

CONTRACT DOCUMENTS

FOR THE

HIDALGO COUNTY PRECINCT NO. 4

Construction of Parking Lot at
San Carlos CRC and Sunflower Park



Hidalgo County, Texas

March 2016

Civil Engineer:

LeFEVRE
ENGINEERING &
MANAGEMENT CONSULTING, LLC

612 Nolana, Suite 520
McAllen, Texas 78504
Tel. 956.687.LEMC
Fax. 956.687.5363

Texas Registered Engineering Firm F-11722

Wesley Richard LeFevre, PE

General Request for Bid Package

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PURCHASING DEPARTMENT
County Of Hidalgo

March 14, 2016

Re: **HIDALGO COUNTY PRECINCT NO. 4**
“Construction of Parking Lot at San Carlos CRC and Sunflower Park”
RFB PROJECT NO. 2016-115-03-30-MSS

Dear Gentleman/Ladies:

Enclosed please find a Request for Bid (RFB) packet for your review and consideration.

Hidalgo County Purchasing Department welcomes and appreciates your participation in the bid process.

If any further assistance is required, please do not hesitate to call the Purchasing Department 956/318-2626.

Sincerely,

Martha L. Salazar, CPPB
Hidalgo County Purchasing Agent

MLS/mss

Enclosures



PURCHASING DEPARTMENT
County Of Hidalgo

“FRONT END DOCUMENTS”
FOR:

HIDALGO COUNTY PRECINCT NO. 4
“Construction of Parking Lot at San Carlos CRC and Sunflower Park”
RFB PROJECT NO. 2016-115-03-30-MSS

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The above mentioned items shall be found in this Request for Bids-RFB packet that is attached herewith. Should you find that any of the listed items are not attached in its entirety, please contact Purchasing by calling (956) 318-2626 or e-mail, to advise us of the missing documentation, and Purchasing will forward information either through facsimile, e-mail or by U.S. Mail.

Thank you.

**REQUEST FOR SEALED BIDS
(RFB)**

TO SUPPLY HIDALGO COUNTY with sealed bids for the following Construction Project:

Request for Sealed Bids (RFB)	2016-115-03-30-MSS	-HIDALGO COUNTY PRECINCT NO. 4- “Construction of Parking Lot at San Carlos CRC and Sunflower Park”
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PROCUREMENT PACKETS. Interested contractors may obtain bid packets at project engineer’s office: LeFevre Engineering, 612 W. Nolana, Ste 520, McAllen, TX 78504, Ph. (956) 687-5362 for the amount of \$ each. General and/or Prime Contractors submitting bids and/or proposals to the County of Hidalgo shall be non-refundable.

PRE-BID CONFERENCE is scheduled for Monday, March 21, 2016 at 3:00 P.M. at HIDALGO COUNTY PURCHASING DEPARTMENT CONFERENCE ROOM: -2802 S. Business Hwy 281, Edinburg, TX 78539

A **BIDDER’S BOND** from a reliable surety company licensed to operate in the State of Texas or certified Cashier’s Check, payable without recourse to the County of Hidalgo, for the amount of not less than **5%** of the total bid shall accompany the bid as guaranty that, if awarded the contract, the bidder will enter into a contract with the County of Hidalgo. A Payment Bond is required in the amount of one hundred percent (100%) of the Contract Amount, if the contract exceeds \$25,000. A Performance Bond is required in the amount of one hundred percent (100%) of the Contract Amount, if the contract exceeds \$100,000.

UPON SUBMITTING SEALED BID, bidders are required to properly identify (handwritten, typed or printed) sealed envelope and/or packet with Bidders’ name and address on the upper left hand corner of the sealed envelope and/or package, and **Bid No. and project name** on the lower left hand corner of sealed envelope/and or packet. **OVERNIGHT MAIL MUST ALSO BE PROPERLY LABELED ON THE OUTSIDE OF EXPRESS ENVELOPE OR PACKAGE.**

The sealed bid must contain one (1) original and three (3) copies of bid and must be clearly identified and addressed for delivery to:
Martha L. Salazar, CPPB, Hidalgo County Purchasing Agent
Hidalgo County Purchasing Department

US Postal Mail/Courier Address: Hidalgo County New Administration Building, 2812 S. Business Hwy 281, Edinburg, TX 78539
Physical Location: Hidalgo County New Administration Building, 2802 S. Business Hwy. 281 (Southeast of Canton Rd & Business Hwy 281) Edinburg, TX

BIDS ACCEPTANCE: Sealed bids will be accepted until **3:00 P.M. on Wednesday, March 30, 2016** at which time they will be opened in the Hidalgo County Purchasing Department Conference Room at **Physical Location: 2802 S. Business Hwy 281, Hidalgo County New Administration Building, Edinburg, Texas 78539.** NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY BID RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED.

Attention is called to the fact that not less than, the most current federally determined prevailing (**Davis-Bacon and Related Acts**) wage rate, as issued and contained in the contract documents, must be paid on this project. In addition the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, age, disability or national origin.

BIDS MAY BE HELD by the County of Hidalgo for a period not to exceed ninety (90) days from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of bidders, prior to awarding of the contract.

Typed-written RFI’s shall be sent to Engineer. Please follow with a call to confirm receipt of RFI. RFI’s will not be answered by phone. NO HAND WRITTEN RFI’S will be answered. All inquiries shall be forwarded by March 22, 2016. Inquiries beyond this date will not be responded. Contact project engineer for copies of Addenda.

BY ORDER OF THE COMMISSIONERS COURT OF HIDALGO COUNTY, TEXAS ON THIS THE 7th DAY OF MARCH, 2016.

MARTHA L. SALAZAR, CPPB
HIDALGO COUNTY PURCHASING AGENT

REPORT ROAD HAZARDS@1-866-HCR-SAFE OR 1-866-427-7233

REQUEST FOR BIDS

HIDALGO COUNTY PRECINCT NO. 4

“Construction of Parking Lot at San Carlos CRC and Sunflower Park”

RFB PROJECT NO. 2016-115-03-30-MSS

BID OPENING DATE

MARCH 30, 2016

Contact Person:

Martha L. Salazar, CPPB, Purchasing Agent
Hidalgo County Purchasing Department
Physical Address: 2802 S. Business Hwy. 281 -New Administration Building
Mailing/Postal Address: 2812 S. Business Hwy. 281
Edinburg, Texas 78539
956 318-2626

Form HCPD-03



1. Sealed bids will be received for Hidalgo County Precinct No. 4 “Construction of Parking Lot at San Carlos CRC and Sunflower Park” in accordance with the specifications attached as Exhibit "A" hereto. Bids should address all specifications set forth. Bidders may suggest substitutions of features which they feel would be in the best interest of Hidalgo County ("County"). Strong rationale must be presented for any deviation from the specifications. Hidalgo County reserves the right to reject the deviation and its effect on the overall bid.
2. **One (1) original and Three (3) copies** of all bids are required with the bidders name and return address clearly typed and or/printed on upper left hand corner and the proper notation clearly typed/printed on the lower left hand corner of the envelope and/or package: **BID NO.: 2016-115-03-30-MSS Hidalgo County Precinct No. 4 “Construction of Parking Lot at San Carlos CRC and Sunflower Park”** and at County's Purchasing Department with a physical address: 2802 S. Business 281 and a mailing address: 2812 S. Business Hwy 281, New Administration Building, Edinburg, Texas, **on or before 3:00 P.M., WEDNESDAY, March 30, 2016. NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY RFB RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED. OVERNIGHT MAIL MUST ALSO BE PROPERLY LABELED ON THE OUTSIDE OF EXPRESS ENVELOPE OR PACKAGE WITH REFERENCE TO Hidalgo County Precinct No. 4 “Construction of Parking Lot at San Carlos CRC and Sunflower Park” - RFB NO.: 2016-115-03-30-MSS-** Hidalgo County reserves the right to refuse and reject any/all bids and to waive any/all formalities or technicalities, or to accept the bids considered the best and most advantageous to Hidalgo County.
3. Hidalgo County reserves the right to: A. separate and accept, or eliminate any item(s) listed under this bid that it deems necessary to accommodate budgetary and/or operational requirements; B. reject any or all bids submitted and further reserves the right to design the evaluation criteria to be used in selecting the lowest and best bid for approval; and C. award the bid to one bidder or to multiple bidders if the County determines it is in its best interest to do so.”
4. The Bidder shall not substitute items named in the bid without the express written consent of Hidalgo County. Failure of the delivered item to perform as specified or failure to meet the stated delivery schedule shall release Hidalgo County from all obligations to the contracting party with regard to the item(s) in question. In such event, County may elect to award the contract to the next-lowest responsible bidder, or to reject all bids and re-advertise.
5. For work to be performed at a County owned or operated location, each bidder shall, in its sole discretion, visit the job site before preparing the bid and thoroughly familiarize himself/herself with existing conditions. Bidder should take field dimensions and note all circumstances which affect the dollar amount of the bid.
6. Descriptive specifications are referenced in this document to indicate the general kind and quality of equipment desired by Hidalgo County. Due to various styles and models of equipment, bidders are required to include illustrations, specifications, explanation of warranties, and service data with their bid including catalogue numbers and any necessary references.
7. No bid may be withdrawn within thirty (30) days from the scheduled time to open bids.
8. Proposed prices are to remain firm for a minimum of ninety (90) days after bid opening.

9. Any interpretations, amendments, corrections or changes to this bid document must be in a written addendum and signed by the County Judge or his designee. Addenda will be mailed to all who are known to have received a copy of the Request for Bids. Bidders shall acknowledge receipt of all addenda as a part of their bid.
10. County reserves the right to accept or reject any or all Bids.
11. Costs are to be net F.O.B., County Prepaid.
12. County is exempt from Federal Excise Tax, State Tax and Local Tax. Do Not include tax in cost figure. If it is determined that tax was included in the cost figures it will not be included in the tabulation of any awards. Tax exemption certificates will be furnished upon request.
13. Funds for this procurement have been provided through the County budget for this fiscal year only. County, on an annual basis, has the right to reconsider a contract during the budget process for ensuing years if financial resources of County are insufficient to meet the liabilities of said contract. The award of a bid or contract hereunder will not be construed to create a debt of the County which is payable out of funds beyond the current fiscal year.
14. Upon award and prior to execution of a contract, Sole Proprietorships are required to submit a copy of their social security cards to the Hidalgo County Auditor's Office in order to establish an account with the County. All awarded vendors must submit a completed W-9 and a copy of their Federal ID Number Certificate.
15. DELIVERY OF GOODS AND SERVICES INSTRUCTIONS (when applicable):
 - . No deliveries accepted after 3:00 P.M., Monday-Friday.
 - . At least seventy two (72) hours prior notice of delivery must be given to Martha L. Salazar, Purchasing Agent before delivery will be accepted.
 - . If you need additional information call the office listed below:

Hidalgo County Purchasing Department
Martha L. Salazar, Purchasing Agent
(956) 318-2626
16. BILLING AND PAYMENT INSTRUCTIONS:
 - . Invoices must include:
 - a) Name and address of successful bidder
 - b) Name and address of receiving department or official
 - c) Purchase Order Number (if any)
 - d) Notation - **Hidalgo County Precinct No. 4 "Construction of Parking Lot at San Carlos CRC and Sunflower Park" -RFB NO.: 2016-115-03-30-MSS**
Descriptive information as to the items or services delivered, including product code, item number, quantity, etc.
 - e) Contract number must be indicated on all invoices
 - . Discount payments will be considered when offered.

Contact person for Billing and Payment questions:

Hidalgo County Auditor's Office
2808 S. Business Hwy 281
Edinburg, Tx 78539
(956) 318-2511

17. Schedule of Events

Bid Opening, 3:00 P.M.	<u>March 30</u> , 2016
Award of Contract	<u> </u> , 2016
Commence Work or Deliver Products	<u> </u> , 2016

18. Bid or Performance Bond and Debarment Certification; Payment under Contract:

If the contract proposed is for the construction of public works or is for a contract for goods & services exceeding \$100,000, all bidders shall furnish a good and sufficient bid bond in the amount of five percent of the total contract price. A bid bond must be executed with a surety company authorized to do business in Texas. All bidders are also required to furnish a certification or acknowledgment stating that the contractor or vendor is free from suspension or debarment pursuant to federal regulation 45CFR Part 76.

Together with the signing of a contract or issuance of a purchase order following the acceptance of a bid, and prior to commencement of the actual work, the bidder shall furnish a performance bond to the County for the full amount of the contract, if that contract exceeds \$50,000.

If the contract is for \$50,000 or less, no money will be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County, and, if applicable, the receipt by County of satisfactory evidence that all subcontractors and material men have been paid.

If a contract is for the construction, alteration or repair of public buildings or public works, the contractor *shall* provide a payment bond for a contract in excess of Twenty Five Thousand Dollars (\$25,000.00), as required by Tex. Govt. Code Ch. 2253.

For requirements contracts, bond requirements are determined by applying the proposed unit price to the estimated quantities included in the specifications.

19. Ethical Standards:

It shall be a breach of ethics to offer, give or agree to give any elected official, department head or employee, or former elected official, department head or employee, of the County, or for any elected official, department head or employee or former elected official, department head or employee of the County, to solicit, demand, accept or agree to accept from another person, entity or organization, a gratuity or an offer of employment in connection with

any decision, approval, disapproval, recommendation, preparation or any part of a program requirement or purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore pending before any department or agency of the County.

. It shall be a breach of ethics for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor for any contract for the County, or any person associated therewith, as an inducement for the award of a subcontract or order.

. No public official shall have an interest in a contract awarded hereunder except in accordance with Tex. Loc. Govt. Code Chapter 171.

NOTICE:

ALL COMMUNICATIONS BY A VENDOR TO THE COUNTY, ITS OFFICIALS, AND DEPARTMENT HEADS REGARDING THIS PROCUREMENT SHALL BE DONE THROUGH THE HIDALGO COUNTY PURCHASING DEPARTMENT.

