, and an engineering analysis of the effects on any highway facility or structure. The contractor shall obtain from the Native American Tribal Council all permits, licenses, and approvals and present to the Department for review. The Department will review each request on a case by case basis.

1001-2.02 Information Available:

The Department's Materials Group maintains a listing of materials sources for which a completed Environmental Analysis is available and the landowner has allowed the source to be placed on the list. In addition, Materials Group maintains files for those sites for which the Department holds an easement, license, permit, lease, or other right, as well as a General Plan of Operation and Restoration. The contractor may contact the Materials Group at (602) 712-7231 for information and may review the files located at 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740.

Contractors are advised that an agency having jurisdiction over the source, such as the Forest Service, Bureau of Land Management, Bureau of Reclamation, the State Land Department,

etc., or the owner, as a condition to the use of the source, may have imposed certain obligations. The contractor who uses such a source shall assume full contractual responsibility for any and all of these obligations imposed either by the agency having jurisdiction or by the owner. Contractors considering such a source shall make themselves fully aware of any and all requirements imposed by the Department and the landowners.

The contractor may propose the use of these or other sources, provided that all requirements of the specifications have been met.

It shall be the responsibility of the contractor to comply with the provisions of the Environmental Analysis and with current laws, rules, and regulations.

The Department makes no representation regarding quality or quantity of materials in any source.

It shall be the responsibility of the contractor to conduct any necessary investigations, explorations and research, on-site and otherwise, to satisfy itself that the specified quantity and/or quality of material exists in any material source.

1001-2.03 Usage of Materials:

Approval of the use of any source shall be limited to the specific contract and purpose for which the use of the source was obtained.

1001-2.04 Royalty Charges:

If the Engineer approves a source for which the Department holds an easement, license, permit, lease, or other right with the landowner or controlling agency that includes requirements for the payment of royalties, the amount of the royalty charges and the name and address of the party to whom royalties are to be paid will be available from the Materials Group, 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740.

Prior to the time of final payment, the contractor shall furnish the Engineer with evidence that all royalty charges have been paid. Such evidence shall consist of a waiver, release, or other written acknowledgement from the owner that all of the contractor's obligations to the owner have been met. In the event that royalty charges have not been paid, the Department reserves the right to make such payment and to deduct the amount of such payment from monies due the contractor.

The final billing and payment for material extracted from sources under the jurisdiction of the State Land Department will include a small administrative charge based on the total amount of royalties due for materials removed.

Upon receipt of the final billing from the Department of Transportation, the contractor shall mail a check, payable to the State Land Department, addressed as follows:

Arizona Department of Transportation
Field Reports Section
206 South 17th Avenue
Phoenix, Arizona 85007

1001-2.05 Performance Bonds:

If sources are under the jurisdiction of either the State Land Department or the Bureau of Land Management, the contractor shall secure a performance bond. A fully executed copy of the bond shall be furnished to the Engineer along with evidence that a fully executed copy has been sent to the State Land Department or the Bureau of Land Management.

The form of the Performance Bond will be available from the Materials Group, 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740. For pits under the jurisdiction of the Bureau of Land Management, the surety shall be a company listed under "Surety Companies Acceptable on Federal Bonds." This list is published annually as of July 1 in the Federal Register.

Performance bonds shall be conditioned upon the compliance with the requirements of the State Land Department and the Bureau of Land Management and the requirements of the specifications for the clearing of pit sites, the removal of material and the cleaning up of pit sites.

Copies of fully executed performance bonds shall be mailed as follows:

State Land Commission
State Land Department
1624 West Adams Street
Phoenix, Arizona 85007

Bureau of Land Management
Manager, Land Office
222 North Central Avenue
Phoenix, Arizona 85004

1001-2.06 Sampling and Testing:

The results of any sampling and testing accomplished by the Department will be available from the Materials Group, 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740.

1001- 2.07 Plan of Operation and Restoration:

The contractor shall determine whether the Department holds an easement, license, permit, lease or other right, for any proposed material source. For such sites, a project-specific Plan of Operation and Restoration will be required. The contractor shall obtain a copy of the related document and the Department's General Plan of Operation and Restoration for the proposed site from the Materials Group. The contractor shall prepare and submit to the Engineer a project-specific Plan of Operation and Restoration which shall follow the format of the Department's General Plan of Operation and Restoration, and shall take into account the

requirements of the Environmental Analysis, as well as any restrictions placed on the use of the source by the landowner or agency.

The proposed source will not be approved without an approved project-specific Plan of Operation and Restoration. Approval of the contractor's project-specific plan does not constitute approval of the use of the source.

The contractor shall identify and provide a person in charge of the operation. That person shall maintain copies onsite of the Department's General Plan of Operation and Restoration, the contractor's approved project-specific Plan of Operation and Restoration, the current Environmental Analysis, and the license and permits issued to the Department by the landowner or agency.

1001-3 Proposed Source:

1001-3.01 Approval Requirements:

(A) General:

The contractor shall promptly advise the Engineer as to the source that it proposes to use.

The contractor acknowledges that all the conditions set forth in this subsection shall be met prior to the source being approved for use.

Other than sampling and testing, the requirements of this subsection shall be completed prior to initiation of any activities that disturb the existing conditions at the proposed source.

The contractor further acknowledges that no additional compensation will be made on account of any delays in preparing or modifying the Environmental Analysis, obtaining approval for the use of a source, or the failure to obtain approval of a source. An extension of contract time may be granted only in accordance with Subsections 104.12 or 1001-3.01(B)(4).

Regulatory changes, specification changes, or other reasons may preclude the approval of a materials source. The contractor acknowledges that the Department may refuse to approve a material source even if the Department had approved the source for other projects.

If all of the requirements for approval of a materials source have been accomplished for the project, and the Engineer has approved the source for use on the project and, subsequent to that approval, the Environmental Analysis is rescinded, the contractor may request a revision to the contract in accordance with Subsection 104.02 and 108.08. In reviewing the contractor's request, the Department will take into account the following factors. Additional factors may be considered.

- (1) Whether the contractor was in compliance with the requirements of the Environmental Analysis and, if applicable, the site-specific Plan of Operations and Restoration.

- (2) Whether the reasons for rescinding the approval were reasonably foreseeable.
- (3) Whether the action taken was the result of regulatory changes.
- (4) Whether deficiencies unrelated to the Environmental Analysis may have rendered the source unacceptable.
- (5) Whether rescinding the approval was the sole cause of any impact to controlling activities on the project.

(B) Specific Conditions For Approval:

The use of a source will require written approval by the Engineer. No approval will be given until the contractor has complied with the following conditions:

- (1) The contractor has submitted an Environmental Analysis, as specified in Subsection 104.12, of the source proposed for use and the Department has reviewed the analysis and satisfied itself that the use of such source will not have an adverse social, economic or environmental impact. The requirements of Subsection 1001-3.01 shall be completed prior to initiation of any activities that disturb the existing conditions at the proposed source, except for exploring test areas as specified in Subsection 1001-3.02.
- (2) The contractor has furnished the Engineer with evidence that he has secured the rights to the source, including ingress and egress.
- (3) The Department has determined that the material from the proposed source not only meets the requirements, but is also compatible with the established project design criteria developed by the ADOT Materials Group and based on the soil support value of the embankment; and the sampling and testing as herein specified has been satisfactorily completed.
- (4) The contractor has furnished a fully executed copy of the Performance Bond as specified in Subsection 1001-2.05.
- (5) When required, the contractor has submitted, and the Department has approved, the site-specific plan of operations and restoration as specified in Subsection 1001-2.07.

The contractor shall also notify the Arizona Department of Agriculture, in accordance with the Arizona Native Plant Law, at least 30 days prior to any clearing operations of less than 40 acres on private land, 60 days prior to clearing operations of 40 or more acres on private land, and 60 days prior to any clearing of state land, regardless of size. If the Engineer is convinced that the contractor has made every effort to comply with the provisions of the Arizona Native Plant Law in contacting the Department of Agriculture, the Engineer will increase the number of contract days by the amount of time required for action by the Department of Agriculture.

The increase will not exceed 45 calendar days and will be concurrent with any increase allowed for the preparation of the Environmental Analysis.

(C) Historical and Cultural Resources:

If the Department determines that the proposed use will have major adverse impact on cultural or historic resources, the Department will not allow the use the source.

(D) Permit from Navajo Nation:

For projects located on the Navajo Reservation, the Navajo Nation has adopted a permitting system for any sources, regardless of whether on or off the Navajo reservation, which are to supply material for projects located within its boundaries. No material source will be approved until the contractor submits a copy of the permit from the Navajo Nation allowing materials from the proposed source to be used on the project. For information concerning the permit, the contractor shall contact the Navajo Nation Historic Preservation Office.

1001-3.02 Testing Requirements:

The contractor shall furnish equipment and personnel and shall obtain representative samples of the material under the supervision of the Engineer. At the option of the contractor, the material shall be tested by either the Department or by a testing laboratory approved by the Department. The cost of all sampling and testing done for the purpose of attaining approval of any source, including the cost of supervision by the Engineer, shall be borne by the contractor.

If testing is performed by a testing laboratory, the contractor shall arrange for the samples to be delivered to the testing laboratory. Tests shall be performed using appropriate test procedures referred to in the sections of the specifications in which the specific material requirements are described.