20. Disclosure of Conflict of Interest

. Effective January 1, 2016, Chapter 176 of the Texas Local Government Code requires that any vendor, person, consultant or contractor considering doing business with Hidalgo County (“the County”) to disclose in the Conflict of Interest Questionnaire (the “CIQ”) attached as **Exhibit D-1**, the vendor, person, consultant or contractor’s affiliation or business relationship that might cause a conflict of interest with the County. By law, the CIQ must be filed with the Hidalgo County Clerk’s Office no later than the seventh business day after the date the person becomes aware of facts that require that statement to be filed. The disclosure requirement applies to a person or business who contracts or seeks to contract with Hidalgo County for the sale or purchase of property, goods or service. Any purchase order or contract resulting from this process shall be considered null and void if the successful bidder fails to comply with Texas Local Government Code Chapter 176. Vendors, consultants, contractors and others who desire to conduct business with Hidalgo County are encouraged to refer to Texas Local Government Code Chapter 176 for the details of this law. An offense under Texas Local Government Code Chapter 176 is a Class C Misdemeanor. **Completed Form CIQ must be submitted to the Hidalgo County Clerk’s Office located at 100 N. Closner, Edinburg, Texas 78539 - Hidalgo County Courthouse.**

COMPLETION AND SUBMISSION OF FORM CIQ IS THE SOLE RESPONSIBILITY OF THE PROSPECTIVE RESPONDENT. QUESTIONS REGARDING COMPLIANCE SHOULD BE DIRECTED TO YOUR LEGAL COUNSEL.

21. **CERTIFICATE OF INTERESTED PARTIES (FORM HB1295)**

As of January 1, 2016, to comply with Texas Government Code Section §2252.908, and the rules issued by the Texas Ethics Commission found in Title 1, Section 46.1, 46.3 and 46.5 of the Texas Administrative Code, we have updated and revised our RFB packet. In accordance with these requirements, business must submit a completed Certificate of Interested Parties Form 1295 to the County **before** the County may enter into a contract with the business entity. In box 3 of Form 1295, you will provide the RFB Project No. (2016-115), as shown on the packet. Once completed and filed with the Texas Ethics Commission, Form 1295 must be printed and signed in the presence of a notary and submitted to our office either by facsimile transmission to (956) 292-7612

or via email to: moises.salazar@co.hidalgo.tx.us. **Hidalgo County cannot enter into a contract until Form 1295 is submitted.** Therefore, failure to timely submit Form 1295 signed and notarized may result in delay of award. Full instructions for completion and submittal of Form 1295 may be found on the Texas Ethics Commission website:

<https://www.ethics.state.tx.us/tec/1295-Info.htm>

THE AWARDED VENDOR WILL HAVE THIRTY (30) DAYS TO SUBMIT THE SIGNED NOTARIZED FORM 1295. HIDALGO COUNTY CANNOT ENTER INTO A CONTRACT UNTIL FORM 1295 IS SUBMITTED.

FORM CIS (LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT) will be included in packet as Exhibit "D-2" for information purposes. This is to inform all prospective Vendors of the new statute (HB 23), becoming effective on September 01, 2015.

FORM CIS IS THE SOLE RESPONSIBILITY OF HIDALGO COUNTY. Should you have any questions regarding HB23, (form CIS) please direct yourself and/or consult with your Legal Counsel.

22. If, during the life of any contract or bid awarded, the successful bidder's net prices generally available to other customers for items awarded herein are reduced below the contracted price, it is understood and agreed that the benefits of such reduction shall be extended to the County.
23. Bids, and all goods and services provided hereunder, shall comply with all federal, state and local laws concerning this type(s) of goods and/or services.
24. Minimum Standards for Responsible Prospective Bidders: A prospective bidder must affirmatively demonstrate bidder's responsibility. A prospective bidder, by submitting a bid, represents to County that it meets the following requirements:
 - . Possess or is able to obtain adequate financial resources as required to perform under the bid;
 - . Be able to comply with the required or proposed delivery schedule;
 - . Have a satisfactory record of performance;
 - . Have a satisfactory record of integrity and ethics;
 - . Be otherwise qualified and eligible to receive an award.
25. Successful bidder will pay or cause to be paid, without cost or expenses to County, all FICA, FUTA/SUTA and Federal Income Withholding Taxes of all employees, and all wages and benefits as required by Federal or State law. Successful bidder's officers, agents and/or employees will not be entitled to any benefits of an employee or elected official of County, including, but not limited to, benefits associated with County's civil service system.
26. Any contract award to a successful bidder will be in effect until (a) the contract expires, (b) delivery and acceptance of products, and/or performance of services ordered, or (c) terminated by County with thirty day's written notice prior to cancellation.
27. County reserves the right to enforce performance of any contract awarded hereunder in any manner prescribed by law or deemed to be in the best interest of the County in the event of breach or default by successful bidder; County reserves the right to terminate any contract immediately in the event a successful bidder fails to:

- A. Meet schedules;
 - B. Pay any required fees or taxes; or
 - C. Otherwise perform in accordance with the specifications.
28. Successful bidder shall defend, indemnify and save harmless County and all its elected officials, officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful bidder, or of any agent, employee, subcontractor or supplier of successful bidder in the execution of, or performance under, any contract which may result from bid award or which arises from any event or casualty happening on or within County premises themselves or happening upon or in any halls, elevators, entrances, stairways or approaches of or to such County facilities. Successful bidder shall pay any judgment with costs which may be obtained against County growing out of such injury or damages, and shall, upon request, provide a defense to County by counsel reasonably acceptable to County. Successful bidder's indemnity hereunder shall include, but is not limited to, claims relating to patent, copyright or trademark infringement, and the like, arising out of the goods and services provided by successful bidder.
29. Successful bidder shall warrant that all items/services shall conform with the specifications and/or all warranties provided under the Uniform Commercial Code and be free from all defects in material, workmanship and the like. Items supplied under a contract pursuant to this Request for Bids shall be subject to County's approval. Items found to be defective or not meeting specifications shall be replaced by successful bidder within two business days at no expense to County. Items not picked up within one (1) week after notification shall be deemed a donation to County and may be used or disposed of at County's discretion and without waiver of any other rights of County as to the item's nonconformity.
30. This document and any disputes arising hereunder shall be governed and construed according to the laws of the State of Texas, and will be performable exclusively in Hidalgo County, Texas.
31. The successful bidder shall not assign, sell, transfer or convey its rights under any awarded contract, in whole or in part, without the prior written consent of County.
32. Respondents must provide all documentation requested with this Request for Bid (RFB), in their response (except for the CIQ form if NON APPLICABLE). Failure to provide this information may result in rejection of the RFB as nonconforming.

Bid
for
Hidalgo County Precinct No. 4
“Construction of Parking Lot at San Carlos CRC and Sunflower Park”
BID NO.: 2016-115-03-30-MSS

To: Martha L. Salazar, CPPB, Purchasing Agent
Physical Address: 2802 S. Business Hwy. 281 -New Administration Building
Mailing/Postal Address: 2812 S. Business Hwy. 281
Edinburg, Texas 78539

In accordance with the Specifications, and subject to all laws and regulations of the United States and state and local laws, the undersigned bidder proposes and commits to furnish all labor, equipment, material, software and services as set forth in the documents hereinbefore mentioned. The undersigned bidder further agrees, upon acceptance of its bid, to execute a contract and/or Purchase Order issued by Hidalgo County for performing and completing the work described in the Specifications within the time stated and for the prices proposed in the documents attached hereto and made a part hereof.

Bidder acknowledges receipt of all of the pages of the documents referenced in the Invitation to Bid Checklist presented in connection with this procurement. Bidder understands that Hidalgo County reserves the right to reject any or all bids and further reserves the right to design the evaluation criteria to be used in selecting the lowest and best bid.

Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids, as contained in the Specifications.

Respectfully submitted,

Bidder: _____

Address: _____

By: _____

Printed Name: _____

Title: _____

BID BOND

KNOWN ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____ as

Principal _____ and

_____ as Surety, are hereby held

and _____ firmly bound _____ unto

_____ as Owner in the penal sum of \$ _____

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors an assigns.

Signed, this _____ day of _____, _____.

The condition of the above obligation is such that whereas the Principal has submitted to

_____ a certain Bid, attached hereto and

hereby made a part hereof to enter a contract in writing, for the

NOW THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract and for the payment of all persons performing labor or using furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event, exceed he penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety dues hereby waive notice of any extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set with hands and seals, and such of them as are corporation have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
PRINCIPAL

SURETY

SEAL:

BY: _____

EXHIBIT “A”

SPECIFICATIONS:

Hidalgo County
Hidalgo County Precinct No. 4 – Construction of Parking Lot at
San Carlos CRC and Sunflower Park
Bid No.: 2016-115-03-30-MSS

SCOPE OF WORK, SPECIFICATION REQUIREMENTS AND OTHER TERMS & CONDITIONS:

The County Of Hidalgo requests proposals for:
“Hidalgo County Precinct No. 1 – Construction of Parking Lot at
San Carlos CRC and Sunflower Park”

(See attached specifications as prepared by LeFevre Engineering & Management Consulting
LLC.)

Engineering Firm Contact:

Emigdio “Milo” Salinas, P.E., Project Engineer
612 Nolana, Suite 520
McAllen, TX 78504
956-687-5362

Precinct Contact:

Hidalgo County-Purchasing Department

Contact:

Marth L. Salazar, CPPB, Purchasing Agent
956-318-2626

Hidalgo County Precinct No. 4
Construction of Parking Lot at San Carlos CRC and Sunflower Park
Hidalgo County, Texas

Technical Specifications

SPECIFICATIONS

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Division
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SECTION 01010

SCOPE OF WORK

This Scope of Work and any accompanying drawings are intended as a guide to the Contractor in identifying the work to be accomplished in completing this project. This Scope of Work may not be all inclusive and the Contractor shall be responsible for providing all supervision, labor, materials, equipment, direction, and coordination necessary to perform and totally complete the work in conformance with the drawings and specifications. If an "or equal" substitution is made for any of the recommended items shown in the specifications or drawings, the Contractor shall be responsible for providing all the necessary physical modifications to fully accommodate the substitution at no change in contract price.

PART 1. GENERAL

1.01 CIVIL

- A. Provide all civil work per specifications and drawings – Reconstruction of Mile 10 and Re-grading of existing drainage swales.

1.02 PIPING

- A. All existing street culverts will be replaced with 18-inch RCP, and driveway culverts will be replaced with 15-inch HDPE; unless otherwise noted.

1.03 CONSTRUCTION RECORD DRAWINGS

- A. The Contractor shall maintain a complete master set of construction "red-line" drawings to document any field changes to the "Issued for Construction" drawing set which shall accurately depict the "As-Built" construction of the road. Following completion, this drawing set shall be turned over to the Engineer for updating the Record "As-Built" drawings.
- B. Any drawings and documentation which are to be supplied by the Contractor, shall be updated to accurately depict the "As-Built" construction of the road and turned over to the Engineer following completion of the project. These items shall be certified by the Contractor's Project Manager as accurate and complete.

1.04 SUBCONTRACTOR COORDINATION

The Contractor shall be responsible for coordination of the work between his various subcontractors to prevent conflicts and schedule interruptions.

1.05 SAFETY REQUIREMENTS

- A. The Contractor shall provide all safety equipment required by his employees to meet Occupational Safety and Health Administration (OSHA) safety requirements.

END OF SECTION 01010

Section 01110

SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Summary of the Work including work by Owner, Owner furnished products, Work sequence, future Work, Contractor use of Premises, and Owner occupancy.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of the contract is for the reconstruction of Mile 10-12 including, but not limited to, Paving and Re-grading of Drainage Swales.

1.03 CASH ALLOWANCES

- A. Include the Cash Allowances shown in the Proposal, if any.

1.04 ALTERNATES

- A. Include the Alternates shown in the Proposal, if any.

1.05 OWNER FURNISHED PRODUCTS

- A. The Owner will furnish no products.

1.06 OWNER FURNISHED UTILITIES

- A. The Owner will furnish no utilities.

1.07 WORK SEQUENCE

- A. Work sequence will be the responsibility of the Contractor using good construction practices.
- B. Coordination of the Work: Refer to Section 01312 – Coordination and Meetings.

1.08 CONTRACTOR USE OF PREMISES

- A. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
- B. Construction Operations: Limited to Owner's rights-of-way provided by Owner.
- C. Utility Outages and Shutdown: Provide notification to the Owner and private utility companies (when applicable) a minimum of 48 hours, excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.

1.09 WARRANTY

- A. Comply with warranty requirements in accordance with Document 00700 - General Conditions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

01110-1 of 1

Section 01145

USE OF PREMISES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section includes general use of the site including properties inside and outside of rights-of-way, work affecting road, ramps, streets and driveways and notification to adjacent occupants.

1.02 RIGHTS-OF-WAY

- A. Confine access and operations and storage areas to rights-of-way provided by Owner as stipulated in Document 00700 - General Conditions; trespassing on abutting lands or other lands in the area is not allowed.
- B. Contractor may make arrangements, at Contractor's cost, for temporary use of private properties, in which case Contractor and Contractor's surety shall indemnify and hold harmless the Owner against claims or demands arising from such use of properties outside of rights-of-way.
- C. Restrict total length which materials may be distributed along the route of the construction at any one time to 1,000 linear feet unless otherwise approved in writing by Resident Project Representative.

1.03 PROPERTIES OUTSIDE OF RIGHTS-OF-WAY

- A. Altering the condition of properties adjacent to and along rights-of-way will not be permitted.
- B. Means, methods, techniques, sequences, or procedures which will result in damage to properties or improvements in the vicinity outside of rights-of-way will not be permitted.
- C. Any damage to properties outside of rights-of-ways shall be repaired or replaced to the satisfaction of the Resident Project Representative and at no cost to the Owner.

1.04 USE OF SITE

- A. Obtain approvals of governing authorities prior to impeding or closing public roads or streets. Do not close more than two consecutive intersections at one time.
- B. Notify Resident Project Representative at least 48 hours prior to closing a street for a street crossing. Permission for street closures is required in advance and are the responsibility of the Contractor.
- C. Maintain access for emergency vehicles including access to fire hydrants.
- D. Avoid obstructing drainage ditches or inlets; when obstruction is unavoidable due to requirements of the Work, provide grading and temporary drainage structures to maintain unimpeded flow.
- E. Locate and protect private lawn sprinkler systems which may exist on rights-of-ways within the site. Repair or replace damaged systems to condition equal to or better than that existing at start of Work at no separate payment.