The contractor shall make the arrangements necessary to see that the testing laboratory submits the results of the tests to ADOT Materials Group. The contractor shall submit to ADOT Materials Group sufficient quantity of material from the samples taken so that ADOT Materials Group may test the materials, at the Department's expense, and verify the results.

Exploratory sampling and testing activities conducted prior to the Department's approval shall be limited so as to cause the minimum amount of vegetation removal and surface disturbance required to obtain representative samples. The contractor shall not produce material, mobilize crushing equipment or clear a worksite prior to approval of the Environmental Analysis.

The contractor may request an exemption from the testing requirements specified in this subsection upon presentation of evidence to the satisfaction of the Engineer that the material that will be produced on the project is sufficiently similar to material that has been previously acceptable to the Department on projects with similar materials specifications.

No approval of the source shall be assumed, nor will it be made, until the Department has determined that the material meets the specified requirements.

The contract time will not be adjusted because of any time required by either the contractor or the Department to sample and test the material and to determine the quality of the material.

1001-4 Special Access:

The contractor may make a request to the Engineer to approve special access to a controlled access highway if special access is not shown on the project plans.

The request by the contractor shall be accompanied by an Environmental Analysis and by documents which specify the point(s) of access, the acquisition of right-of-way, the manner in which access will be attained, the traffic control plan, and crossovers, along with all other appropriate data which will allow the Engineer to evaluate its request. If the request is approved, a supplemental agreement shall be entered into.

All costs associated with the special access requested by the contractor shall be borne by the contractor, including, but not limited to, cattle guards, fences, gates and restoration work.

When access is not being utilized, gates shall be closed and locked. Upon completion of all operations, the area within the right-of-way that has been disturbed shall be restored to the condition existing prior to the contractor's operations.

The decision by the Engineer to deny a request by the contractor will be considered to be final.

1001-5 Operations at Source:

1001-5.01 General Requirements:

The contractor shall conduct its operations in such a manner as to preserve available materials in excess of project requirements.

The contractor shall notify the Engineer in advance of operations at the source. Notice shall be given before and after clearing and grubbing, and before and after cleaning up.

1001-5.02 Clearing and Grubbing:

Before beginning stripping, the contractor shall clear and grub the source as necessary to prevent the contamination of materials to be used in the work. Clearing and grubbing shall be in accordance with the requirements of Section 201, except that the resulting surface need not be leveled and vegetable matter need not be separated from any overburden which the Engineer determines to be unsuitable for any future use and which is to be wasted. Clearing and grubbing shall be limited to the area expected to be excavated and areas used for processing and stockpiling.

In the disposal of all tree trunks, stumps, brush, limbs, roots, vegetation and other debris removed, the contractor shall comply with the requirements of the Arizona Revised Statutes Title 49 Chapter 3 – Air Quality; and with the Arizona Administrative Code Title 18 Chapter 2 – Department of Environmental Quality – Air Pollution Control.

Burning will be permitted only after the contractor has obtained a permit from the Arizona Department of Environmental Quality, and from any other Federal, State, County or City Agency that may be involved.

When stripping is required, overburden shall be removed to the extent necessary to remove all undesirable materials and shall, at all times, be kept stripped at least five feet beyond the working face of the area being excavated.

The contractor shall comply with the requirements of the landowner or agency having jurisdiction over the land.

1001-5.03 Extraction of Materials:

Materials shall be removed from the source in a workmanlike manner and, when required, in accordance with the contractor's project-specific Plan of Operation and Restoration. In order to produce acceptable material in the amount and gradation required, it may be necessary for the contractor to do any or all of the following, along with any other similar operations usually associated with the extraction, processing and production of the particular material being produced:

- Move materials from one area to another.
- Perform additional screening.
- Remove, wash and waste material.
- Blend materials.
- Revise crushing methods.
- Remove deleterious materials such as clay balls, roots and sticks.

If the Engineer determines that the material in a source is stratified, all material except borrow shall be removed for the full depth in such a manner as to produce a uniform blend of the material. Placing the material from different areas and depths into a surge pile and removing material from the surge pile by cutting through the pile will be acceptable provided that a uniformly blended material is obtained.

Material sources located in drainage channels such as washes, riverbeds, etc., may experience seasonal variations in the depth of ground water. In order to produce the quantity of material estimated to be available, the contractor may be required to work below the water table.

1001-6 Fences and Cattle Guards:

Where the haul roads to material sources cross existing fence lines in areas where there is livestock of any kind, temporary cattle guards shall be installed by the contractor at each crossing.

The livestock operator or owner shall be contacted prior to the beginning of any operations and effective measures shall be taken and means provided by the contractor to prevent livestock from straying.

In operations where conditions will exist that are dangerous to livestock of any kind, temporary cattle guards and fence shall be installed around the pit area by the contractor to protect livestock.

Temporary cattle guards and fence installed by the contractor shall be removed and existing fence disturbed shall be replaced or reconstructed and all fence shall be left in as good condition as it was prior to the beginning of work.

1001-7 Cleaning Up:

All overburden and other undesirable materials removed and all piles of waste materials resulting from operations in the source shall be handled in accordance with the requirements of the landowner or agency having jurisdiction over the land, the Environmental Analysis, the project-specific Plan of Operation and Restoration, if applicable, and all laws, rules and regulations. All debris shall be removed and disposed of and, if directed, all open test holes shall be filled. Unless otherwise required, the sides of sources shall be sloped and smoothed so that livestock can enter and leave the excavated area safely. Unless otherwise required, all haul roads shall be obliterated and, as far as practicable, the ground left in as good condition as it was prior to hauling.

1001-8 Method of Measurement and Basis of Payment:

Except as may be otherwise specifically provided for in this section or elsewhere, no measurement or direct payment will be made for any costs involved in the procuring of materials. Such costs shall be considered as included in the cost of contract items.

(1005PG, 7/01/14)

SECTION 1005 BITUMINOUS MATERIALS:

1005-2 Sampling of Bituminous Material: the first sentence of the first paragraph of the Standard Specifications is revised to read:

Sampling of bituminous material shall conform to the requirements of Arizona Test Method 103.

1005-3.01 Asphalt Cement: the second paragraph of the Standard Specifications is revised to read:

If PG 76-22 TR+ asphalt binder is used, it shall conform to the requirements of Table 1005-1a.

If PG 70-22 TR+ asphalt binder is used, it shall conform to the requirements of Table 1005-1b.

If PG 64-28 TR+ asphalt binder is used, it shall conform to the requirements of Table 1005-1c.

1005-3.04 Emulsified Asphalt (Special Type): of the Standard Specifications is revised to read:

Emulsified asphalt (special type) shall consist of Type SS-1 or CSS-1 diluted with water to provide an asphalt content not less than 26 percent. The water used must be potable. The material shall not be diluted in the field.

TABLE 1005-1: “Creep Stiffness of PAV Binder” in Table 1005-1 of the Standard Specifications is revised to read:

| TABLE 1005-1 ASPHALT BINDER ADJUSTMENT TABLE | | | |
|---|--------------------|-------------|--|
| Test Property | AASHTO Test Method | Test Result | Percent of Contract Unit Price Allowed |
| Creep Stiffness of PAV Binder: S, MPa | T 313 | ≤ 300 | 100 |
| | | 301-330 | 95 |
| | | 331-450 | 85 |
| | | 451-600 | 75 |
| | | > 600 | 65 (1) |

TABLE 1005-1b: PG 70-22 TR+ ASPHALT BINDER is hereby added to the Standard Specifications:

| TABLE 1005-1b PG 70-22 TR+ ASPHALT BINDER | | | | |
|---|--------------|-------------|-------------------------|--|
| Test Property | Test Method | Requirement | Test Result | Percent of Contract Unit Price Allowed |
| Solubility in Trichloroethylene, %, minimum | ASTM D 2042 | 97.5 | ----- | ----- |
| Softening Point, °C, minimum | AASHTO T 53 | 54 | ≥ 54 51 - 53 < 51 | 100 85 70 (1) |
| Elastic Recovery, @ 10 °C, %, Minimum | AASHTO T 301 | 55 | ≥ 55 50 - 54 < 50 | 100 85 70 (1) |
| Phase Angle (δ), @ 70 °C @ 10 rad/sec, degrees, maximum | AASHTO T 315 | 75 | ≤ 75 76 - 83 > 83 | 100 85 65 (1) |
| (1) Reject Status: The pay adjustment applies if allowed to remain in place. | | | | |
| <p>Notes:</p> <p>PG 70-22 TR+ asphalt binder shall contain a minimum of 8 percent crumb rubber and a minimum of two percent SBS (styrene-butadiene-styrene) polymer.</p> <p>PG 70-22 TR+ asphalt binder shall conform to the requirements of AASHTO M 320 and, in addition, shall meet the requirements specified above.</p> <p>Table 1005-1 will also apply for PG 70-22 TR+ asphalt binder.</p> <p>Should the bituminous material be deficient on more than one of the properties listed in Tables 1005-1 and 1005-1b, the pay adjustment will be the greatest reduction to the contract unit price specified considering individual test results.</p> <p>The pressure aging temperature for PG 70-22 TR+ asphalt binder shall be 110 °C.</p> | | | | |

The crumb rubber shall be derived from processing whole scrap tires or shredded tire materials. The tires from which the crumb rubber is produced shall be taken from automobiles, trucks, or other equipment owned and operated in the United States. The processing shall not produce, as a waste product, casings or other round tire material that can hold water when stored or disposed of above ground.