- F. Perform daily clean-up of dirt outside the construction zone, and debris, scrap materials, and other disposable items. Keep streets, driveways, and sidewalks clean of dirt, debris and scrap materials. Do not leave building, roads, streets or other construction areas unclean overnight.

1.05 NOTIFICATION TO ADJACENT OCCUPANTS

- A. Notify individual occupants in areas to be effected by the Work of the proposed construction and time schedule. Notification shall be not less than 72 hours or more than 2 weeks prior to work being performed within 200 feet of the homes or businesses.
- B. Include in notification names and telephone numbers of two company representatives for resident contact, who will be available on 24-hour call. Include precautions which will be taken to protect private property and identify potential access or utility inconvenience or disruption.
- C. Consideration shall be given to the ethnicity of the neighborhood where English is not the dominant language. Notice shall be in an understandable language.

1.06 PUBLIC, TEMPORARY, AND CONSTRUCTION ROADS AND RAMPS

- A. Construct and maintain temporary detours, ramps, and roads to provide for normal public traffic flow when use of public roads or streets is closed by necessities of the Work.
- B. Provide mats or other means to prevent overloading or damage to existing roadways from tracked equipment or large or heavy trucks or equipment.

1.07 EXCAVATION IN STREETS AND DRIVEWAYS

- A. Avoid needless hindering or inconveniencing public travel on a street or any intersecting alley or street for more than two blocks at any one time.
- B. Remove surplus materials and debris and open each block for public use as work in that block is complete.
- C. Acceptance of any portion of the Work will not be based on return of street to public use.
- D. Avoid obstructing driveways or entrances to private property.
- E. Provide temporary crossing or complete the excavation and backfill in one continuous operation to minimize the duration of obstruction when excavation is required across drives or entrances.

1.08 TRAFFIC CONTROL

- A. Provide traffic control plan, traffic control, flagmen, signals, control devices, lights, traffic signals, barricades and signs in accordance with the State of Texas Manual on Uniform Traffic Control Devices.

1.09 SURFACE RESTORATION

- A. Restore site to condition existing before construction to satisfaction of Resident Project Representative.
- B. Repair paved area per the requirements of Section 02951 - Pavement Repair and Resurfacing.
- C. Repair turf areas which become damaged, level with bank run sand conforming to Section 02317 - Excavation and Backfill for Utilities, or topsoil conforming to Section 02911 - Topsoil, as

approved by the Resident Project Representative and re-sod in accordance with Section 02922 - Sodding. Water and level newly sodded areas with adjoining turf using steel wheel rollers appropriate for sodding. Do not use spot sodding or sprigging.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

Section 01321

CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Photographic requirements for construction photographs and submittals.

1.02 SUBMITTALS

- A. Prints: Furnish 2 sets of 4-inch by 6-inch prints of each view and submit 1 print directly to the Engineer within 7 days of taking photographs. One print shall be retained by the Contractor in the field office at the Project site and available at all times for reference.
- B. Extra Prints: When requested by the Engineer, the Contractor shall submit extra prints of photographs, with distribution directly to designated parties who will pay the costs for the extra prints directly to the photographer.
- C. When required by individual sections, submit photographs taken prior to start of construction to show original site conditions.
- D. When required by Contract Documents, submit photographs with monthly Pay Estimate.
- E. Negatives: With each submittal, include photographic negatives, in protective envelopes, identified by Project name, Contractor, and date photographs were taken.
- F. In lieu of negatives, Contractor may submit electronic files of digital photographs if using a digital camera, but must comply with Parts 1 and 2 of this section.

1.03 QUALITY ASSURANCE

- A. Contractor shall be responsible for the timely execution of the photographs, their vantage point, and quality.
- B. Photographs: Two prints; color, matte finish; 4 x 6 -inch size, mounted on 8-1/2 x 11- inch soft card stock, with left edge binding margin for three hole punch. Digital photos shall not be distorted to fit card stock.

PART 2 PRODUCTS

2.01 PRECONSTRUCTION PHOTOGRAPHS

- A. Prior to the commencement of any construction, take 35 mm or digital color photographs of the site of the project and present two sets of prints to the Engineer for their use in contract administration and inspection. Subject matter of the photographs to be determined by the Engineer.
- B. The photographs shall show on a non-reflective chalkboard readable in the photograph:
 - 1. Job number.

2. Date and time photographs were taken.
 3. Location and compass direction of the photograph, along with the project number.
 4. Date shall be on negative (35mm) or on digital image.
 5. Provide notation of vantage point marked for location and direction of shot, on a key plan of the site.
- C. Sufficient number of photographs shall be taken to show the existence or non-existence of cracked paved surfaces and the condition of trees, shrubs, and grass.
- D. Identify each photograph with an applied label or rubber stamp on the back with the following information:
1. Name of the Project.
 2. Name and address of the photographer (if a professional photographer is used).
 3. Name of the Contractor.
 4. Date the photograph was taken.
 5. Photographs shall be in plastic pockets and bound in three-ring notebook for easy access and viewing.

2.02 PROGRESS PHOTOGRAPHS

- A. Take photographs of subject matter selected by Resident Project Representative at intervals, coinciding with the cutoff date associated with each application for payment. Select the vantage points for each shot each month to best show the status of construction and progress since the last photographs were taken.
1. Vantage Points: Follow direction by the Resident Project Representative to select vantage points. During each of the following construction phases take not less than 2 of the required shots from the same vantage point each time to create a time-lapse sequence.
 2. Photos shall be submitted according to Paragraphs 1.03 B. and 2.01 B and D.

PART 3 EXECUTION - Not Used

END OF SECTION

Section 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures for:
 - 1. Project Record Documents.
 - 2. Design Mixes.

1.02 SUBMITTAL PROCEDURES

- A. Scheduling and Handling:
 - 1. Schedule submittals well in advance of the need for the material or equipment for construction. Allow time to make delivery of material or equipment after submittal has been approved.
 - 2. Develop a submittal schedule that allows sufficient time for initial review, correction, resubmission and final review of all submittals. The Engineer will review and return submittals to the Contractor as expeditiously as possible but the amount of time required for review will vary depending on the complexity and quantity of data submitted. In no case will a submittal schedule be acceptable which allows less than 30 days for initial review by the Engineer. This time for review shall in no way be justification for delays or additional compensation to the Contractor. Recognizing that time is of the essence, the Contractor is to stamp the top of each submittal with the words ROUTINE or CRITICAL. Routine submittals shall be processed in accordance with the timeframe set forth previously. Critical submittals are those that: were overlooked by the Contractor, involve complex coordination, or are crucial to the successful completion of a specific portion of the project. For critical submittals:
 - i. Contractor shall indicate on the submittal his realistically estimated date of when a review must be returned;
 - ii. Upon return of critical submittals, Contractor shall date-stamp the transmittal page with date and time received;
 - iii. Contractor is cautioned that the use of critical submittals is not a substitute for proper due diligence on his part. Review of critical submittals found to be routine shall be accompanied by an invoice for excess time and material expenditures that were required in order to complete the critical review as compared to a routine review. The Resident Project Representative shall make the determination as to whether a critical submittal was in fact routine.
 - 3. The Engineer's review of submittals covers only general conformity to the Drawings, Specifications and dimensions which affect the layout. The Contractor is responsible for quantity determination. Quantities may be verified by the Engineer. The Contractor is responsible for any errors, omissions or deviations from the Contract requirements; review of submittals in no way relieves the Contractor from his obligation to furnish required items according to the Drawings and Specifications.

4. Submit sufficient copies of documents. Unless otherwise specified in the following paragraphs or in the Specifications, provide 6 copies in addition to the number the Contractor requires returned. For portions of the project involving electrical or signal components, provide one additional copy (7 copies in addition to the number the Contractor requires returned).
 5. Revise and resubmit submittals as required. Identify all changes made since previous submittal.
 6. A maximum of three (3) reviews will be conducted on any one submittal. Submittals requiring more than three (3) reviews will be considered inadequate and result in a recovery of review expenses from the Contractor.
 7. The Contractor shall assume the risk for material or equipment which is fabricated or delivered prior to approval. No material or equipment shall be incorporated into the Work or included in periodic progress payments until approval has been obtained in the specified manner.
- B. Transmittal Form and Numbering:
1. Transmit each submittal to the Engineer with a Transmittal Cover.
 2. Sequentially number each transmittal form beginning with the number 1. Re-submittals shall use the original number with an alphabetic suffix (i.e., 2A for first re-submittal of Submittal 2 or 15C for third re-submittal of Submittal 15). Each submittal shall only contain one type of work, material, or equipment. Mixed submittals will not be accepted.
 3. Identify time nature of submittal, either ROUTINE or CRITICAL.
 4. Identify variations from requirements of Contract Documents and identify product or system limitations.
 5. For submittal numbering of video tapes, see paragraph 1.10 Video.
- C. Transmittal Cover:
1. Transmittal Cover, certifying that the items have been reviewed in detail and are correct and in accordance with Contract Documents, except as noted by any requested variance. A stamp may be used to print the information on the Transmittal Cover except for the Contractor's signature. Regardless of whether the transmittal cover is typed or stamped, the transmittal cover text shall be a minimum of fourteen (14) point.
 2. As a minimum, Transmittal Cover information shall include:
 - a. Contractor's name.
 - b. Job number.
 - c. Submittal number.
 - d. Certification statement that the Contractor has reviewed the submittal and it is in compliance with the Contract Documents.
 - e. Signature line for Contractor.
 - f. Submittal type – routine or critical
 3. The bottom half of the Transmittal Cover shall be kept blank.

1.03 PROJECT RECORD DOCUMENTS

- A. Submit Project Record Documents to the Engineer.

1.04 DESIGN MIXES

- A. When specified in Specifications, submit design mixes for review.
- B. Transmittal Cover, as described in paragraph 1.02C, shall be placed on front page of each design mix.
- C. Mark each design mix to identify proportions, gradations, and additives for each class and type of design mix submitted. Include applicable test results on samples for each mix.
- D. Maintain a copy of approved design mixes at mixing plant.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

- A. Submittals made as part of this project will become a vital portion of the project record and will be referenced by the Owner for the useful life of the project. All submittals shall be of high quality. To this end, the following requirements are made:
 - i. As much as possible, all catalog cuts and manufacturer's information shall be original.
 - ii. Copies, when required, shall be clean and entirely legible.
 - iii. Neither facsimiles nor copies of facsimiles are to be included as part of any submittal.
 - iv. Binders, if used, shall be rugged, lock-ring type. Spine of binders shall be clearly labeled with the information outlined in items 1.02 C.2.a. through c.
- B. Reviewed submittals shall be returned to Contractor for distribution to subcontractors and other trades as required. As a minimum, submittals returned to the Contractor will be marked with review comments indicating findings of the review and giving instruction as to necessity of a re-submittal. The Engineer may, at his option, use a stamp for this purpose. Detailed correspondence covering the review may also accompany returned submittals.

END OF SECTION

SECTION 01410

TPDES REQUIREMENTS

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Documentation to be prepared and signed by Contractor before conducting construction operations, in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit Number TXR 150000 issued March 5, 2003 (the Construction General Permit).
- B. Implementation, maintenance inspection, and termination of storm water pollution prevention control measures including, but not limited to, erosion and sediment controls, storm water management plans, waste collection and disposal, off-site vehicle tracking, and other appropriate practices shown on the Drawings or specified elsewhere in the contract.
- C. Review of the Storm Water Pollution Prevention Plan (SWP3) implementation with Engineer prior to start of construction.

1.02 DEFINITIONS

- A. Commencement of Construction Activities: The exposure of soil resulting from activities such as clearing, grading, and excavating.
- B. Large Construction Activity: Project that:
 - 1. disturbs five acres or more, or
 - 2. disturbs less than five acres but is part of a larger common plan of development that will disturb five acres or more of land.
- C. Small Construction Activity: Project that:
 - 1. disturbs one or more acres but less than five acres, or
 - 2. disturbs less than one acre but is part of a larger common plan of development that will ultimately disturb one or more acres but less than five acres.
- D. TPDES Operator:
 - 1. The person or persons who have day-to-day operational control of the construction activities which are necessary to ensure compliance with the SWP3 for the site or other Construction General Permit conditions.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWP3)

- A. Prepare a SWP3 following Part III of the Construction General Permit and the Storm Water Management Handbook for Construction Activities issued under Owner Ordinance Section 47-695(b). If conflicts exist between the Construction General Permit and the handbook, the more stringent requirements will apply.
- B. Update or revise the SWP3 as needed during the construction following Part III, Section E of the Construction General Permit.

- C. Submit the SWP3 and any updates or revisions to Engineer for review and address comments prior to commencing, or continuing, construction activities.

3.02 NOTICE OF INTENT for Large and Small Construction Activity

- A. Fill out, sign, and date TCEQ Form 20022 (02/03) Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity under the TPDES Construction General Permit (TXR 150000), SEE ATTACHMENT of this Section 01410.
- B. Transmit the signed Contractor's copy of TCEQ Form 20022 (02/03), along with a \$100.00 check, made out to Texas Commission on Environmental Quality.
- C. Submission of the Notice of Intent form by the Contractor to TCEQ is required a minimum of two days before Commencement of Construction Activities.

3.03 CERTIFICATION REQUIREMENTS

- A. Fill out TPDES Operator's Information form, SEE ATTACHMENT of this Section 01410, including Contractor's name, address, and telephone number, and the names of persons or firms responsible for maintenance and inspection of erosion and sediment control measures. Use multiple copies as required to document full information.
- B. Contractor and Subcontractors shall sign and date the Contractor's / Subcontractor's Certification for TPDES Permitting, SEE ATTACHMENT 4 this Section 01410.
- C. Submit properly completed certification forms to Engineer for review before beginning construction operations.
- D. Conduct inspections in accordance with TCEQ requirements. Ensure persons or firms responsible for maintenance and inspection of erosion and sediment control measures read, fill out, sign, and date the Erosion Control Contractor's Certification for Inspection and maintenance. Use the EPA NPDES Construction Inspection Form, SEE ATTACHMENT of this Section 01410; and the Owner's Storm Water Pollution Prevention Plan Construction Site Inspection Report, SEE ATTACHMENT of this Section 01410 to record maintenance inspections and repairs.

3.04 RETENTION OF RECORDS

- A. Keep a copy of this document and the SWP3 in a readily accessible location at the construction site from Commencement of Construction Activity until submission of the Notice of Termination (NOT) for Storm Water Discharges Associated with Construction Activity under TPDES Construction General Permit (TXR 150000) to TCEQ. Contractors with day-to-day operational control over SWP3 implementation shall have a copy of the SWP3 available at a central location, on-site, for the use of all operators and those identified as having responsibilities under the SWP3. Upon submission of the NOT, to TCEQ submit a copy of the SWP3 with all revisions to Engineer.

3.05 REQUIRED NOTICES

- A. Post the following notices from effective date of the SWP3 until date of final site stabilization as defined in the Construction General Permit:
 - 1. Post the TPDES permit number for Large Construction Activity, or a signed TCEQ Construction Site Notice for Small Construction Activity. Signed copies of the Owner's and Contractor's NOI must also be posted.

2. Post notices near the main entrance of the construction site in a prominent place for public viewing. Post name and telephone number of Contractor's local contact person, brief project description and location of the SWP3.
 - a. If posting near a main entrance is not feasible due to safety concerns, coordinate posting of notice with Project Manager to conform to requirements of the Construction General Permit.
 - b. If Project is a linear construction project (e.g.: road, utilities, etc.), post notice in a publicly accessible location near active construction. Move notice as necessary.
3. Post a notice to equipment and vehicles operators, instructing them to stop, check, and clean tires of debris and mud before driving onto traffic lanes. Post at each stabilized construction exit area.
4. Post a notice of waste disposal procedures in a readily visible location on site.

3.06 ON-SITE WASTE MATERIAL STORAGE

- A. On-site waste material storage shall be self-contained and shall satisfy appropriate local, state, and federal rules and regulations.
- B. Prepare list of waste material to be stored on-site. Update list as necessary to include up-to-date information. Keep a copy of updated list with the SWP3.
- C. Prepare description of controls to reduce pollutants generated from on-site storage. Include storage practices necessary to minimize exposure of materials to storm water, and spill prevention and response measures consistent with best management practices. Keep a copy of the description with the SWP3.

3.08 NOTICE OF TERMINATION

- A. Submit a NOTE, ATTACHMENT 7 of this Section 01410, to Project Manager within 30 days after:
 1. Final stabilization has been achieved on all portions of the site that are the responsibility of the Contractor; or
 2. Another operator has assumed control over all areas of the site that have not been stabilized; and
 3. All silt fences and other temporary erosion controls have either been removed, scheduled to be removed as defined in the SWP3, or transferred to a new operator if the new operator has sought permit coverage.
- B. Project Manager will complete Owner's NOT and submit Contractor and Owner's notices to the TCEQ and MS4 entities.

END OF SECTION

Section 01454

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Testing laboratory services and Contractor responsibilities related to those services.

1.02 REFERENCES

- A. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- B. ASTM D 3666 - Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials.
- C. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- D. ASTM E 329 - Specification for Minimum Requirements for Agencies Engaged the Testing and/or Inspection of Materials Used in Construction.

1.03 SELECTION AND PAYMENT

- A. The Owner shall employ and pay for the services of an independent testing laboratory, or laboratories, to perform product and material quality control , perform in-place quality control and verification identified in individual Specification sections.
- B. The Owner, with the assistance of the Engineer, shall have control of testing, sampling, and expenditures.
- C. The Contractor shall coordinate the services of the project's Geotechnical Engineer of Record to conduct observation and testing of the subgrade preparation, and the selection, placement and compaction of select fill material. The foundation excavations for structures shall be observed by the Geotechnical Engineer of Record prior to steel and/or concrete placement to assess that the foundation materials are capable of supporting the design loads and are consistent with the subsurface materials described in the project's Geotechnical Engineering Study.
- D. Employment of a testing laboratory by the Owner shall not relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.
- E. Remedial work and re-testing costs, resulting from deficiencies in materials and/or workmanship, shall be borne by the Contractor.

1.04 QUALIFICATION OF LABORATORY

- A. Meet laboratory requirements of ASTM E 329 and applicable requirements of ASTM C 1077, ASTM D 3666, and ASTM D 3740.
- B. Where a laboratory subcontracts any part of the testing services, such work shall be placed with a laboratory complying with the requirements of this Section.

1.05 LABORATORY REPORTS

- A. The testing laboratory shall provide and distribute copies of laboratory reports to the distribution list provided by the Engineer.
- B. One copy of each laboratory report distributed or faxed to the Contractor shall be kept at the site field office for the duration of the project.
- C. Before close of business on the working day following test completion and review, reports which indicate failing test results shall be transmitted immediately via fax from the testing laboratory to the material supplier, Contractor, and Engineer.

1.06 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of the Contractor.
- D. Laboratory has no authority to stop the Work.

1.07 CONTRACTOR RESPONSIBILITIES

- A. Provide safe access to the Work and to manufacturer's facilities for the Engineer, Engineer and for testing laboratory personnel.
- B. Provide to the testing laboratory a copy of the construction schedule and a copy of each update to the construction schedule.
- C. Notify the Engineer and the testing laboratory during normal working hours of the day previous to the expected time for operations requiring inspection and testing services. If the Contractor fails to make timely prior notification, then the Contractor shall not proceed with the operations requiring inspection and testing services.
- D. Notify the Engineer 24 hours in advance if the Specification requires the presence of the Engineer or testing laboratory for sampling or testing.
- E. Request and monitor testing as required to provide timely results and to avoid delay to the Work. Provide samples to the laboratory in sufficient time to allow the required test to be performed in accordance with specified test methods before the intended use of the material.
- F. Cooperate with laboratory personnel in collecting samples on site. Provide incidental labor and facilities for safe access to the Work to be tested; to obtain and handle samples at the site or at source of products to be tested; and to facilitate tests and inspections including storage and curing of test samples.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 CONDUCTING TESTING

- A. Laboratory sampling and testing specified in individual Specification sections shall conform to the latest issues of ASTM standards, TxDOT methods, or other recognized test standards as approved by the Engineer.
- B. The requirements of this section shall also apply to those tests for approval of materials, for mix designs, and for quality control of materials as performed by the testing laboratories employed by the Contractor.

Section 01502

MOBILIZATION

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Mobilization of construction equipment and facilities onto the site.

1.02 MEASUREMENT & PAYMENT

- A. Measurement and payment for mobilization is on a stipulated price basis.

- B. Mobilization payments will be made in accordance with the following provisions:

1. Authorization for payment of 50 percent of the Contract Price for mobilization will be made upon receipt and approval by Engineer of the following items, as applicable:

- a. Establishment of the field office for the Resident Project Representative where an office is required by other Sections;
- b. Establishment of the Contractor's office;
- c. Establishment of Contractor's material and equipment storage areas (as evidenced by executed leases or rental agreement); and
- d. Issuance of Notice to Proceed by Engineer to Contractor..

2. Authorization for payment of the remaining fifty (50) percent of the Contract Price for mobilization will be made upon completion of Work amounting to five (5) percent of the Contract Price less the mobilization unit price.

- C. Mobilization payments will be subject to retainage amounts stipulated in the General Conditions.

- D. All cost difference between the stipulated amount and the actual cost of the initial mobilization and the cost of all subsequent mobilization shall be included in the various other prices bid.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N - Not Used

END OF SECTION

SECTION 01504

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary facilities and necessary controls for the Project, including utilities, telephone, sanitary facilities, storage sheds and building, safety requirements, first aid equipment, fire protection, security measures, protection of the Work and property, access roads and parking, environmental controls, pest and rodent control and disposal of trash, debris and excavated material.
- B. Facilities and controls specified in this section are considered minimum for the Project. Provide additional facilities and controls for proper execution of the Work and to meet Contractor's responsibilities for protection of persons and property.

1.02 CONTRACTOR'S RESPONSIBILITY

- A. Comply with applicable requirements specified in other sections of the Specifications.
 - 1. Maintain and operate temporary facilities and systems to assure continuous service.
 - 2. Modify and extend systems as the Work progress requires.
 - 3. Completely remove temporary materials and equipment when no longer required.
 - 4. Restore existing facilities used for temporary services to specified or original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 TEMPORARY UTILITIES

- A. Obtaining Temporary Service:
 - 1. Make arrangements with utility service companies for temporary services.
 - 2. Abide by rules and regulations of the utility service companies or authorities having jurisdiction.
 - 3. Responsible for utility service costs until Date of Substantial Completion. Included are fuel, power, light, heat, and other utility services necessary for execution, completion, testing, and initial operation of the Work.
- B. Water:
 - 1. Provide water required for and in connection with work to be performed and for specified tests of piping, equipment, devices, or for other use as required for proper completion of the Work.
 - 2. Water to be drawn from public fire hydrants. Obtain transit meter from Owner. Pay required deposit based on rates established by latest ordinance.
 - 3. Provide and maintain an adequate supply of potable water for domestic

consumption by Contractor personnel, Engineer and representatives of the Owner.

C. Electricity and Lighting:

1. Provide electric power service required for the Work including required testing, lighting, operation of equipment, and other Contractor use.
2. Electric power service includes temporary power or generators required to maintain plant operations during scheduled shutdowns.
3. Minimum lighting level shall be 10 foot-candles for open areas; 20-foot-candles for stairs and shops. Provide a minimum of one 300-watt lamp for each 200 square feet of work area.

D. Temporary Heat and Ventilation:

1. Provide temporary heat necessary for protection or completion of the Work.
2. Provide temporary heat and ventilation to assure safe working conditions; maintain enclosed areas at a minimum of 50 degrees F.

E. Telephone:

1. Provide emergency telephone service at Project site for use by Contractor personnel and others performing work or furnishing services at the site.

F. Sanitary Facilities:

1. Provide and maintain sanitary facilities for persons on the site; comply with regulations of State and local departments of health.
2. Enforce use of sanitary facilities by construction personnel at site. Enclose sanitary facilities. Pit-type toilets are not permitted. No discharge will be allowed from these facilities. Collect and store sewage and waste so as not to cause nuisance or health problems. Haul sewage and waste off-site and properly dispose in accordance with applicable regulations.
3. Locate toilets near the Work site and secluded from view insofar as possible. Keep toilets clean and supplied throughout the course of the Work.

3.02 STORAGE SHEDS AND BUILDINGS

- A. Provide adequately ventilated, watertight storage facilities with floor above ground level for Products susceptible to weather damage.
- B. Storage of Products not susceptible to weather damage may be on blocks off the ground.
- C. Store Products in a neat and orderly manner. Place Products to permit easy access for identification, inspection and inventory.
- D. Fill and grade site for temporary structures to provide drainage away from temporary and existing buildings.

3.03 SAFETY REQUIREMENTS

- A. Submit a safety program at the pre-construction meeting and follow the Program. Include documented response to trench safety requirements of Section 02260 - Trench Safety

System.

- B. Conduct operations in strict accordance with applicable Federal, State and local safety codes and statutes and with good construction practice. Establish and maintain procedures for safety of all work, personnel and equipment involved in the Work.
- C. Observe and comply with Texas Occupational Safety Act (Art. 5182a, V.C.S.) and with all safety and health standards promulgated by Secretary of Labor under Section 107 of Contract Work Hours and Standards Act, published in 29 CFR Part 1926 and adopted by Secretary of Labor as occupational safety and health standards under Williams-Steiger Occupational Safety and Health Act of 1970, and to other legislation enacted for safety and health of Contractor employees. Safety and health standards apply to Subcontractors and Suppliers as well as to the Contractor.
- D. Observance of and compliance with safety regulations is Contractor's responsibility without reliance or superintendence of or direction by Engineer. Immediately advise Engineer of investigation or inspection by Federal Safety and Health inspectors of Contractor's or Subcontractor's work or place of work on site under the Contract, and after investigation or inspection, advise Engineer of results. Submit one copy of accident reports to Engineer within 10 days of occurrence.
- E. Protect areas occupied by workmen using the best available devices for detection of lethal and combustible gases. Test devices frequently to assure functional capability. Constantly observe infiltration of liquids into the Work area for visual or odor evidence of contamination, and immediately take appropriate steps to seal off entry of contaminated liquids to the Work area.
- F. Implement safety measures, including but not limited to safety personnel, first-aid equipment, ventilating equipment and other safety equipment specified or detailed on Drawings.
- G. Maintain required coordination with City Police and Fire Departments during entire period covered by the Contract.
- H. Include Project safety analysis in safety plan. Itemize major tasks and potential safety hazards. Plan to eliminate hazards or protect workers and public from each hazard.

3.04 FIRST AID EQUIPMENT

- A. Provide a first aid kit throughout the construction period. List telephone numbers for physicians, hospitals, and ambulance services in each first aid kit.
- B. Have at least one person thoroughly trained in first aid and CPR procedures present on the site when work is in progress. Contractor to conform to protocols and requirements for training and protection against "blood borne pathogens".

3.05 FIRE PROTECTION

- A. Conform to specified fire protection and prevention requirements established by Federal, State, or local governmental agencies and as provided in Safety Program.

3.06 SECURITY MEASURES

- A. Protect the Work, materials, equipment, and property from loss, theft, damage, or vandalism. Protect Owner property used in performance of the Contract.

- B. If existing fencing or barriers are breached or removed for purposes of construction, provide and maintain temporary security fencing equal to existing.