TABLE 1005-1c: PG 64-28 TR+ ASPHALT BINDER is hereby added to the Standard Specifications:

| TABLE 1005-1c PG 64-28 TR+ ASPHALT BINDER | | | | |
|---|--------------|-------------|-------------------------|--|
| Test Property | Test Method | Requirement | Test Result | Percent of Contract Unit Price Allowed |
| Solubility in Trichloroethylene, %, minimum | ASTM D 2042 | 97.5 | ----- | ----- |
| Softening Point, °C, minimum | AASHTO T 53 | 50 | ≥ 50 47 - 49 < 47 | 100 85 70 (1) |
| Elastic Recovery, @ 10 °C, %, Minimum | AASHTO T 301 | 55 | ≥ 55 50 - 54 < 50 | 100 85 70 (1) |
| Phase Angle (δ), @ 64 °C @ 10 rad/sec, degrees, maximum | AASHTO T 315 | 75 | ≤ 75 76 - 83 > 83 | 100 85 65 (1) |

(1) Reject Status: The pay adjustment applies if allowed to remain in place.

Notes:

PG 64-28 TR+ asphalt binder shall contain a minimum of 8% crumb rubber and a minimum of two percent SBS (styrene-butadiene-styrene) polymer.

PG 64-28 TR+ asphalt binder shall conform to the requirements of AASHTO M 320 and, in addition, shall meet the requirements specified above.

Table 1005-1 will also apply for PG 64-28 TR+ asphalt binder.

Should the bituminous material be deficient on more than one of the properties listed in Tables 1005-1 and 1005-1c, the pay adjustment will be the greatest reduction to the contract unit price specified considering individual test results.

The pressure aging temperature for PG 64-28 TR+ asphalt binder shall be 100 °C.

The crumb rubber shall be derived from processing whole scrap tires or shredded tire materials. The tires from which the crumb rubber is produced shall be taken from automobiles, trucks, or other equipment owned and operated in the United States. The processing shall not produce, as a waste product, casings or other round tire material that can hold water when stored or disposed of above ground.

TABLE 1005-3a: “Elastic Recovery by means of Ductilometer” is revised and “Note 2” is added in Table 1005-3a of the Standard Specifications:

| TABLE 1005-3a POLYMERIZED CATIONIC RAPID SET (CRS-2P) EMULSIFIED ASPHALT (1) | | |
|--|--------------------|--------------------|
| Tests on Emulsion: | Test Method | Requirement |
| Elastic Recovery by means of Ductilometer, 25 °C (77 °F), % minimum | AASHTO T 301 (2) | 55 |
| (2) Testing shall be performed on residue by distillation, not on residue by oven evaporation. | | |

TABLE 1005-3b: “Elastic Recovery by means of Ductilometer” is revised and “Note 3” is added in Table 1005-3b of the Standard Specifications:

| TABLE 1005-3b POLYMERIZED HIGH FLOAT EMULSIFIED ASPHALT (1) | | | |
|--|--------------------|--------------------|-----------------|
| Tests on Emulsion: | Test Method | Requirement | |
| | | HFE-150P | HFE-300P |
| Elastic Recovery by means of Ductilometer, 4 °C (39.2 °F), % minimum | AASHTO T 301 (3) | 25 | 25 |
| (3) Testing shall be performed on residue by distillation, not on residue by oven evaporation. | | | |

TABLE 1005-6: PG 70-22 TR+ and PG 64-28 TR+ are added to “Paving Asphalt” in Table 1005-6 of the Standard Specifications:

| TABLE 1005-6 OTHER REQUIREMENTS | | | |
|--|---|---|--|
| Grade of Asphalt Specification Designation | Range of Temperatures for Application by Spraying, °F (Not applicable for Plant Mixing) | Range of Aggregate Temperatures for Plant Mixing, °F | Basis of Conversion, Average Gallons Per Ton at 60 °F |
| Paving Asphalt | 275 - 400 | ----- | |
| PG 76-XX | | | 232 |
| PG 70-XX | | | 233 |
| PG 64-XX | | | 235 |
| PG 58-XX | | | 236 |
| PG 52-XX | | | 238 |
| PG 76-22 TR+ | | | 229 |
| PG 70-22 TR+ | | | 230 |
| PG 64-28 TR+ | | | 231 |

(1007REFS, 11/05/13)

SECTION 1007 - RETROREFLECTIVE SHEETING:

1007-1 General Requirements: the last two sentences of the first paragraph of the Standard Specifications are revised to read:

Sheeting shall conform to criteria listed in the most current version of ASTM D 4956 for the applicable type and class, unless otherwise specified.

1007-2 Material Types: of the Standard Specifications is revised to read:

Sheeting for permanent warning signs, regulatory signs, and overhead-mounted guide signs, including all sign legends and borders, shall be ASTM Type XI.

Sheeting for all warning signs with yellow backgrounds shall be Type XI fluorescent retroreflective yellow.

Sheeting for information signs, ground-mounted guide signs, and marker signs, including all sign legends and borders, shall be ASTM Type IX or XI.

Sheeting for permanent object markers and delineators on a rigid substrate with yellow backgrounds, including guardrail end treatments, guardrail markers, rigid delineators, and impact attenuators, shall be Type XI fluorescent retroreflective yellow.

Sheeting for permanent object markers and delineators on a rigid substrate in colors other than yellow, including guardrail end treatments, guardrail markers, rigid delineators, and impact attenuators, shall be ASTM Type IX or XI.

Sheeting for object markers and delineators on a flexible or plastic substrate, including flexible delineators and sand barrels, shall be ASTM Type VIII, IX or XI.

For temporary regulatory and guide signs on a rigid substrate with fluorescent retroreflective orange sheeting, ASTM sheeting Types VIII, IX, or XI shall be used.

For temporary regulatory and guide signs on a rigid substrate in colors other than fluorescent retroreflective orange, ASTM sheeting Types IV, VIII, IX, or XI shall be used.

For retroreflective orange temporary signs on a flexible or roll-up substrate, ASTM Type VI sheeting shall be used.

All temporary signs (rigid, flexible, or roll-up) with orange backgrounds shall use fluorescent retroreflective orange sheeting, except that non-reflective sign materials may be used for temporary signs where the signs will be clearly visible under available natural light.

For barricades and other temporary channelizing devices, ASTM sheeting Types IV, VIII, IX, or XI shall be used.

Sheeting for Adopt-A-Highway signs shall be ASTM Type I, IV, or XI.

Logo signs shall be ASTM Type I, IX, or XI.

When more than one sheeting type is allowed, the contractor may use any of the types listed, provided that materials used for a particular application shall be of the same ASTM type, manufacturer, and product for all signs of the same type in the project.

Opaque films used with sheeting shall be acrylic type films.

Direct-applied and demountable black characters shall be non-reflective.

1007-3 **Visual Appearance, Luminance and Color Requirements:** of the Standard Specifications is revised to read:

Except as specified herein, the color of the sheeting, ink or film shall conform to the ADOT Manual of Approved Signs, the Manual on Uniform Traffic Control Devices (MUTCD), and the plans.

All sheeting, inks and film used shall be uniformly colored so there is no visual variation in their appearance on the same sign or from sign to sign of the same colors.

Standard colors specified for sheeting, processing inks, and films shall, as applicable, match visually and be within the color tolerance limits required by Highway Tolerance Charts issued by the Federal Highway Administration. Additionally, for the retroreflective sheeting, unless otherwise noted, the Luminance Factor (Daytime Luminance) and Color Specification Limits (Daytime) shall conform to the applicable requirements of ASTM D 4956.

In addition to the luminance and color requirements, fluorescent orange sheeting and fluorescent yellow sheeting shall have the capacity to effectively fluoresce outdoors under low light conditions. For all applications requiring fluorescent orange sheeting or fluorescent yellow sheeting, the contractor shall provide a letter to the Engineer from the manufacturer certifying that the sheeting to be used is fluorescent.

1007-6 Adhesive: the first paragraph of the Standard Specifications is revised to read:

Reflective sheeting and film adhesives shall be Class I as specified in ASTM D 4956 and as modified herein.

1007-6 Adhesive: the third paragraph of the Standard Specifications is hereby deleted:

1007-8 Durability Requirements: the second and third paragraphs of the Standard Specifications are revised to read:

Sheeting shall be weather-tested as specified above in Subsection 1007-7. Sheeting weather-testing periods and durability ratings shall be as specified in Table 1007-8. In all cases, the related inks and films shall be tested along with the respective sheeting, and shall be subject to the same durability requirements as the sheeting.

| ASTM Sheeting Type | Color | Weather-testing period, months | Durability rating, years |
|---------------------------|--------------------|---------------------------------------|---------------------------------|
| XI | Fluorescent yellow | 42 | 7 |
| XI | Fluorescent orange | 18 | 3 |
| XI | All other colors | 60 | 10 |
| IX | Fluorescent orange | 18 | 3 |
| IX | All other colors | 60 | 10 |
| VIII | Fluorescent orange | 18 | 3 |
| VIII | All other colors | 30 | 5 |
| VI | Fluorescent orange | 18 | 3 |
| IV | All colors | 30 | 5 |
| I | All colors | 30 | 5 |

(1010PIPE, 05/03/16)

SECTION 1010 DRAINAGE PIPE:

1010-3 Slotted Pipe: the last paragraph of the Standard Specifications is revised to read:

Grout shall consist of Portland cement, aggregate, and water. It may also contain supplementary cementitious material. Portland cement, aggregate, water, and supplementary cementitious material shall conform to the requirements of Section 1006. If approved by the Engineer, chemical admixtures may be used. Chemical admixtures shall conform to the requirements of Subsection 1006-2.04, except no admixtures containing chlorides or nitrates shall be used. Air-entraining admixtures, conforming to the requirements of Subsection 1006-2.04, will be required for grout placed at elevations of 3000 feet or above.