3.07 PROTECTION OF UTILITIES AND PIPELINES

- A. Prevent damage to existing public utilities during construction. Approximate locations of known utilities are shown on Drawings, but all lines may not be shown. Excavate with caution and repair lines damaged by construction operations.
- B. Use the Utility Coordinating Committee One Call System which must be called 48 hours in advance. The toll free telephone number is 1-800-669-8344, Texas One Call System.
- C. Before excavating, locate underground utilities by appropriate means including the use of metal detection equipment, and probes, or by excavation or surveys. Repair damage caused by investigative work and by failure to locate or to preserve underground utilities.
- D. Give utility owners a minimum five days notice before commencing excavation to allow time to locate utilities and make adjustments or relocations when they conflict with the Work. Include cost for temporary relocation of water, wastewater, and storm drainage lines, necessary to accommodate construction, in unit prices for utility construction unless otherwise noted. Bypassing of sanitary waste to storm drainage facilities is not allowed.
- E. Prior to excavation near pipelines, request a representative of the pipeline company to meet with Contractor to locate the pipelines of proposed utility.

3.08 PROTECTION OF THE WORK AND PROPERTY

A. Preventive Actions

- 1. Take necessary precautions and actions to prevent damage, injury, or loss to the Work or public and private property, including:
 - a. Storage of apparatus, supplies, and Products in an orderly, safe manner to limit interference with progress of the Work or work of other contractors, utility service companies, or the Owner's operations.
 - b. Suitable storage for Products subject to damage by exposure to weather, theft, breakage, etc.
 - c. Limitation of loading pressures imposed upon portions of the Work.
 - d. Frequent clean up of refuse, scrap materials, and debris from construction operations, necessary to maintain the site in a safe and orderly condition.
 - e. Provision of barricades and guard rails to protect pedestrian and traffic around openings, scaffolding, temporary stairs and ramps, excavations, elevated walkways, and other hazardous areas.
- 2. Protect public and private property adjacent to the site. Obtain written consent before entering or occupying privately-owned land except on easements provided for construction. Restore property damaged by construction operations to condition equal to or better than that existing before the damage.

B. Barricades and Warning Systems

1. Where work is performed on or adjacent to roadways, rights-of-ways, or public land, provide barricades, fences, lights, warning signs, danger signals, and other precautionary measures necessary for protection of persons or property and for protection of the Work.
 - a. Erect sufficient barricades to keep vehicles and pedestrians from entering the Work. Paint barricades to be visible at night. From sunset to sunrise, provide at least one light at each barricade.
 - b. Maintain barricades, signs, lights, and provide watchmen until Engineer approves removal. Whenever work creates encroachment onto public roadways, station flagmen to manage traffic flow in accordance with approved traffic control plan.
 - c. Conform to requirements of section 01555 - Traffic Control and regulation.

C. Protection of Existing Structures

1. Underground Facilities:
 - a. Known Underground Facilities are shown on the Drawings but all Facilities may not be shown. Explore sufficiently ahead of trenching and excavation work to locate Underground Facilities in order to prevent damage to them and to prevent interruption of utility services. Restore damage to Underground Facilities to original condition at no additional cost to the Owner.
 - b. If necessary to avoid unanticipated Underground Facilities, Engineer may make changes in location of the Work.
 - c. If permanent relocation of an Underground Facility is required and not provided for in the Contract documents, Engineer will direct Contractor in writing to perform the Work.
2. Surface Structures include buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks, guard cables, fencing, and other facilities that are visible above the ground level.
3. Protection of Underground Facilities and Surface Structures:
 - a. Support in place and protect Underground Facilities and Surface Structures located within or adjacent to the limits of the Work from damage. Install supports as required by the owner of the structure. Satisfy Engineer that the owner of the facility or structure has approved methods and procedures before installing structure supports.
 - b. Avoid moving or changing public utility or private corporation property without prior written consent of a responsible official of the facility or structure. Allow representatives of utilities to enter the construction site for maintenance and repair purposes or to make necessary changes.
 - c. Notify utility and pipeline owners and operators of the nature of construction operations and dates when operations will be performed. When construction operations are required in immediate vicinity of existing structures, pipelines, or utilities, give a minimum of five working

days advance notice. Probe and flag location of Underground Facilities prior to commencement of excavation. Keep flags in place until construction operations uncover the facility.

- d. Assume risk for damages and expenses to Underground Facilities and Surface Structures within or adjacent to the Work.
 - e. Employ a structural engineer to ensure protection measures are adequate for the safety and integrity of structures and facilities.
- E. Protection of Installed Products:
- 1. Provide protection of Installed Products to prevent damage from subsequent operations. Remove protection facilities when no longer needed, prior to completion of the Work.
 - 2. Control traffic to prevent damage to Products and surfaces.
 - 3. Provide coverings to protect Products from damage. Cover projections, wall corners, jambs, sills, and exposed sides of openings in areas used for traffic and passage of materials in subsequent work.

3.09 ROADS AND PARKING

- A. Prevent interference with traffic and operations of the Owner on existing roads.
- B. Designate temporary parking areas to accommodate construction and Owner personnel. When site space is not adequate, provide additional off-site parking.
- C. Minimize use by construction traffic on existing streets and driveways.
- D. Do not allow heavy vehicles or construction equipment in existing parking areas.

3.10 ENVIRONMENTAL CONTROLS

- A. Use methods, equipment, and temporary construction necessary for control of environmental conditions at the site and adjacent areas.
- B. Comply with statutes, regulations, and ordinances relating to prevention of environmental pollution and preservation of natural resources including National Environmental Policy Act of 1969, PL 91-190, Executive Order 11514.
- C. Minimize impact to the surrounding environment. Do not use construction procedures that cause unnecessary excavation and filling of terrain, indiscriminate destruction of vegetation, air or stream pollution, or harassment or destruction of wildlife.
- D. Limit disturbed areas to boundaries established by the Contract. Do not pollute on-site streams, sewers, wells, or other water sources.
- E. Do not burn rubbish, debris or waste materials.

3.11 POLLUTION CONTROL

- A. Provide methods, means, and facilities necessary to prevent contamination of soil, water or the atmosphere by discharge of Pollutants from construction operations.
- B. Provide equipment and personnel to perform emergency measures to contain spillage, and to remove contaminated soils or liquids. Excavate and dispose of contaminated earth off-site in accordance with laws and regulations, and replace with suitable compacted fill

and topsoil.

- C. Provide systems necessary for control of Pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of Pollutants into the environment.
- D. Use equipment that conforms to current Federal, State, and local laws and regulations.

3.12 PEST AND RODENT CONTROL

- A. Provide rodent and pest control as necessary to prevent infestation of construction or storage areas.
- B. Employ methods and use materials that will not adversely affect conditions at site or on adjoining properties.

3.13 NOISE CONTROL

- A. Provide vehicles, equipment, and use construction activities that minimize noise to the greatest degree practicable. Conform to noise levels of Chapter 30 -Noise and Sound Level Regulation, City Code of Ordinances, and latest OSHA standards. Do not permit noise levels to interfere with the Work or create a nuisance to surrounding areas.
- B. Conduct construction operations during daylight hours except as approved by Engineer.
- C. Select construction equipment that operates with minimum noise and vibration. When directed by Engineer, correct objectionable noise or vibration produced by operation of equipment at no additional cost to the Owner. Sound Power Level (PWL) of equipment shall not exceed 85 dbA (re: 10-12 watts) measured five feet from the equipment, or at a lower level if prescribed by City Ordinances. Equipment noise requirements are contained in equipment specifications.

3.14 DUST CONTROL

- A. Use water or other methods approved by Engineer to control amount of dust generated by vehicle and equipment operations.

3.15 WATER RUNOFF AND EROSION CONTROL

- A. Comply with requirements of Section 01410 - TPDES Requirements.
- B. Conduct fill, grading and ditching operations and provide adequate methods necessary to control surface water, runoff, subsurface water, and water from excavations and structures in order to prevent damage to the Work, the site, or adjoining properties.
 - 1. Plan and execute construction and earthwork by methods that control surface drainage from cuts and fills, and from borrow and waste disposal areas.
 - 2. Minimize area of bare soil exposed at one time.
 - 3. Provide temporary control measures, such as berms, dikes, and drains.
 - 4. Provide, operate, and maintain equipment and facilities of adequate size to control surface water.
 - 5. Construct fill and waste areas by selective placement of materials to eliminate erosion of surface silts or clays that may erode.

6. Direct water away from excavations, pits, tunnels, and other construction areas to prevent erosion, sedimentation or damage.
7. Maintain existing drainage patterns adjacent to the site by constructing temporary earth berms, sedimentation basins, retaining areas, and temporary ground cover.
8. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to the site or adjoining areas, in conformance with environmental requirements.
9. Inspect earthwork periodically to detect any evidence of erosion. Take corrective measures as required to control erosion.

END OF SECTION - 01504

Section 01555

TRAFFIC CONTROL AND REGULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Traffic Control and Regulation

1.02 METHODS OF PAYMENT

- A. No separate payment will be made for traffic control and regulation. Include the cost of traffic control and regulation in unit price for work requiring such control.

1.03 REFERENCES

- A. Texas Manual of Uniform Traffic Control Devices (TMUTCD)
- B. Texas Department of Transportation (TxDOT) permit (if applicable)
- C. Railroad company permit(s) (if applicable)

1.04 PERFORMANCE REQUIREMENTS

- A. Provide all necessary signs, barricades, marking, lighting, and other equipment and supplies required to comply with the TMUTCD (and TxDOT permit, and/or Railroad Company permit, if applicable)
- B. Provide all necessary certified flagmen required to comply with the TMUTCD (and TxDOT permit, if applicable)

PART 2 PRODUCTS

- A. Equipment and materials must be furnished, installed and operated by an experienced contractor regularly engaged in traffic control system design, installation and operation.
- B. All equipment must be in good repair and operating order.
- C. Sufficient standby equipment and materials shall be kept available to ensure continuous operation, where required.

PART 3 EXECUTION

- A. Provide labor, material, equipment, techniques and methods required to provide safe traffic control and regulation. Monitor effectiveness of the installed system and its effect on adjacent property.
- B. Notify, TxDOT and/or Railroad Company as required by the permit(s) (if applicable).
- C. Provide continuous system operation, including nights, weekends and holidays. Arrange for appropriate backup if electrical power is primary energy source for traffic control system.
- D. Remove system(s) upon completion of construction or when traffic control is no longer required.

END OF SECTION

SECTION 01570

STORM WATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Implementation of Storm Water Pollution Prevention Plans (SWP3) described in Section 01410 - TPDES Requirement.
- B. Installation and maintenance of storm-water pollution prevention structures: diversion dikes, interceptor dikes, diversion swales, interceptor swales, down spout extenders, pipe slope drains, paved flumes and level spreaders. Structures are used during construction and prior to final development of the site.
- C. Filter Fabric Fences:
 - 1. Type 1: Temporary filter fabric fences for erosion and sediment control in non-channelized flow areas.
 - 2. Type 2: Temporary reinforced filter fabric fences for erosion and sediment control in channelized flow areas.
- D. Straw Bale Fence.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices
 - 1. Payment for filter fabric fence if included in Bid Form is on a linear foot basis measured between limits of beginning and ending of stakes.
 - 2. Payment for reinforced filter fabric fence if included in Bid Form is on a linear foot basis measured between limits of beginning and ending of stakes.
 - 3. Payment for drop inlet baskets if included in Bid Form is on a unit price basis for each drop inlet basket.
 - 4. Payment for storm inlet sediment traps if included in Bid Form is on a unit price basis for each storm inlet sediment trap.
 - 5. Payment for storm-water-pollution-prevention structures if included in Bid Form is on a lump sum basis for the project. Earthen structures with outlet and piping includes diversion dikes, interceptor dikes, diversion swales, interceptor swales, and excavated earth-outlet sediment trap, embankment earth-outlet sediment trap, down spout extenders, pipe slope drains, paved flumes, stone outlet sediment trap, and level spreaders.
 - 6. Payment for straw bale barrier, if included in Bid Form, is on a linear foot of accepted bale barriers, if not include in cost of storm-water-pollution-prevention structures.
 - 7. Payment for brush berm, if included in Bid Form, is on a linear foot of accepted rush berm, if not include in cost of storm water-pollution-prevention structures.
 - 8. Payment for sandbag barrier, if included in Bid Form, is on a linear foot basis measured between limits of beginning and ending of sandbags, if not include in

cost of storm-water-pollution prevention structures.

9. Payment for sediment basin with pipe outlet or stone outlet, if included in Bid Form, is on a square yard basis, if not include in cost of storm-water-pollution-prevention structures.
10. Payment for inlet protection barriers, if included in Bid Form, is on a linear foot basis measured along outside face of inlet protection barrier, if not include in cost of storm-water-pollution prevention structures.
11. Refer to Section 01270 - Measurement and Payment for unit price procedures.

B. Stipulated Price (Lump Sum) Contract. If Contract is Stipulated Price Contract, payment for Work in this Section is included in total Stipulated Price.

1.03 REFERENCE STANDARDS

A. ASTM

1. A 36 - Standard Specification for Carbon Structural Steel.
2. D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
3. D3786 - Standard Test Method for Hydraulic Bursting Strength for Knitted Goods and Nonwoven Fabrics.
4. D 4355 - Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).
5. D 4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
6. D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
7. D 4833 - Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.
8. D 6382 - Standard Practice for Dynamic Mechanical Analysis and Thermogravimetry of Roofing and Waterproofing Membrane Material.

1.04 SYSTEM DESCRIPTIONS

- A. Filter Fabric Fence Type 1 and Type 2: Install to allow surface or channel runoff percolation through fabric in sheet-flow manner and to retain and accumulate sediment. Maintain Filter Fabric Fences to remain in proper position and configuration at all times.
- B. Straw Bale Fence: Install to allow surface runoff percolation through straw in sheet-flow manner and to retain and accumulate sediment. Maintain Straw Bale Fence to remain in proper position and configuration at all times.
- C. Interceptor Dikes and Swales: Construct to direct surface or channel runoff around the project area or runoff from project area into sediment traps.
- D. Drop Inlet Baskets: Install to allow runoff percolation through the basket and to retain and accumulate sediment. Clean accumulation of sediment to prevent clogging and backups.
- E. Sediment traps: Construct to pool surface runoff from construction area to allow sediment to settle onto the bottom of trap.

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit manufacturer's literature for product specifications and installation instructions.
- C. Submit manufacture's catalog sheets and other product data on geotextile or filter fabrics, outlet pipe, perforated riser and connectors.
- D. Submit proposed methods, equipment, materials, and sequence of operations for storm-water pollution prevention structures.
- E. Submit shop drawings for Drop Inlet Baskets.