The grout shall meet the requirements given in the table below.

| Minimum Cementitious Material Content: Lbs per CY (See Note 1) | Maximum Water/Cementitious Material Ratio (w/cm): Lb./Lb. | Slump: Inches (See Note 2) | Air Content: Percent (See Note 3) |
|--|--|---|--|
| 850 | 0.60 | 9 ± 2 | 0 – 8 |
| Note 1: A maximum of 25 percent of the cementitious material, by weight, may consist of an approved Class F fly ash, conforming to the requirements of ASTM C 618. | | | |
| Note 2: The consistency of the grout shall be as approved by the Engineer. | | | |
| Note 3: For placement of grout at elevations of 3000 feet or above, the air content shall be a minimum of 4 percent and a maximum of 8 percent. | | | |

The aggregate shall consist of fine aggregate; however, at the option of the contractor, No. 8 coarse aggregate may be used in the grout. If No. 8 coarse aggregate is used, the volume shall be a maximum of 35 percent of the total aggregate volume.

For plant-mixed grout, the proportioning, mixing, and placing shall be in accordance with the applicable requirements in Section 1006.

For on-site mixing, grout that has been mixed more than one hour shall not be used.

Re-tempering of grout will not be permitted.

1010-8 **Corrugated High Density Polyethylene Plastic Pipe:** the title and the first paragraph of the Standard Specifications are revised to read:

1010-8 **Corrugated High Density Polyethylene Plastic Pipe, Steel Reinforced High Density Thermoplastic Ribbed Pipe, and Corrugated Polypropylene Plastic Pipe:**

Corrugated high density polyethylene plastic pipe, fittings, couplings and ends, where specified, shall conform to the requirements of AASHTO M 252 for pipe sizes less than 12 inches in diameter and AASHTO M 294 for pipe sizes 12 to 60 inches in diameter.

Steel reinforced high density thermoplastic ribbed pipe and fittings shall conform to the requirements of ASTM F 2562.

Corrugated polypropylene plastic pipe and fittings for pipe sizes 12 to 60 inches in diameter shall conform to the requirements of AASHTO M 330 (Type C or S) and ASTM F 2881.

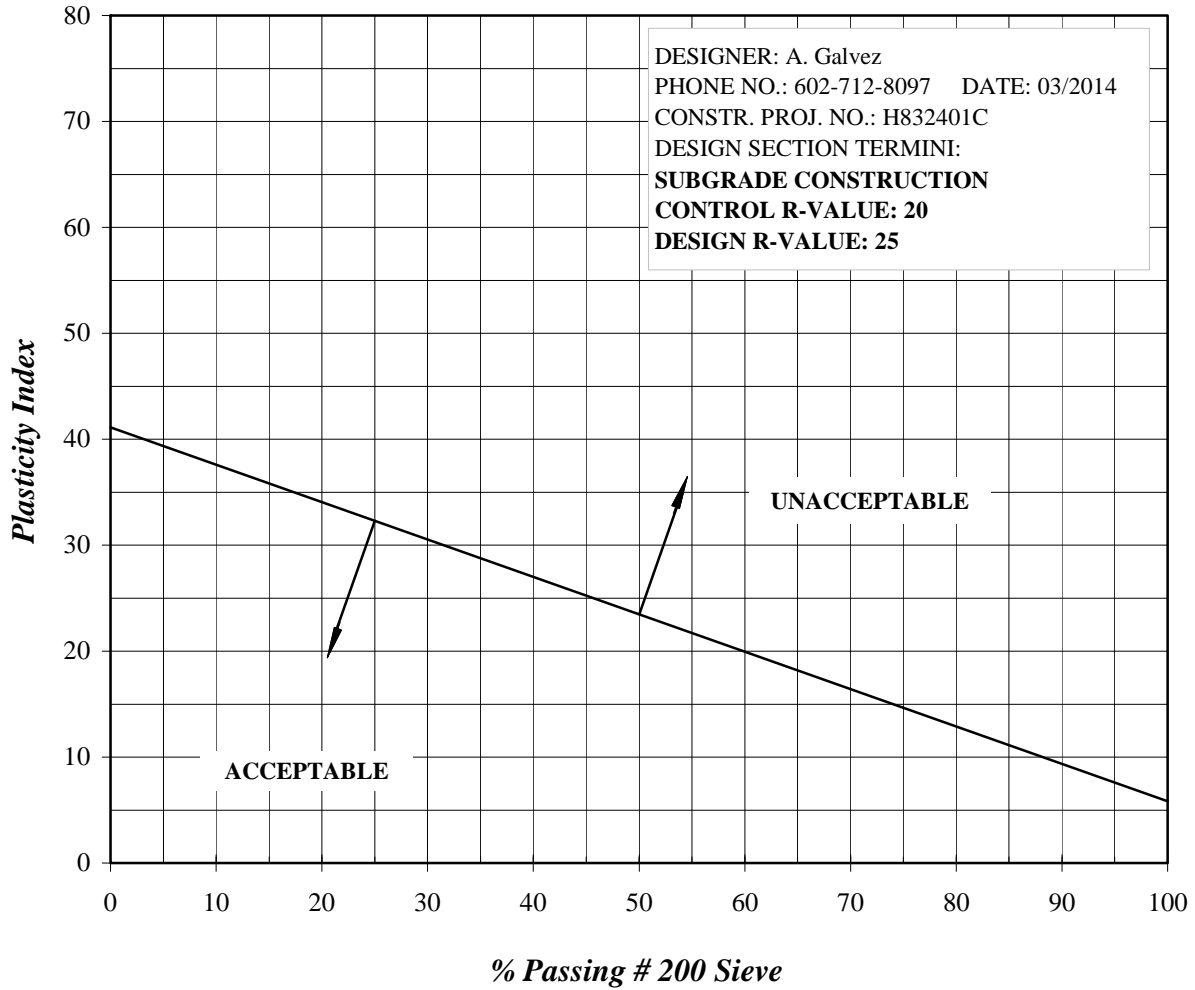
1010-8 **Corrugated High Density Polyethylene Plastic Pipe, Steel Reinforced High Density Thermoplastic Ribbed Pipe, and Corrugated Polypropylene Plastic Pipe:** the last paragraph of the Standard Specifications is revised to read:

Tracer wire, which is to be placed in the trench with the corrugated high density polyethylene plastic pipe, steel reinforced high density thermoplastic ribbed pipe, or corrugated polypropylene plastic pipe as an aid in location after burial, shall conform to the requirements of Subsection 104.15(B).

APPENDIX A

SUBGRADE ACCEPTANCE CHART

SUBGRADE ACCEPTANCE CHART
US 191, Relation St. to Jct. US 70
191 GH 120 H8324 01C



SUBGRADE
ACCEPTANCE CHART

US 191
MP 120.52 to MP 121.08

Baker
June, 2016
US 191, Relation St. to Junction US 70

Special Provisions
191 GH 120 H832401C
STP-191-B(203)T

APPENDIX B

ARIZONA EASTERN RAILWAY COMPANY DOCUMENTS

This section to be completed by Genesee & Wyoming Railroad Services, Inc. Real Estate Dept.

Date App Packet Received _____

Regional Manager Approval _____

GIS Prefix _____

Date Approved _____

Contract Number _____

RR Code _____

Lessee Code _____

Engineering Approval _____

Date Approved _____

Fee Paid (initial) _____

Genesee & Wyoming Railroad Services, Inc.

Real Estate Department, 13901 Sutton Park Dr., S, Suite 160, Jacksonville, FL 32224

Contractors Access/Occupancy on Railroad Property

Check box if Contractor unknown at this time (this form will need to be completed with contractor information and submitted prior to any work once bid process is complete)

Incomplete or Inaccurate Information will delay application request

Section 1 - Applicant Data

Complete Name of Contractor to appear on Legal Document: _____

Applicant Mailing Address: _____

Applicant Overnight Address: _____

Applicant FEIN or Social Security Number: _____

Applicant Contact Name & Title: _____

Telephone Number: _____

Email Address: _____

Emergency Contact (in case of derailment or fallen/wire pole etc.):

Emergency Telephone Number: _____

Applicant:

- Corporation Partnership Sole Proprietor Individual
- Municipality Developer Other*

*If other please explain: _____

State of Incorporation or Partnership: _____

Section 2 - Location Data

Proposed date of Installation: _____

Railroad Name: _____

Nearest City: _____ County: _____ State: _____

If Crossing Nearest Railroad
Mile Post (required):

_____ Feet from Railroad Milepost _____ N S E W

Latitude/Longitude
(Required in Digital Format)
(ex 12.3456789/-64.101112):

US
DOT/AAR
Crossing
Number
(Required):

Railroad Subdivision
(Required):

Section 3 - Existing Agreement Data

Is there an Existing Agreement at this Location which will be affected by this Request?

Yes No If YES, List Agreement Number(s): _____

Will facility be exclusively used by Applicant? Yes No

If YES, List Name of Lessee: _____

Describe in detail the manner and method of installation on Railroad property (REQUIRED):

Section 4 - Department of Transportation (D.O.T.)

Is this installation associated
with a Department of
Transportation project? Yes No

If Yes, complete the following:

D.O.T. Contract Number: _____ D.O.T. Project Number: _____ D.O.T. Project Name: _____

D.O.T. Contact
Information:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Prior to application submittal, it is recommended that any questions concerning this application should be submitted to the Real Estate Department of Genesee & Wyoming Railroad Services, Inc. All questions or requests for information submitted by email receive a rapid response. Other requests can be made by phone (904) 900-6286, or email donna.killingsworth@gwrr.com. Questions can be answered and additional contact information obtained by visiting the website at www.gwrr.com.

Plans for proposed installations shall be submitted to and approved by the Railroad, on behalf of itself, its subsidiaries, and affiliates, and designated engineer before work can begin! Applications submitted not meeting current specifications as outlined in the General Specifications for Sub-grade and Above grade Utility Crossings of Railway's Right-of-Way will be returned and may incur additional engineering review fees. For your convenience a copy of these specifications can be found on the website along with a checklist to ensure plans meet all requirements.

Materials and installations are to be in strict accordance with specifications of National Electrical Safety Code, AREMA, current edition, and requirements of the Railroad.

Upon application approval, applicant agrees to reimburse Railroad for any cost incurred by Railroad incident to the installation, maintenance and/or supervision necessitated by the installation. Applicant further agrees to assume all liability for accidents or injuries that arise as a result of this installation.

Insurance Requirements prior to any construction project

Facility Owner and/or their Contractor:

U.S. Roads

Current certificate of Commercial General Liability Insurance naming the Railroad and Genesee & Wyoming Inc. as additional insured in limits no less than \$2 million dollars per occurrence and \$6 million dollars in the aggregate. The policy or policies, where applicable and available, shall contain Insurance Services Office Standard Endorsement CG 2417 or its equivalent. A waiver of subrogation in favor of the railroad must also be shown as an endorsement to the policy.

A policy of Railroad Protective Liability Insurance, with minimum limits of liability of \$2 million dollars per occurrence and \$6 million aggregate shall be in place through either the applicant or their contractor. The Railroad and Genesee & Wyoming Inc. must be shown as named insured. This coverage may be purchased through the railroad for an additional fee and for your convenience an application can be found on the website at www.gwrr.com

Canadian Roads

Facility Owner and/or their Contractor:

A policy of public liability insurance in the amount no less than \$5 million dollars per occurrence and naming Railroad and Genesee & Wyoming Inc. as additional insured.

The policy or policies, where applicable and available, shall contain Insurance Services Office Standard Endorsement CG 2417. A waiver of subrogation in favor of the railroad must also be an endorsement on the policy.

This section must be completed in full, signed and dated prior to submittal to the Real Estate Department for processing, incomplete or inaccurate information will delay application request and may incur additional fees. Unsigned applications will be returned to the applicant for signature.

Date: _____ Signature: _____

Printed

Phone Number: _____ Name: _____

Fax Number: _____ Title: _____

Contact Email Address: _____

Please make check payable to the Railroad in question. W-9 Information available upon request.

Mail the application for proposed project, in duplicate along with the applicable non-refundable fee(s) in U.S. Funds (Canadian Applicants please pay in Canadian Funds plus HST) to:

Genesee & Wyoming Railroad Services, Inc.
Real Estate Department
13901 Sutton Park Dr., S., Suite 160
Jacksonville, FL 32224

In order for the application to be complete ALL required details pertinent to the proposed installation must be completed in full and submitted along with the following fees:

| | # of Copies | Amount Due | Description |
|--------------------------|-------------|------------|---|
| <input type="checkbox"/> | 2 | \$1,500 | Engineer review fee, plans/drawings, no larger than 11 x 17. Larger drawings may incur additional engineering fees. |
| <input type="checkbox"/> | 2 | \$1,500 | Completed Contractor's Access/Occupancy Application and Fee required will ALL application submittals. |

**\$3,000 All applicable fees must be submitted with application.
Applications submitted not signed, dated and without proper fees will be returned.**

Standard Application processing takes approximately 6-8 weeks. "Expedited processing" is available and will reduce the processing time to between 1-2 weeks at an additional cost of \$1,750, plans must meet engineering specifications. Incomplete application and plans not meeting engineering specifications will cause a delay in the processing of expedited applications. Current utility specifications and checklist can be found in the Real Estate section of the website at www.gwrr.com

Entering or working on the railroad right of way or any other railroad property without the permission of the railroad is trespassing and illegal. Violators risk the possibility of serious, even fatal injury and will be prosecuted.

Exhibit B

Under state law the right of way of GWI and its subsidiary companies property is private property. Persons found on GWI's right of way without express written permission can be arrested and prosecuted.

Contractors

Contractors completing new installations or working on or around any of GWI's properties are required to obtain Railroad Protective Liability Insurance in the amounts of \$2,000,000 per occurrence and \$6,000,000 aggregate. This coverage can now be purchased through GWI subsidiary railroads.

In addition to providing Railroad Protective Liability insurance and Contractor is required to provide current proof of Commercial General Liability insurance naming the Railroad and Genesee & Wyoming Inc. as additional insured. This coverage must meet minimum requirements of \$2M per occurrence and \$6M aggregate.

The General Liability certificate is also required to show proof of CG2417 or its equivalent as well as a waiver of subrogation in favor of the Railroad.

If you have questions or require additional information on how to obtain Railroad Protective Insurance coverage through a GWI subsidiary Railroad, please contact Donna Killingsworth at (904) 900-6286 or donna.killingsworth@gwrr.com

Applicants for Private Use Drive - Personal use only

For use of private (non-commercial use) grade crossings, individuals are required to maintain both personal and automobile liability coverage with minimum limits of \$2,000,000 per occurrence and \$6,000,000 aggregate as well as name the Railroad and GWI as additional insured. Evidence of this coverage is required and a current certificate is to be provided annually to the GWI Real Estate Department in Jacksonville, FL for its records.

With compliance of the required insurance per the terms of the agreement between the

applicant and railroad, the property owner can maintain full use of the grade crossing over the railroad tracks. However, should there be any violation of the terms of the agreement between user and railroad (i.e. failure to maintain and provide evidence of valid liability coverage), the railroad has due cause to close or remove this access through the railroad right of way. An application can be completed by clicking on the link below. If you have any questions or require additional information please call or email Donna Killingsworth at (904) 900-6286 or donna.killingsworth@gwrr.com

SAMPLE

LIST OF SUBCONTRACTORS, SUPPLIERS, SERVICE PROVIDERS AND
MANUFACTURERS BIDDING ON ADOT CONTRACTS

This form must be submitted to the Civil Rights Office by 4:00 p.m. on the fifth working day after the opening of bids. You may make copies of this form. List all companies that bid with your firm on this contract.

FAILURE TO SUBMIT THE REQUIRED INFORMATION BY THE STATED TIME AND IN THE MANNER HEREIN SPECIFIED SHALL BE CAUSE FOR THE BIDDER TO BE DEEMED NONRESPONSIVE.

Project No. _____ TRACS No. _____ Bidder _____

Firm Name

Contact Information (address or phone no)

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

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

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6. Training and Promotion:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

1. Minimum wages

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

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

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

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

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

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

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

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

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

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

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

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

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

2. Withholding

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

3. Payrolls and basic records

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

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

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

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

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

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

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

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

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

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

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

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

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

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

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

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more — as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-L.L.L., "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
EXECUTIVE ORDER 11246, July 1, 1978

(Revised November 3, 1980)

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 America and maintaining identifiable tribal affiliations through membership or 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 7 a 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

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has 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 site 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 women 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 complied 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 at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually 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 Foremen, etc., prior to the initiation of construction work at any job site. 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 tests 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

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.

Revised 04-15-81

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 nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female 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 noncompliance.

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, or national origin.

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 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 41 CFR 60-4.8.

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 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 an 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).

Title VI/Non-Discrimination Assurances

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, the *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. **Non-discrimination:** The contractor, with regard to the work performance 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 Regulations relative to Non-discrimination 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 Non-discrimination 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 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 request 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/Non-Discrimination Assurances**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 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. 1687 *et seq.*).

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

JULY 1, 1978 (Revised November 3, 1980)

(Revised April 15, 1981)

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 work force in each trade on all construction work in the covered area, are as follows:

| | Minority | Female |
|---|----------|--------|
| Tucson and balance of Pima County | 24.1 | 6.9 |
| Cochise, Graham, Greenlee and Santa Cruz Counties | 27.0 | 6.9 |
| Phoenix and balance of Maricopa County | 15.8 | 6.9 |
| Apache, Coconino, Gila, Mohave, Navajo, Pinal, Yavapai and Yuma Counties | 19.6 | 6.9 |

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in all areas where he has Federal or federally assisted work.