PART 2 PRODUCTS**2.01 CONCRETE**

- A. Concrete: Class B in accordance with Section 03315 - Concrete for Utility Construction or as shown on the Drawings.

2.02 AGREGATE MATERIALS

- A. Use poorly graded cobbles with diameter greater than 3 inches and less than 5 inches.
- B. Provide gravel lining in accordance with Section 2320 - Utility Backfill Materials or as shown on the drawings.
- C. Provide clean cobbles and gravel consisting of crushed concrete or stone. Use clean, hard crushed concrete or stone free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic matter.
- D. Sediment Pump Pit Aggregate: Use nominal 2-inch diameter river gravel.

2.03 GEOTEXTILE FILTER FABRIC

- A. Woven or nonwoven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material, in continuous rolls of longest practical length.
- B. Grab Strength: 100 psi in any principal direction (ASTM D-4632), Mullen burst strength >200 psi (ASTM D-3786), and equivalent opening size between 50 and 140.
- C. Furnish ultraviolet inhibitors and stabilizers for minimum 6 months of expected usable construction life at temperature range of 0 degrees F to 120 degrees.
- D. Mirafi, Inc., Synthetic Industries, or equivalent

2.05 FENCING

- A. Wire Fencing: Woven galvanized steel wire, 14 gauge by 6-inch square mesh spacing, minimum 24 inch roll or sheet width of longest practical length.
- B. Fence Stakes: Nominal 2 by 2 inch moisture-resistant treated wood or steel posts (min. of 1.25 lbs. per linear foot and Brinell Hardness greater than 140) with safety caps on top; length as required for minimum 8 inch bury and full height of filter fabric.

2.06 SANDBAGS

- A. Provide woven material made of polypropylene, polyethylene, or polyamide material.

1. Minimum unit weight of four ounces per square yard.
2. Minimum grab strength of 100 psi in any principal direction (ASTM D4632).
3. Mullen burst strength exceeding 300 psi (ASTM D3786).
4. Ultraviolet stability exceeding 70 percent.
5. Size: Length:18 to 24 inches. Width: 12 to 18 inches. Thickness: 6 to 8 inches. Weight: 50 to 125 pounds.

2.07 DROP INLET BASKET

- A. Provide steel frame members in accordance with ASTM A36.
- B. Construct top frame of basket with two short sides of 2 inch by 2 inch and single long side of 1 inch by 1 inch, 1/8 inch angle iron. Construct basket hangers of 2 inch by 1/4 inch iron bars. Construct bottom frame of 1 inch by 1/4 inch iron bar or 1/4 inch plate with center 3 inches removed. Use minimum 1/4 inch diameter iron rods or equivalent for sides of inlet basket. Weld minimum of 14 rods in place between top frame/basket hanger and bottom frame. Exact dimensions for top frame and insert basket will be determined based on dimensions of type of inlet being protected.

2.08 STRAW BALE

- A. Straw: Standard-baled agricultural hay bound by wire, nylon, or polypropylene rope. Do not use jute or cotton binding.
- B. Straw Bale Stakes (applicable where bales are on soil): No. 3 (3/8 diameter) reinforcing bars, deformed or smooth at Contractor's option, length as required for minimum 18 inch bury and full height bales.

PART 3 EXECUTION

3.01 PREPARATION, INSTALLATION AND MAINTAINANCE

- A. Provide erosion and sediment control structures at locations shown on the Drawings.
- B. Do not clear, grub or rough cut until erosion and sediment control systems are in place unless approved by Engineer to allow installation of erosion and sediment control systems, soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by Engineer to remove and discard existing system.
- D. Regularly inspect and repair or replace damaged components of erosion and sediment control structures. Unless otherwise directed, maintain erosion and sediment control structure until project area stabilization is accepted. Redress and replace granular fill at outlets as needed to replenish depleted granular fill. Remove erosion and sediment control structures promptly when directed by Engineer.
- E. Remove and dispose sediment deposits at the designated spoil site for the Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at approved location.
- F. Unless otherwise shown on the Drawings, compact embankments, excavations, and trenches in accordance with Section 02317 Excavation and Backfill for Utilities.
- G. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated right of

way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control structures.

- H. Protect existing trees and plants.

SEDIMENT TRAPS

- A. Install sediment traps so that surface runoff shall percolate through system in sheet flow fashion and allow retention and accumulation of sediment.
- B. Inspect sediment traps after each rainfall, daily during periods of prolonged rainfall, and at a minimum once each week. Repair or replace damaged sections immediately.
- C. Use fill material for embankment in accordance with Section 02320 - Utility Backfill Materials.
- D. Excavation length and height shall be as specified on Drawings. Use side slopes of 2:1 or flatter.
- E. Stone outlet sediment traps:
1. Maintain minimum of 6 inches between top of core material and top of stone outlet, minimum of 4 inches between bottom of core material and existing ground and minimum of 1 foot between top of stone outlet and top of embankment.
 2. Embed cobbles minimum of 4 inches into existing ground for stone outlet. Core shall be a minimum of 1 foot in height and in width and wrapped in triple layer of geotextile filter fabric.
- F. Sediment Basin with Pipe Outlet Construction Methods: Install outlet pipe and riser as shown on the Drawings.
- G. Remove sediment deposits when design basin volume is reduced by one third or sediment level is one foot below principal spillway crest, whichever is less.

3.03 FILTER FABRIC FENCE CONSTRUCTION METHODS

- A. Fence Type 1:
1. Install stakes 3 feet on center maximum and firmly embed minimum 8 inches in soil. If filter fabric is factory preassembled with support netting, then maximum support spacing is 8 feet. Install wood stakes at a slight angle toward the source of anticipated runoff.
 2. Trench in the toe of the fence lines so the downward face of the trenches is flat and perpendicular to direction of flow. V-trench configuration as shown on Drawings may also be used.
 3. Lay fabric along edges of trenches in longest practical continuous runs to minimize joints. Make joints only at a support post. Splice with minimum 6-inch overlap and seal securely.
 4. Staple filter fabric to stakes at maximum 3 inches on center. Extend fabric minimum 18 inches and maximum 36 inches above natural ground.
 5. Backfill and compact trench.
- B. Fence Type 2:
1. Layout fence same as for Type 1.

2. Install stakes at 6 feet on center maximum and at each joint in wire fence, firmly embedded 1-foot minimum, and inclined it as for Type 1.
 3. Tie wire fence to stakes with wire at 6 inches on center maximum. Overlap joints minimum one bay of mesh.
 4. Install trench same as for Type 1.
 5. Fasten filter fabric wire fence with tie wires at 3 inches on center maximum.
 6. Layout fabric same as for Type 1. Fasten to wire fence with wire ties at 3 inches on center maximum and, if applicable, to stakes above top of wire fence it as for Type 1.
 7. Backfill and compact trench.
- C. Attach filter fabric to wooden fence stakes spaced a maximum of 6 feet apart or steel fence stakes spaced a maximum of 8 feet apart and embedded a minimum of 12 inches. Install stakes at a slight angle toward source of anticipated runoff.
- D. Trench in toe of filter fabric fence with spade or mechanical trencher so that downward face of trench is flat and perpendicular to direction of flow. A V-trench configuration may also be used. Lay filter fabric along edges of trench. Backfill and compact trench upon completion of Construction.
- E. Filter fabric fence shall have a minimum height of 18 inches and a maximum height of 36 inches above natural ground.
- F. Cut length of fence to minimize use of joints. When joints are necessary, splice fabric together only at support post with minimum 6 inch overlap and seal securely.
- G. Triangular Filter Fabric Fence Construction Methods
1. Attach filter fabric to wire fencing, 18 inches on each side. Provide a fabric cover and skirt with continuous wrapping of fabric. Skirt should form continuous extension of fabric on upstream side of fence.
 2. Secure triangular fabric filter fence in place using one of the following methods:
 - a. Toe-in skirt 6 inches with mechanically compacted material;
 - b. Weight down skirt with continuous layer of 3-inch to 5-inch graded rock;
or
 - c. Trench-in entire structure 4 inches.
 3. Anchor triangular fabric filter fence structure and skirt securely in place using 6-inch wire staples on 2-foot centers on both edges and on skirt, or staked using 18-inch by 3/8-inch diameter re-bar with tee ends.
 4. Lap fabric filter material by 6 inches to cover segment joints. Fasten joints with galvanized shoat rings.
- H. Reinforced Filter Fabric Barrier Construction Methods
1. Attach woven wire fence to fence stakes.
 2. Securely fasten filter fabric material to wire fence with tie wires.

3. When used in swales, ditches or diversions, elevation of barrier at top of filter fabric at flow line location in channel shall be lower than bottom elevation of filter fabric at ends of barrier or top of bank, whichever is less, in order to keep storm water discharge in channel from overtopping bank.
4. Remove sediment deposits when silt reaches depth one-third height of barrier or 6 inches, whichever is less.

3.04 DIKE AND SWALE

- A. Unless otherwise indicated, maintain minimum dike height of 18 inches, measured from cleared ground at up slope toe to top of dike. Maintain side slopes of 2:1 or flatter.
- B. Dike and Swale Stabilization: When shown on the Drawings, place gravel lining 3 inches thick and compacted into the soil or 6 inches thick if truck crossing is expected. Extend gravel lining across bottom and up both sides of swale minimum height of 8 inches vertically, above bottom. Gravel lining on dike side shall extend up the up slope side of dike a minimum height of 8 inches, measured vertically from interface of existing or graded ground and up slope toe of dike, as shown on Drawings.
- C. Divert flow from dikes and swales to sediment basins, stabilized outlets, or sediment trapping devices of types and at locations shown on Drawings. Grade dikes and swales as shown on Drawings, or, if not specified, provide positive drainage with maximum grade of 1 percent to outlet or basin.
- E. Carry out excavation for swale construction so that erosion and water pollution is minimal. Minimum depth shall be 1 foot and bottom width shall be 4 feet, with level swale bottom. Excavation slopes shall be 2:1 or flatter. Clear, grub and strip excavation area of vegetation and root material.

3.05 DOWN SPOUT EXTENDER

- A. Down spout extender shall have slope of approximately 1 percent. Use pipe diameter of 4 inches or as shown on the Drawings. Place pipe in accordance with Section 2317 - Bedding and Backfill for Utilities.

3.06 PIPE SLOPE DRAIN

- A. Compact soil around and under drain entrance section to top of embankment in lifts appropriately sized for method of compaction utilized.
- B. Inlet pipe shall have slope of 1 percent or greater. Use pipe diameter as shown on the Drawings.
- C. Top of embankment over inlet pipe and embankments directing water to pipe shall be at least 1 foot higher at all points than top of inlet pipe.
- D. Pipe shall be secured with hold-down grommets spaced 10 feet on centers.
- E. Place riprap apron with a depth equal to pipe diameter with 2:1 side slopes.

3.07 PAVED FLUME

- A. Compact soil around and under the entrance section to top of the embankment in lifts appropriately sized for method of compaction utilized.
- B. Construct subgrade to required elevations. Remove and replace soft sections and unsuitable material. Compact subgrade thoroughly and shape to a smooth, uniform surface.

- C. Construct permanent paved flumes in accordance with Drawings.
- D. Remove sediment from riprap apron when sediment has accumulated to depth of one foot.

3.08 LEVEL SPREADER

- A. Construct level spreader on undisturbed soil and not on fill. Ensure that spreader lip is level for uniform spreading of storm runoff.
- B. Maintain at required depth, grade, and cross section as specified on Drawings. Remove sediment deposits as well as projections or other irregularities which will impede normal flow.

3.09 INLET PROTECTION BARRIER

- A. Place sandbags and filter fabric fences at locations shown on the SWP3.

3.10 DROP INLET BASKET CONSTRUCTION METHODS

- A. Fit inlet insert basket into inlet without gaps around insert at locations shown on the SWP3.
- B. Support for inlet insert basket shall consist of fabricated metal as shown on Drawings.
- C. Push down and form filter fabric to shape of basket. Use sheet of fabric large enough to be supported by basket frame when holding sediment and extend at least 6 inches past frame. Place inlet grates over basket/frame to serve as fabric anchor.
- D. Remove sediment deposit after each storm event and whenever accumulation exceeds 1-inch depth during weekly inspections.

3.11 STRAW BALE FENCE CONSTRUCTION METHODS

- A. Place bales in row with ends tightly abutting adjacent bales. Place bales with bindings parallel to ground surface.
- B. Embed bale in soil a minimum of 4 inches.
- C. Securely anchor bales in place with Straw Bale Stakes driven through bales a minimum of 18-inches into ground. Angle first stake in each bale toward previously laid bale to force bales together.
- D. Fill gaps between bales with straw to prevent water from channeling between bales. Wedge carefully in order not to separate bales.
- E. Replace with new straw bale fence every two months or as required by Engineer.

3.12 BRUSH BERM CONSTRUCTION METHODS

- A. Construct brush berm along contour lines by hand placing method. Do not use machine placement of brush berm.
- B. Use woody brush and branches having diameter less than 2-inches with 6 inches overlap. Avoid incorporation of annual weeds and soil into brush berm.
- C. Use minimum height of 18-inches measured from top of existing ground at upslope toe to top of berm. Top width shall be 24 inches minimum and side slopes shall be 2:1 or flatter.

- D. Embed brush berm into soil a minimum of 4-inches and anchor using wire, nylon or polypropylene rope across berm with a minimum tension of 50 pounds. Tie rope securely to 18-inch x 3/8-inch diameter rebar stakes driven into ground on 4-foot centers on both sides of berm.

3.13 STREET AND SIDEWALK CLEANING

- A. Keep areas clean of construction debris and mud carried by construction vehicles and equipment. If necessary, install stabilized construction exits at construction, staging, storage, and disposal areas.

3.14 WASTE COLLECTION AREAS

- A. Prevent water runoff from passing through waste collection areas, and prevent water runoff from waste collection areas migrating outside collection areas.