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.

EQUAL EMPLOYMENT OPPORTUNITY
COMPLIANCE REPORTS

(Project, Training and Annual)

Federal-Aid Projects

February 1, 1977; Revised July 1, 1978; Revised November 3, 1980
Revised April 15, 1981; Revised September 7, 1983
Revised October 15, 1998; Revised August, 1, 2005;
Revised March 1, 2015

ANNUAL REPORT:

For each contract in the amount of \$10,000 or more, and for each subcontract, regardless of tier not including material suppliers, in the amount of \$10,000 or more, the contractor and each subcontractor regardless of tier shall submit an annual Equal Employment Opportunity (EEO) Report containing all the information required on Form FHWA-1391. Contractors and subcontractors are required to submit the required information through the LCPtracker system, a labor compliance software monitoring certified payroll and prevailing wage.

The staffing figures to be reported should represent the project workforce on board in all or any part of the last payroll period preceding the end of July.

The report shall be submitted no later than September 1.

General Decision Number: AZ160009 01/08/2016 AZ9

Superseded General Decision Number: AZ20150009

State: Arizona

Construction Type: Highway

Counties: Apache, Cochise, Gila, Graham, Greenlee, La Paz, Navajo and Santa Cruz Counties in Arizona.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

| | |
|---------------------|------------------|
| Modification Number | Publication Date |
| 0 | 01/08/2016 |

* CARP0408-007 10/01/2015

APACHE, COCHISE & SANTA CRUZ COUNTIES

| | Rates | Fringes |
|--|----------|---------|
| CARPENTER (Including Cement Form Work)..... | \$ 24.63 | 11.54 |
| ----- | | |

ENG10428-004 06/01/2015

| | Rates | Fringes |
|---|----------|---------|
| POWER EQUIPMENT OPERATOR Oiler Driver..... | \$ 26.86 | 9.55 |
| ----- | | |

IRON0075-006 08/01/2015

Apache, Cochise, Gila, Graham, Greenlee, La Paz, Navajo Counties

| | Rates | Fringes |
|------------------------|----------|---------|
| Ironworker, Rebar..... | \$ 26.00 | 21.77 |

- Zone 1: 0 to 50 miles from City Hall in Phoenix or Tucson
- Zone 2: 050 to 100 miles - Add \$4.00
- Zone 3: 100 to 150 miles - Add \$5.00
- Zone 4: 150 miles & over - Add \$6.50

| | Rates | Fringes |
|--|----------|---------|
| CARPENTER | | |
| Gila, Graham, Greenlee, La Paz & Navajo..... | \$ 21.71 | 3.82 |
| CEMENT MASON..... | \$ 17.74 | 3.59 |
| ELECTRICIAN..... | \$ 24.43 | 5.38 |
| IRONWORKER, Rebar | | |
| Santa Cruz county..... | \$ 21.75 | 13.59 |
| LABORER | | |
| Asphalt Raker..... | \$ 14.97 | 5.88 |
| Concrete Worker..... | \$ 13.38 | 4.50 |
| Fence Builder..... | \$ 12.20 | 3.84 |
| Flagger..... | \$ 12.31 | 3.96 |
| General/Cleanup..... | \$ 12.78 | 2.50 |
| Guard Rail Installer..... | \$ 12.20 | 3.84 |
| Landscape Laborer..... | \$ 11.02 | |
| Water Blaster..... | \$ 14.90 | 2.90 |
| OPERATOR: Power Equipment | | |
| Backhoe < 1 cu yd..... | \$ 17.76 | 3.89 |
| Compactor Self Propelled (with blade-grade operation..) | \$ 22.53 | 6.57 |
| Compactor Small Self Propelled (with blade- backfill, ditch operation).. | \$ 22.29 | 6.31 |
| Concrete Pump..... | \$ 20.31 | 6.48 |
| Crane (under 15 tons)..... | \$ 22.98 | 4.26 |
| Drilling Machine (including wells)..... | \$ 21.79 | 4.10 |
| Grade Checker..... | \$ 23.41 | 6.54 |
| Hydrographic Seeder..... | \$ 19.73 | 5.40 |
| Mass Excavator..... | \$ 23.33 | 6.98 |
| Milling Machine/Rotomill.... | \$ 21.87 | 6.84 |
| Power Sweeper..... | \$ 19.33 | 4.85 |
| Roller (all types asphalt).. | \$ 17.46 | 5.58 |
| Roller (excluding asphalt).. | \$ 19.23 | 5.09 |
| Scraper (pneumatic tire).... | \$ 22.41 | 6.90 |
| Screed..... | \$ 20.90 | 6.72 |
| Skip Loader (all types 3 < 6 cu yd)..... | \$ 20.91 | 7.35 |
| Skip Loader (all types 6 < 10 cu yd)..... | \$ 22.24 | 6.83 |
| Skip Loader < 3 cu yd..... | \$ 17.97 | 6.60 |
| Tractor (dozer, pusher- all)..... | \$ 22.53 | 6.47 |
| Tractor (wheel type)..... | \$ 24.62 | 7.57 |
| PAINTER..... | \$ 13.94 | 2.56 |
| TRUCK DRIVER | | |
| 2 or 3 axle Dump or Flatrack..... | \$ 16.17 | 4.24 |

| | | |
|-------------------------------------|----------|------|
| Oil Tanker Bootman..... | \$ 21.94 | |
| Pickup..... | \$ 12.88 | 1.73 |
| Water Truck < 2500 gal..... | \$ 19.59 | 5.90 |
| Water Truck > 3900 gal..... | \$ 18.70 | 4.79 |
| Water Truck 2500 < 3900 gal..... | \$ 17.13 | |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and

non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====
END OF GENERAL DECISION

ARIZONA DEPARTMENT OF TRANSPORTATION
 INTERMODAL TRANSPORTATION DIVISION
 CONTRACTS AND SPECIFICATIONS SECTION

BID SCHEDULE

CONTRACT # 2016053

| TRACS No. | Project No. | Item | County | District | Gross Length | Net Length | Prepared By: |
|---------------------|--------------|-------|--------|----------|--------------|------------|---------------------|
| 191 GH 120 H832401C | 191-B-(203)T | 12016 | GRAHAM | SAFFORD | | 0.8 | Patton Samuel James |

| Highway Termini | Location | Work Description |
|---|---------------------------------|-----------------------------|
| • BOWIE JCT. - SAFFORD HIGHWAY (US 191) | • RELATION STREET TO JCT. US 70 | • INTERSECTION IMPROVEMENTS |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|---|--------|----------|------------|-----------------|
| 2020021 | REMOVAL OF CONCRETE CURB AND GUTTER | L.FT. | 2,358 | | |
| 2020025 | REMOVAL OF CONCRETE SIDEWALKS, DRIVEWAYS AND SLABS | SQ.FT. | 7,172 | | |
| 2020029 | REMOVAL OF ASPHALTIC CONCRETE PAVEMENT | SQ.YD. | 925 | | |
| 2020041 | REMOVAL OF PIPE | L.FT. | 5 | | |
| 2020053 | REMOVE (CATCH BASIN) | EACH | 1 | | |
| 2020056 | REMOVE AND SALVAGE (TRAFFIC SIGNAL EQUIPMENT) | L.SUM | 1 | | |
| 2020057 | REMOVE AND SALVAGE (SIGN ASSEMBLY) | EACH | 30 | | |
| 2020060 | REMOVE AND SALVAGE (FIRE HYDRANT) | EACH | 1 | | |
| 2020080 | REMOVE BITUMINOUS PAVEMENT (MILLING) (1/2") | SQ.YD. | 20,347 | | |
| 2020153 | REMOVE (TRAFFIC SIGNAL EQUIPMENT) | L.SUM | 1 | | |
| 2020155 | REMOVE (AND REPLACE TEMPOARY TRAFFIC CONTROL DEVICES) | EACH | 12 | | |
| 2020201 | SAW CUTTING | L.FT. | 2,561 | | |
| 2020366 | REMOVE LEAD-BASED PAINT MATERIALS | L.SUM | 1 | | |
| 2020370 | DISPOSE OF LEAD-BASED PAINT MATERIALS (FORCE ACCOUNT) | L.SUM | 1 | \$1,000.00 | \$1,000.00 |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|---|--------|----------|------------|-----------------|
| 2030301 | ROADWAY EXCAVATION | CU.YD. | 384 | | |
| 3030022 | AGGREGATE BASE, CLASS 2 | CU.YD. | 279 | | |
| 4040111 | BITUMINOUS TACK COAT | TON | 1 | | |
| 4040116 | APPLY BITUMINOUS TACK COAT | HOUR | 4 | | |
| 4040230 | ASPHALT BINDER (PG 76 - 22 TR+) | TON | 38 | | |
| 4070006 | ASPHALTIC CONCRETE FRICTION COURSE (SPECIAL W/PG 76-22 TR+) | TON | 631 | | |
| 4070021 | MINERAL ADMIXTURE (FOR ACFC SPECIAL W/PG 76-22 TR+) | TON | 6 | \$90.00 | \$540.00 |
| 4090003 | ASPHALTIC CONCRETE (MISCELLANEOUS STRUCTURAL) | TON | 353 | | |
| 5010007 | PIPE, CORRUGATED METAL, 18" | L.FT. | 11 | | |
| 5030003 | CONCRETE CATCH BASIN (C-15.10) DOUBLE, H=8' OR LESS | EACH | 1 | | |
| 5050202 | RESET FRAME AND COVER FOR MANHOLE (SEWER, MAG STD DTL 422) | EACH | 10 | | |
| 6070038 | SLIP BASE (NEW) | EACH | 8 | | |
| 6070054 | SIGN POST (PERFORATED) (2 S) | L.FT. | 46 | | |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|---|----------|----------|------------|-----------------|
| 6070055 | SIGN POST (PERFORATED) (2 1/2 S) | L.FT. | 340 | | |
| 6070057 | SIGN POST (PERFORATED) (2 1/2 T) | L.FT. | 54 | | |
| 6070060 | FOUNDATION FOR SIGN POST (CONCRETE) | EACH | 36 | | |
| 6080005 | WARNING, MARKER, OR REGULATORY SIGN PANEL | SQ.FT. | 328 | | |
| 6080025 | FLAT SHEET ALUMINUM SIGN PANEL | SQ.FT. | 105 | | |
| 6080050 | SIGN PANEL (REPLACE) | SQ.FT. | 219 | | |
| 7015070 | OBLITERATE PAVEMENT MARKERS | EACH | 218 | | |
| 7016030 | BARRICADE (TYPE II, VERT.PANEL, TUBULAR MARKER) | EACH-DAY | 11,722 | | |
| 7016031 | BARRICADE (TYPE III, HIGH LEVEL FLAG TREES) | EACH-DAY | 316 | | |
| 7016032 | PORTABLE SIGN STANDS (RIGID) | EACH-DAY | 88 | | |
| 7016033 | PORTABLE SIGN STANDS (SPRING TYPE) | EACH-DAY | 662 | | |
| 7016035 | WARNING LIGHTS (TYPE A) | EACH-DAY | 5,578 | | |
| 7016037 | WARNING LIGHTS (TYPE C) | EACH-DAY | 5,196 | | |
| 7016039 | EMBEDDED SIGN POST | EACH-DAY | 6,600 | | |
| 7016050 | TRUCK MOUNTED ATTENUATOR | EACH-DAY | 20 | | |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|--|----------|----------|------------|-----------------|
| 7016051 | TEMPORARY SIGN (LESS THAN 10 S.F.) | EACH-DAY | 5,818 | | |
| 7016052 | TEMPORARY SIGN (10 S.F. OR MORE) | EACH-DAY | 660 | | |
| 7016061 | FLASHING ARROW PANEL | EACH-DAY | 78 | | |
| 7016067 | CHANGEABLE MESSAGE BOARD (CONTRACTOR FURNISHED) | EACH-DAY | 366 | | |
| 7016075 | FLAGGING SERVICES (CIVILIAN) | HOUR | 20 | | |
| 7016078 | FLAGGING SERVICES (LOCAL ENFORCEMENT OFFICER) | HOUR | 160 | | |
| 7030095 | MILEPOST MARKER (S-10) | EACH | 1 | | |
| 7040005 | PAVEMENT MARKING (WHITE EXTRUDED THERMOPLASTIC) (0.090") | L.FT. | 6,005 | | |
| 7040006 | PAVEMENT MARKING (YELLOW EXTRUDED THERMOPLASTIC) (0.090") | L.FT. | 10,713 | | |
| 7040072 | PAVEMENT MARKING (TRANSVERSE) (THERMOPLASTIC) (ALKYD) (0.090") | L.FT. | 2,807 | | |
| 7040073 | PAVEMENT LEGEND (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090") | EACH | 8 | | |
| 7040074 | PAVEMENT SYMBOL (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090") | EACH | 23 | | |
| 7060015 | PAVEMENT MARKER, RAISED, TYPE D | EACH | 171 | | |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|---|-------|----------|------------|-----------------|
| 7060018 | PAVEMENT MARKER, RAISED, TYPE G | EACH | 168 | | |
| 7080001 | PERMANENT PAVEMENT MARKING (PAINTED) (WHITE) | L.FT. | 6,798 | | |
| 7080011 | PERMANENT PAVEMENT MARKING (PAINTED) (YELLOW) | L.FT. | 7,170 | | |
| 7080101 | PERMANENT PAVEMENT MARKING (PAINTED SYMBOL) | EACH | 4 | | |
| 7080121 | PERMANENT PAVEMENT MARKING (PAINTED SYMBOL) (ARROW) | EACH | 19 | | |
| 7080221 | PERMANENT PAVEMENT MARKING (PAINTED LEGEND) (ONLY) | EACH | 8 | | |
| 7310130 | POLE (TYPE Q) | EACH | 2 | | |
| 7310140 | POLE (TYPE R) | EACH | 2 | | |
| 7310195 | POST (PEDESTRIAN PUSH BUTTON) | EACH | 1 | | |
| 7310310 | POLE FOUNDATION (TYPE Q) | EACH | 2 | | |
| 7310320 | POLE FOUNDATION (TYPE R) | EACH | 2 | | |
| 7310390 | PEDESTRIAN PUSH BUTTON POST FOUNDATION | EACH | 1 | | |
| 7310511 | MAST ARM (10 FT.) (TAPERED) | EACH | 4 | | |
| 7310561 | MAST ARM (25 FT.) (TAPERED) | EACH | 1 | | |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|---|-------|----------|------------|-----------------|
| 7310590 | MAST ARM (40 FT.) (TAPERED) | EACH | 1 | | |
| 7310600 | MAST ARM (45 FT.) (TAPERED) | EACH | 1 | | |
| 7310610 | MAST ARM (50 FT.) (TAPERED) | EACH | 1 | | |
| 7320050 | ELECTRICAL CONDUIT (2") (PVC) | L.FT. | 118 | | |
| 7320070 | ELECTRICAL CONDUIT (3") (PVC) | L.FT. | 88 | | |
| 7320073 | ELECTRICAL CONDUIT (2 - 3") (PVC) | L.FT. | 128 | | |
| 7320274 | ELECTRICAL CONDUIT (2-3") (DIRECTIONAL DRILL) | L.FT. | 271 | | |
| 7320420 | PULL BOX (NO. 7) | EACH | 3 | | |
| 7320421 | PULL BOX (NO. 7) (WITH EXTENSION) | EACH | 1 | | |
| 7320650 | CONDUCTORS | L.SUM | 1 | | |
| 7330033 | TRAFFIC SIGNAL (FACE, TYPE G, LED) | EACH | 5 | | |
| 7330061 | TRAFFIC SIGNAL FACE (TYPE F) (LED) | EACH | 10 | | |
| 7330137 | TRAFFIC SIGNAL FACE (TYPE R) (LED) | EACH | 4 | | |
| 7330211 | PEDESTRIAN SIGNAL (COUNTDOWN)(LED) | EACH | 8 | | |
| 7330221 | PEDESTRIAN PUSH BUTTON (ADA) | EACH | 8 | | |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|--|-------|----------|------------|-----------------|
| 7330310 | TRAFFIC SIGNAL MOUNTING ASSEMBLY (TYPE II) | EACH | 11 | | |
| 7330360 | TRAFFIC SIGNAL MOUNTING ASSEMBLY (TYPE VII) | EACH | 8 | | |
| 7340050 | CONTROL CABINET (TYPE V) | EACH | 1 | | |
| 7350130 | LOOP DETECTOR FOR TRAFFIC SIGNALS (6' X 70')(QUAD) | EACH | 5 | | |
| 7350140 | LOOP DETECTOR FOR TRAFFIC SIGNALS (6' X 50')(QUAD) | EACH | 5 | | |
| 7360104 | LUMINAIRE (HORIZONTAL MOUNT)(LED TYPE 25L) | EACH | 2 | | |
| 7360105 | LUMINAIRE (HORIZONTAL MOUNT)(LED TYPE 40L) | EACH | 2 | | |
| 7360160 | POWER SUPPLY (BATTERY BACKUP) | EACH | 1 | | |
| 7370202 | TEMPORARY TRAFFIC SIGNAL (PORTABLE) | L.SUM | 1 | | |
| 8080645 | RESET WATER METER BOX | EACH | 4 | | |
| 8080646 | RESET FRAME AND COVER FOR VALVE BOX | EACH | 18 | | |
| 8080651 | FIRE HYDRANT | EACH | 1 | | |
| 8080658 | FIRE HYDRANT (SPECIAL) (ADJUST TO GRADE) | EACH | 4 | | |
| 9010001 | MOBILIZATION | L.SUM | 1 | | |
| 9080084 | CONCRETE CURB AND GUTTER (C-05.10)(TYPE D) | L.FT. | 2,147 | | |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|--|--------|----------|-------------|-----------------|
| 9080112 | CONCRETE TRANSITION CURB | EACH | 6 | | |
| 9080201 | CONCRETE SIDEWALK (C-05.20) | SQ.FT. | 14,721 | | |
| 9080247 | CONCRETE (SIDEWALK RAMP, C-05.30, TYPE A) | EACH | 17 | | |
| 9080289 | CONCRETE WHEEL CHAIR RAMP (SIDEWALK RAMP DETAIL B) | EACH | 8 | | |
| 9080290 | CONCRETE WHEEL CHAIR RAMP (SIDEWALK RAMP, DETAIL D) | EACH | 2 | | |
| 9080296 | CONCRETE SIDEWALK RAMP (C-05.30, TYPE B) | EACH | 2 | | |
| 9080298 | CONCRETE SIDEWALK RAMP (C-05.30, TYPE E) | EACH | 3 | | |
| 9080300 | CONCRETE SIDEWALK RAMP (C-05.30, TYPE F) | EACH | 3 | | |
| 9080301 | CONCRETE DRIVEWAY (C-05.20) | SQ.FT. | 3,330 | | |
| 9080305 | CONCRETE DRIVEWAY (DETAIL A) | SQ.FT. | 6,266 | | |
| 9090031 | RESET FRAME AND COVER FOR SURVEY MONUMENT (C-21.10) | EACH | 1 | | |
| 9210011 | MEDIAN PAVING | SQ.YD. | 34 | | |
| 9240012 | FORCE ACCOUNT WORK (RAILROAD FLAGGING SERVICES) | L.SUM | 1 | \$12,000.00 | \$12,000.00 |