3.15 EQUIPMENT MAINTENANCE AND REPAIR

- A. Confine maintenance and repair of construction machinery and equipment to areas specifically designated for that purpose, so fuels, lubricants, solvents, and other potential pollutants are not washed directly into receiving streams or storm water conveyance systems. Provide these areas with adequate waste disposal receptacles for liquid and solid waste. Clean and inspect maintenance areas daily.
- B. Where designated equipment maintenance areas are not feasible, take precautions during each individual repair or maintenance operation to prevent potential pollutants from washing into streams or conveyance systems. Provide temporary waste disposal receptacles.

3.16 VEHICLE/ EQUIPMENT WASHING AREAS

- A. Install wash area (stabilized with coarse aggregate) adjacent to stabilized construction exit(s), as required to prevent mud and dirt run-off. Release wash water into drainage swales or inlets protected by erosion and sediment controls. Install gravel or rock base beneath wash areas.
- B. Wash vehicles only at designated wash areas. Do not wash vehicles such as concrete delivery trucks or dump trucks and other construction equipment at locations where runoff flows directly into watercourses or storm water conveyance systems.
- C. Locate wash areas to spread out and evaporate or infiltrate wash water directly into ground, or collect runoff in temporary holding or seepage basins.

3.17 WATER RUNOFF AND EROSION CONTROL

- A. Control surface water, runoff, subsurface water, and water from excavations and structures to prevent damage to the Work, the site, or adjoining properties.
- B. Control fill, grading and ditching to direct water away from excavations, pits, tunnels, and other construction areas, and to direct drainage to proper runoff courses to prevent erosion, sedimentation or damage.
- C. Provide, operate, and maintain equipment and facilities of adequate size to control surface water.
- D. Dispose of drainage water to prevent flooding, erosion, or other damage to the site or adjoining areas. Follow environmental requirements.
- E. Retain existing drainage patterns external to the site by constructing temporary earth

berms, sedimentation basins, retaining areas, and temporary ground cover as required to control conditions.

- F. Plan and execute construction and earth work to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
 - 1. Hold area of bare soil exposed at one time to a minimum.
 - 2. Provide temporary controls such as berms, dikes, and drains.
- G. Construct fill and waste areas by selective placement to eliminate surface silts or clays which will erode.
- H. Inspect earthwork periodically to detect start of erosion. Immediately apply corrective measures as required to control erosion.
- I. Dispose of sediments offsite, not in or adjacent to streams or floodplains, nor allow sediments to flush into streams or drainage ways. Assume responsibility for offsite disposal location.
- J. Unless otherwise indicated, compact embankments, excavations, and trenches by mechanically blading, tamping, and rolling soil in maximum of 8 inch layers. Provide compaction density at minimum 90 percent Standard Proctor ASTM D-698-78 density. Make at least one test per 500 cubic yards of embankment.
- K. Do not maneuver vehicles on areas outside of dedicated rights-of-way and easements for construction. Immediately repair damage to erosion and sedimentation control systems caused by construction traffic.
- L. Do not damage existing trees intended to remain.

3.18 REMOVAL OF CONTROLS

- A. Remove erosion and sediment controls when the site is finally stabilized or as directed by Engineer.
- B. Dispose of sediments and waste products following Section 01504- Temporary Facilities.

END OF SECTION - 01570

Section 01572

SOURCE CONTROLS FOR EROSION AND SEDIMENTATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of erosion and sediment control and other control-related practices, which shall be utilized during construction activities.

1.02 UNIT PRICES

- A. No separate payment will be made for work performed under this Section. Include cost of work performed under this Section in pay items of which this work is a component.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. No clearing and grubbing or rough cutting shall be permitted until erosion and sediment control systems are in place, other than site work specifically directed by the Resident Project Representative to allow soil testing and surveying.
- B. Equipment and vehicles shall be prohibited by the Contractor from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Damage caused by construction traffic to erosion and sediment control systems shall be repaired immediately by the Contractor.
- C. The Contractor shall be responsible for collecting, storing, hauling, and disposing of spoil, silt, and waste materials as specified in this or other Specifications and in compliance with applicable federal, state, and local rules and regulations.
- D. Contractor shall conduct all construction operations under this Contract in conformance with the erosion control practices described in the SWPPP, Drawings, and this Specification.
- E. The Contractor shall install, maintain, and inspect erosion and sediment control measures and practices as specified in the SWPPP, Drawings, and in this or other Specifications.

3.02 TOPSOIL PLACEMENT FOR EROSION AND SEDIMENT CONTROL SYSTEMS

- A. When topsoil is specified as a component of another Specification, the Contractor shall conduct erosion control practices described in this Specification during topsoil placement operations.
 - 1. When placing topsoil, maintain erosion and sediment control systems, such as swales, grade stabilization structures, berms, dikes, waterways, and sediment basins.
 - 2. Maintain grades which have been previously established on areas to receive topsoil.
 - 3. After the areas to receive topsoil have been brought to grade, and immediately prior to dumping and spreading the topsoil, loosen the subgrade by discing or by scarifying to a depth of at least 2 inches to permit bonding of the topsoil to the subsoil.

4. No sod or seed shall be placed on soil which has been treated with soil sterilants until sufficient time has elapsed to permit dissipation of toxic materials.

3.03 SEDIMENT CONTROL MAINTENANCE

- A. All erosion, sediment, and water pollution controls will be maintained in good working order. A rain gauge provided by the Contractor shall be located on the project site. Within 24 hours of a rainfall event of 0.5 inches or more as measured by the project rain gauge, the Contractor and the Resident Project Representative shall inspect the entire project to determine the condition of the control measures. Sediment shall be removed and devices repaired as soon as practicable but no later than 7 days after the surrounding ground has dried sufficiently to prevent further damage from equipment operations needed for repairs.
- B. In the event of continuous rainfall over a 24 hour period, or other circumstances that preclude equipment operation in the area, the Contractor shall install additional backup storm water pollution control devices, as determined by the Resident Project Representative, by other appropriate methods. The Contractor shall remove sediment accumulations and deposit the spoils in an area approved by the Resident Project Representative as soon as practical and in accordance with the SWPPP. Any corrective action needed for the control measures is to be accomplished in the sequence directed by the Resident Project Representative; however, areas adjacent to receiving waters shall generally have priority, followed by devices protecting storm sewer inlets.

3.04 DUST CONTROL

- A. Implement dust control methods to control dust creation and movement on construction sites and roads and to prevent airborne sediment from reaching receiving streams or storm water conveyance systems, to reduce on-site and off-site damage, to prevent health hazards, and to improve traffic safety.
- B. Control blowing dust by using one or more of the following methods:
 1. Mulches bound with chemical binders.
 2. Temporary vegetative cover.
 3. Spray-on adhesives on mineral soils when not used by traffic.
 4. Tillage to roughen surface and bring clods to the surface.
 5. Irrigation by water sprinkling.
 6. Barriers using solid board fences, snow fences, burlap fences, crate walls, bales of straw, or similar materials.
- C. Implement dust control methods immediately whenever dust can be observed blowing on the project site.

3.05 KEEPING STREETS CLEAN

- A. Keep streets clean of construction debris and mud carried by construction vehicles and equipment. If necessary to keep the streets clean, install stabilized construction exits at construction, staging, storage, and disposal areas. A vehicle/equipment wash area (stabilized with coarse aggregate) may be installed adjacent to the stabilized construction exit, as needed. Release wash water into a drainage swale or inlet protected by erosion and sediment control measures. Construction exit and wash areas are specified in Section 01575 - Stabilized Construction Exit.

- B. In lieu of or in addition to stabilized construction exits, shovel or sweep the pavement to the extent necessary to keep the street clean. Waterhosing or sweeping of debris and mud off of the street into adjacent areas is not allowed.

3.06 EQUIPMENT MAINTENANCE AND REPAIR

- A. Confine maintenance and repair of construction machinery and equipment to areas specifically designated for that purpose. Locate such areas so that oils, gasoline, grease, solvents, and other potential pollutants cannot be washed directly into receiving streams or storm water conveyance systems. Provide these areas with adequate waste disposal receptacles for liquid as well as solid waste. Clean and inspect maintenance areas daily.
- B. On a construction site where designated equipment maintenance areas are not feasible, take precautions during each individual repair or maintenance operation to prevent potential pollutants from washing into streams or conveyance systems. Provide temporary waste disposal receptacles.

3.07 WASTE COLLECTION AND DISPOSAL

- A. Contractor shall formulate and implement a plan for the collection and disposal of waste materials on the construction site. In plan, designate locations for trash and waste receptacles and establish a collection schedule. Methods for ultimate disposal of waste shall be specified and carried out in accordance with applicable local, state, and federal health and safety regulations. Make special provisions for the collection and disposal of liquid wastes and toxic or hazardous materials.
- B. Keep receptacles and waste collection areas neat and orderly to the extent possible. Waste shall not be allowed to overflow its container or accumulate from day-to-day. Locate trash collection points where they will least likely be affected by concentrated storm water runoff.

3.08 WASHING AREAS

- A. Vehicles such as concrete delivery trucks or dump trucks and other construction equipment shall not be washed at locations where the runoff will flow directly into a watercourse or storm water conveyance system. Designate special areas for washing vehicles. Locate these areas where the wash water will spread out and evaporate or infiltrate directly into the ground, or where the runoff can be collected in a temporary holding or seepage basin. Beneath wash areas construct a gravel or rock base to minimize mud production.

3.09 STORAGE OF CONSTRUCTION MATERIALS AND CHEMICALS

- A. Isolate sites where chemicals, cements, solvents, paints, or other potential water pollutants are stored in areas where they will not cause runoff pollution.
- B. Store toxic chemicals and materials, such as pesticides, paints, and acids in accordance with manufacturers' guidelines. Protect groundwater resources from leaching by placing a plastic mat, packed clay, tar paper, or other impervious materials on any areas where toxic liquids are to be opened and stored.

3.10 DEMOLITION AREAS

- A. Demolition activities which create large amounts of dust with significant concentrations of heavy metals or other toxic pollutants shall use dust control techniques to limit transport of airborne pollutants. However, water or slurry used to control dust contaminated with heavy metals or toxic pollutants shall be retained on the site and shall not be allowed to run directly into watercourses or storm water conveyance systems. Methods of ultimate disposal of these materials shall be carried out in accordance with applicable local, state, and federal health and safety regulations.

3.11 SANITARY FACILITIES

- A. Provide and maintain sanitary facilities for persons on the job site; comply with the regulations of State and local departments of health.
- B. Enforce the use of sanitary facilities by construction personnel at the job site. Such facilities shall be enclosed. Pit-type toilets will not be permitted. No discharge will be allowed from these facilities. Collect and store sewage and waste so as not to cause a nuisance or health problem; have sewer and waste hauled off-site and properly disposed in accordance with City regulations.
- C. Located toilets near the Work site and secluded from view insofar as possible. Keep toilets clean and supplied throughout the course of the Work.

3.12 PESTICIDES

- A. Use and store pesticides during construction in accordance with manufacturers' guidelines and with local, state, and federal regulations. Avoid overuse of pesticides which could produce contaminated runoff. Take great care to prevent accidental spillage. Never wash pesticide containers in or near flowing streams or storm water conveyance systems.

END OF SECTION

Section 01573

FILTER FABRIC FENCE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control filter fabric fences used during construction and until final development of the site. The purpose of filter fabric fences is to contain pollutants from overland flow. Filter fabric fences are not for use in channelized flow areas.

1.02 UNIT PRICES

- A. No separate payment will be made for Filter Fabric Fence under this section. Include payment in unit price for related sections.

1.03 SUBMITTALS

- A. Manufacturer's catalog sheets and other product data on geotextile fabric.

1.04 REFERENCES

- A. ASTM D3786 - Standard Test Method for Hydraulic Bursting Strength for Knitted Goods and Nonwoven Fabrics
- B. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles

PART 2 PRODUCTS

2.01 FILTER FABRIC

- A. Provide woven or nonwoven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.
- B. Geotextile fabric shall have a grab strength of 100 psi in any principal direction (ASTM D-4632), Mullen burst strength exceeding 200 psi (ASTM D-3786), and the equivalent opening size between 50 and 140.
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 degrees F to 120 degrees F.
- D. Representative Manufacturers: Mirafi, Inc., or equal.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at the locations shown on the SWPPP. Such systems shall be of the type indicated and shall be constructed in accordance with the requirements shown on the Drawings and specified in this Section.
- B. No clearing and grubbing or rough cutting shall be permitted until erosion and sediment control systems are in place, other than site work specifically directed by the Resident Project Representative to allow soil testing and surveying.

- C. Maintain existing erosion and sediment control systems located within the project site until acceptance of the project or until directed by the Resident Project Representative to remove and discard the existing system.
- D. Regularly inspect and repair or replace damaged components of filter fabric fences as specified in this Section. Unless otherwise directed, maintain the erosion and sediment control systems until the project area stabilization is accepted by the City. Remove erosion and sediment control systems promptly when directed by the Resident Project Representative. Discard removed materials off site.
- E. Remove sediment deposits and dispose of them at the designated spoil site for the project. If a project spoil site is not designated on the Drawings, dispose of sediment off site at a location not in or adjacent to a stream or floodplain. Off-site disposal is the responsibility of the Contractor. Sediment to be placed at the project site should be spread evenly throughout the site, compacted and stabilized. Sediment shall not be allowed to flush into a stream or drainage way. If sediment has been contaminated, it shall be disposed of in accordance with existing federal, state, and local rules and regulations.
- F. Equipment and vehicles shall be prohibited by the Contractor from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Damage caused by construction traffic to erosion and sediment control systems shall be repaired immediately.
- G. Conduct all construction operations under this Contract in conformance with the erosion control practices described in Section 01572- Source Controls for Erosion and Sedimentation.