BID SCHEDULE

191 GH 120 H832401C

| Item No. | Item Description | Unit | Quantity | Unit Price | Extended Amount |
|----------|--|-------|----------|------------|-----------------|
| 9240103 | MISCELLANEOUS WORK (ELECTRICAL RECORD DRAWINGS) | L.SUM | 1 | | |
| 9240119 | MISCELLANEOUS WORK (DETECTABLE WARNING STRIP, C-05.30) | EACH | 3 | | |
| 9240122 | MISCELLANEOUS WORK (SIGN FASTENER) | EACH | 14 | | |
| 9250001 | CONSTRUCTION SURVEYING AND LAYOUT | L.SUM | 1 | | |

BID TOTAL :

PROPOSAL

TO THE ARIZONA DEPARTMENT OF TRANSPORTATION:

Gentlemen:

The following Proposal is made for constructing project

191 GH 120 H832401C STP-191-B(203)T
BOWIE JCT. - SAFFORD HIGHWAY (US 191)
(Relation Street to Junction US 70)

in the State of Arizona.

The following Proposal is made on behalf of _____

and no others.

(NAME OF COMPANY, FIRM, OR CORPORATION)

The undersigned hereby certifies that (s)he has been duly authorized to submit a proposal on behalf of the company, firm, or corporation mentioned above; and further certifies, pursuant to Subsection 112(c) of Title 23, United States Code and Title 44, Chapter 10, Article 1 of the Arizona Revised Statutes, that neither (s)he nor anyone associated with the company, firm, or corporation mentioned above has, 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 such project and furthermore that no member or employee of the Arizona Department of Transportation is personally or financially interested, directly or indirectly, in the Proposal, or in any purchase or sale of any materials or supplies for the work to which it relates, or in any portion of the profits thereof.

The undersigned certifies that the approved Plans, Standard Specifications, Special Provisions and forms of Contract and Bond authorized by the Arizona Department of Transportation and constituting essential parts of this proposal, have been carefully examined, and also that the site of the work has been personally inspected. The undersigned declares that the amount and nature of the work to be done is understood and that at no time will misunderstanding of the Plans, Specifications, Special Provisions, or conditions to be overcome, be plead. On the basis of Plans, Specifications, Special Provisions, and the forms of Contract and Bond proposed for use, the undersigned proposes to furnish all the necessary equipment, materials, machinery, tools, apparatus, and other means of construction, and labor to do all the work in the manner specified, and to accept, as full compensation therefor, the sum of the various products obtained by multiplying each unit price, herein bid for the work or materials, by the quantity thereof actually incorporated in the complete project, as determined by the State Engineer. The undersigned understands that the quantities mentioned herein are approximate only and are subject to increase or decrease and hereby proposes to perform all quantities of work as either increased or decreased, in accordance with the provisions of the Specifications, at the unit price bid in the Bidding Schedule.

The undersigned 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 undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bond within ten calendar days from the date of Notice of Award, time being of the essence. The undersigned further proposes to begin work as specified in the contract attached hereto, and to complete the work on or before expiration of the contract time as defined in the Specifications, and maintain at all times a Payment Bond and a Performance Bond, approved by the State Engineer, in an amount equal to one hundred (100) percent of the total bid. These bonds shall serve not only to guarantee the completion of the work on the part of the undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, until the work is finally accepted and the provisions of the Plans, Standard Specifications and Special Provisions fulfilled.

A Proposal Guaranty in the amount and character named in the Advertisement for Bids is enclosed, which Proposal Guaranty is submitted as a guaranty of the good faith of the bidder, and that the bidder will enter into written contract, as provided, to do the work, if successful in securing the award thereof, and it is hereby agreed that if at any time other than as provided in the Proposal there should be failure on the part of the undersigned to execute the Contract and furnish satisfactory Bond as herein provided, the State of Arizona, in either of such events, shall be entitled and is hereby given the right to retain the said Proposal Guaranty as liquidated damages.

If by a Corporation:

(Seal)

Corporate Name: _____

Corporate Mailing Address: _____ Zip Code: _____

Incorporated under the laws of the State of: _____

By (Signature): _____ Date: _____

President: _____

Secretary: _____

Treasurer: _____

If by a Firm or Partnership:

Firm or Partnership Mailing Name: _____

Firm or Partnership Address: _____

By (Signature): _____ Date: _____

Name and Address of Each Member: _____

If by an Individual:

Signature: _____ Date: _____

Mailing Address: _____

ARIZONA DEPARTMENT OF TRANSPORTATION
SURETY (BID) BOND
(Penalty of this bond must not be less than 10% of the bid amount)



KNOW ALL MEN BY THESE PRESENTS, THAT _____

as Principal, hereinafter called the Principal, and _____

a corporation duly organized under the laws of the state of _____ hereinafter called the Surety, holding a certificate of authority to transact surety business in this State issued by the Director of the Department of Insurance, are held and firmly bound unto the Arizona Department of Transportation, as Obligee, hereinafter called the Obligee, in the sum of Ten Percent (10%) of the amount of the bid of Principal, submitted by Principal to the Arizona Department of Transportation for the work described below, for the payment of which sum well and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is herewith submitting its proposal for TRACS/Project No.

191 GH 120 H832401C STP-191-B(203)T
BOWIE JCT. - SAFFORD HIGHWAY (US 191)
(Relation Street to Junction US 70)

NOW THEREFORE, if the Obligee, acting by and through its Transportation board, shall accept the proposal of the Principal and the Principal shall enter into contract with the Obligee in accordance with the terms of such proposal, and give such bonds and certificates of insurance as may be specified in the contract documents with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such contract and give such bonds and certificates of insurance, if the Principal shall pay to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise it remains in full force and effect.

IN WITNESS WHEREOF, we hereunto set our hands and seals:

Principal

Surety

By

By Attorney-in-Fact

Title

Address Attorney-in-Fact

Subscribed and sworn before me
this _____ day of _____, 20 _____.

My Commission expires: _____

**CERTIFICATION WITH REGARD TO THE PERFORMANCE OF
PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE
EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS
APRIL, 1969**

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.

(Company)

By: _____

(Title)

Date: _____

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7b (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.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Information concerning Standard Form 100 (EEO-1) is available from:

Joint Reporting Committee
P.O. Box 19100
Washington, D.C. 20036-9100

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.

191 GH 120 H832401C STP-191-B(203)T
BOWIE JCT. - SAFFORD HIGHWAY (US 191)
(Relation Street to Junction US 70)

R7/03

**CERTIFICATION WITH RESPECT TO THE
RECEIPT OF ADDENDA**

In the submission of a bid and by the signing of the Proposal, this will certify that the following numbered addenda issued on this project have been brought to my personal attention and furthermore that I understand and agree that those will be made a part of the Contract.

Addendum No. _____, _____, _____, _____, _____

PRINT NAME OF CONTRACTOR

SIGNATURE

TITLE

DATE

191 GH 120 H832401C STP-191-B(203)T
BOWIE JCT. - SAFFORD HIGHWAY (US 191)
(Relation Street to Junction US 70)

AFFIDAVIT

**DISADVANTAGED BUSINESS ENTERPRISE
ASSURANCES**

The undersigned, fully cognizant of the requirements and of the goal established, hereby certifies that in the preparation of this bid for federal aid project

191 GH 120 H832401C STP-191-B(203)T
BOWIE JCT. - SAFFORD HIGHWAY (US 191)
(Relation Street to Junction US 70)

(CHECK ONE)

_____ The established goal for DBE participation will be met and agreements have been made with certified DBEs, or

_____ The bidder has been unable to meet the goal prior to the submission of the bid and has made good faith efforts to do so.

THIS AFFIDAVIT MAY NOT BE REVISED OR CORRECTED AFTER SUBMISSION OF THE BID.

In accordance with the Special Provisions, the bidder shall specify its DBE participation on the "DBE Intended Participation Affidavit", or provide documentation of its good faith efforts, by 4:00 p.m. on the fifth working day following the bid opening. The apparent low bidder shall obtain the required affidavit from the Civil Rights Office, 1135 N. 22nd Avenue (second floor), Phoenix, AZ, 85009, following the opening of bids.

Print Name of Firm

Print Name of Authorized Officer of Firm

Signature of Authorized Officer of Firm

Title

Subscribed and sworn to before me this

_____ day of _____, 20_____

My commission expires:

Notary Public

R03/11