3.02 CONSTRUCTION METHODS

- A. Provide filter fabric fence systems in accordance with the Drawing detail for Filter Fabric Fences. Filter fabric fences shall be installed in such a manner that surface runoff will percolate through the system in sheet flow fashion and allow sediment to be retained and accumulated.
- B. Attach the filter fabric to steel posts spaced 6 to 8 feet and embedded a minimum of 18 inches. Steel posts shall have a minimum length of 4 feet. If filter fabric is factory preassembled with support netting, then maximum spacing allowable is 8 feet. Install stakes at a slight angle toward the source of anticipated runoff.
- C. Trench in the toe of the filter fabric fence with a spade or mechanical trencher so that the downward face of the trench is flat and perpendicular to the direction of flow. The v-trench configuration as shown on the Drawings may also be used. Lay filter fabric along the edges of the trench. Backfill and compact trench.
- D. Filter fabric fence shall have a minimum height of 18 inches and a maximum height of 36 inches above natural ground.
- E. Provide the filter fabric in continuous rolls and cut to the length of the fence to minimize the use of joints. When joints are necessary, splice the fabric together only at a support post with a minimum 6-inch overlap and seal securely.
- F. Inspect sediment filter barrier systems after each rainfall, daily during periods of prolonged rainfall, and at a minimum once each week. Repair or replace damaged sections immediately. Remove sediment deposits when silt reaches a depth one-third the height of the fence or 6 inches, whichever is less.

END OF SECTION

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Section 01575

STABILIZED CONSTRUCTION EXIT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control for stabilized construction exits used during construction and until final development of the site.

1.02 SUBMITTALS

- A. Manufacturer’s catalog sheets and other product data on geotextile fabric.
- B. Sieve analysis of aggregates conforming to requirements of this Specification.

1.03 UNIT PRICES

- A. No separate payment will be made for work performed under this Section. Include cost of work performed under this Section in pay items for which this work is a component.

1.04 REFERENCES

- A. ASTM D 4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.

PART 2 PRODUCTS

2.01 GEOTEXTILE FABRIC

- A. Provide woven or nonwoven geotextile fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.
- B. Geotextile fabric shall have a minimum grab strength of 270 psi in any principal direction (ASTM D-4632), and the equivalent opening size between 50 and 140.
- C. Both the geotextile and threads shall be resistant to chemical attack, mildew, and rot and shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable life at a temperature range of 0°F to 120°F.
- D. Representative Manufacturers: Mirafi, Inc., or equal.

2.02 COARSE AGGREGATES

- A. Coarse aggregate shall consist of crushed stone, gravel, crushed blast furnace slag, or a combination of these materials. Aggregate shall be composed of clean, hard, durable materials free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials, or organic and injurious matter.
- B. Coarse aggregates shall conform to the following gradation requirements.

Sieve Size (Square Mesh)	Percent Retained (By Weight)
2-1/2"	0
2"	0 - 20
1-1/2"	15 - 50
3/4"	60 - 80

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. If necessary to keep the street clean of mud carried by construction vehicles and equipment, Contractor shall provide stabilized construction roads and exits at the construction, staging, parking, storage, and disposal areas. Such erosion and sediment controls shall be constructed in accordance with the details shown on the Drawings and specified in this Section.
- B. No clearing and grubbing or rough cutting shall be permitted until erosion and sediment control systems are in place, other than as specifically directed by the Resident Project Representative to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within the project site until acceptance of the project or until directed by the Resident Project Representative to remove and discard the existing system.
- D. Regularly inspect and repair or replace components of stabilized construction exits. Unless otherwise directed, maintain the stabilized construction roads and exits until the project is accepted by the City. Remove stabilized construction roads and exits promptly when directed by the Resident Project Representative. Discard removed materials off site.
- E. Equipment and vehicles shall be prohibited by the Contractor from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Damage caused by construction traffic to erosion and sediment control systems shall be repaired immediately.
- F. Conduct all construction operation under this Contract in conformance with the erosion control practices described in the Specification 01572 - Source Controls for Erosion and Sedimentation.

3.02 CONSTRUCTION METHODS

- A. Provide stabilized construction exits, and truck washing areas when approved by Resident Project Representative, of the sizes and locations where shown on SWPPP or as specified in this Section.
- B. Vehicles leaving construction areas shall have their tires cleaned to remove sediment prior to entrance onto public right-of-way. When washing is needed to remove sediment, Contractor shall construct a truck washing area. Truck washing shall be done on stabilized areas which drain into a drainage system protected by erosion and sediment control measures.
- C. Details for stabilized construction exit shall be shown on the SWPPP. Construction of all other stabilized areas shall be to the same requirements. Roadway width shall be at least 14 feet for one-way traffic and 20 feet for two-way traffic and shall be sufficient for all ingress and egress. Furnish and place geotextile fabric as a permeable separator to prevent mixing of coarse aggregate with underlying soil. Exposure of geotextile fabric to the elements between laydown and cover shall be a maximum of 14 days to minimize damage potential.
- D. Roads and parking areas shall be graded to provide sufficient drainage away from stabilized areas. Use sandbags, gravel, boards, or similar methods to prevent sediment from entering public right-of-way, receiving stream or storm water conveyance system.
- E. The stabilized areas shall be inspected and maintained daily. Provide periodic top dressing with additional coarse aggregates to maintain the required depth. Repair and clean out damaged control measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public right-of-way shall be removed immediately.

- F. The length of the stabilized area shall be as shown on the SWPPP, but not less than 50 feet. The thickness shall not be less than 8 inches. The width shall not be less than the full width of all points of ingress or egress.
- G. Stabilization for other areas shall have the same coarse aggregate, thickness, and width requirements as the stabilized construction exit, except where shown otherwise on the SWPPP.
- H. Stabilized area may be widened or lengthened to accommodate truck washing area when authorized by Resident Project Representative.
- I. Alternative methods of construction may be utilized when shown on SWPPP, or when approved by the Resident Project Representative. These methods include the following:
 - 1. Cement-Stabilized Soil - Compacted cement-stabilized soil or other fill material in an application thickness of at least 8 inches.
 - 2. Wood Mats/Mud Mats - Oak or other hardwood timbers placed edge-to-edge and across support wooden beams which are placed on top of existing soil in an application thickness of at least 6 inches.
 - 3. Steel Mats - Perforated mats placed across perpendicular support members.

END OF SECTION

Section 01576

WASTE MATERIAL DISPOSAL

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Disposal of waste material and salvageable material.

1.02 UNIT PRICES

- A. No separate payment will be made for waste material disposal under this Section. Include payment in unit price for related sections.

1.03 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01330 - Submittal Procedures.
- B. Obtain and submit disposal permits for proposed disposal sites if required by local ordinances.
- C. Submit a copy of written permission from property owner, along with description of property, prior to disposal of excess material adjacent to the Project. Submit a written and signed release from property owner upon completion of disposal work.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 SALVAGEABLE MATERIAL

- A. Excavated Material: When indicated on Drawings, load, haul, and deposit excavated material at a location or locations shown on Drawings outside the limits of Project.
- B. Other Salvageable Materials: Conform to requirements of individual Specification Sections.

3.02 EXCESS MATERIAL

- A. Vegetation, rubble, broken concrete, debris, asphaltic concrete pavement, excess soil, and other materials not designated for salvage, shall become the property of Contractor and shall be removed from the job site and legally disposed of.
- B. Excess soil may be deposited on private property adjacent to the Project when written permission is obtained from property owner. See Paragraph 1.03 C above.
- C. Waste materials shall be removed from the site on a daily basis, such that the site is maintained in a neat and orderly condition.

END OF SECTION

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Section 01578

CONTROL OF GROUND WATER AND SURFACE WATER

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Dewatering, depressurizing, draining, and maintaining trenches, shaft excavations, structural excavations, and foundation beds in a stable condition, and controlling ground water conditions for tunnel excavations.
- B. Protecting work against surface runoff and rising flood waters.
- C. Disposing of removed water.

1.02 METHOD OF PAYMENT

- A. No separate payment will be made for control of ground water and surface water. Include the cost to control ground water and surface water in unit price for work in related sections.

1.03 REFERENCES

- A. ASTM D 698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb (2.49 kg) Rammer and 12-inch (304.8 mm) Drop.
- B. Federal Regulations, 29 CFR Part 1926, Standards-Excavation, Occupational Safety and Health Administration (OSHA).
- C. Federal Register 40 CFR (Vol. 55, No. 222) Part 122, EPA Administered Permit Programs (NPDES), Para.122.26(b)(14) Storm Water Discharge.
- D. Texas Commission of Environmental Quality, TCEQ General Permit Number TX150000 Relating to Discharges from Construction Activities.

1.04 DEFINITIONS

- A. Ground water control includes both dewatering and depressurization of water-bearing soil layers.
 - 1. Dewatering includes lowering the water table and intercepting seepage which would otherwise emerge from slopes or bottoms of excavations, or into tunnels and shafts, and disposing of removed water. The intent of dewatering is to increase stability of tunnel excavations and excavated slopes; prevent dislocation of material from slopes or bottoms of excavations; reduce lateral loads on sheeting and bracing; improve excavating and hauling characteristics of excavated material; prevent failure or heaving of the bottom of excavations; and to provide suitable conditions for placement of backfill materials and construction of structures and other installations.
 - 2. Depressurization includes reduction in piezometric pressure within strata not controlled by dewatering alone, as required to prevent failure or heaving of excavation bottom or instability of tunnel excavations.
- B. Excavation drainage includes keeping excavations free of surface and seepage water.

- C. Surface drainage includes use of temporary drainage ditches and dikes and installation of temporary culverts and sump pumps with discharge lines as required to protect the Work from any source of surface water.
- D. Equipment and instrumentation for monitoring and control of the ground water control system includes piezometers and monitoring wells, and devices, such as flow meters, for observing and recording flow rates.

1.05 PERFORMANCE REQUIREMENTS

- A. Conduct surface and subsurface investigations to identify ground water and surface water conditions and to provide parameters for design, installation, and operation of control systems.
- B. Design a ground water control system, compatible with requirements of Federal Regulations 29 CFR Part 1926 and Trench Safety Systems, to produce the following results:
 - 1. Effectively reduce the hydrostatic pressure affecting:
 - a. Excavations.
 - b. Tunnel excavation, face stability or seepage into tunnels.
 - 2. Develop a substantially dry and stable subgrade for subsequent construction operations.
 - 3. Preclude damage to adjacent properties, buildings, structures, utilities, installed facilities, and other work.
 - 4. Prevent the loss of fines, seepage, boils, quick condition, or softening of the foundation strata.
 - 5. Maintain stability of sides and bottom of excavations.
- C. Provide ground water control systems that may include single-stage or multiple-stage well point systems, eductor and ejector-type systems, deep wells, or combinations of these equipment types.
- D. Provide drainage of seepage water and surface water, as well as water from any other source entering the excavation. Excavation drainage may include placement of drainage materials, such as crushed stone and filter fabric, together with sump pumping.
- E. Provide ditches, berms, pumps and other methods necessary to divert and drain surface water from excavation and other work areas.
- F. Locate ground water control and drainage systems so as not to interfere with utilities, construction operations, adjacent properties, or adjacent water wells.
- G. Assume sole responsibility for ground water and surface water control systems and for any loss or damage resulting from partial or complete failure of protective measures and any settlement or resultant damage caused by the control operations. Modify control systems or operations if they cause or threaten to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells, or affect potentially contaminated areas. Repair damage caused by control systems or resulting from failure of the system to protect property as required.

1.06 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01330 - Submittals.
- B. Submit a Ground Water and Surface Water Control Plan for review by the Engineer prior to start of any field work. Submit a plan to include the following:

1. Results of subsurface investigation and description of the extent and characteristics of water bearing layers subject to ground water control.
2. Excavation drainage methods including typical drainage layers, sump pump application and other necessary means.
3. Surface water control and drainage installations.
4. Proposed methods and locations for disposing of removed water.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Comply with requirements of agencies having jurisdiction.
- B. Obtain permit from TCEQ under the Texas Pollutant Discharge Elimination System (TPDES), for storm water discharge from construction sites. (If Applicable)
- C. Monitor ground water discharge for contamination while performing pumping in the vicinity of potentially contaminated sites.

PART 2 P R O D U C T S

2.01 EQUIPMENT AND MATERIALS

- A. Equipment and materials are at the option of Contractor as necessary to achieve desired results for control of ground and surface water.
- B. Eductors, well points, or deep wells, where used, must be furnished, installed and operated by an experienced contractor regularly engaged in ground water control system design, installation, and operation.
- C. All equipment must be in good repair and operating order.
- D. Sufficient standby equipment and materials shall be kept available to ensure continuous operation, where required.

PART 3 E X E C U T I O N

3.01 GROUND WATER CONTROL

- A. Provide labor, material, equipment, techniques and methods to lower, control and manage ground water in a manner compatible with construction methods and site conditions. Monitor effectiveness of the installed system and its effect on adjacent property.
- B. Install, operate, and maintain ground water control systems in accordance with the Ground Water and Surface Water Control Plan. Notify Engineer in writing of any changes made to accommodate field conditions and changes to the Work. Provide revised drawings and calculations with such notification.
- C. Provide for continuous system operation, including nights, weekends, and holidays. Arrange for appropriate backup if electrical power is primary energy source for dewatering system.
- D. Remove system upon completion of construction or when dewatering and control of surface or ground water is no longer required.

- E. Compact backfill to not less than 95 percent of the maximum dry density in accordance with ASTM D 698.

3.02 EXCAVATION DRAINAGE

- A. Contractor may use excavation drainage methods if necessary to achieve well drained conditions. The excavation drainage may consist of a layer of crushed stone and filter fabric, and sump pumping in combination with sufficient wells for ground water control to maintain stable excavation and backfill conditions.

3.03 SURFACE WATER CONTROL

- A. Intercept surface water and divert it away from excavations through use of dikes, ditches, curb walls, pipes, sumps or other approved means. The requirement includes temporary works required to protect adjoining properties from surface drainage caused by construction operations.
- B. Divert surface water and seepage water into sumps and pump it into drainage channels or storm drains, when approved by agencies having jurisdiction. Provide settling basins when required by such agencies.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site for the Owner one record copy of:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other Modifications to the Contract
 - 5. Engineer Field Orders or written instructions
 - 6. Approved Shop Drawings, Product Data and Samples
 - 7. Approved Operation and Maintenance Data
 - 8. Field Test records
 - 9. Receipts for delivery of items to Owner
- B. Delegate the responsibility for maintenance of record documents to one person on the Contractor's staff as approved in advance by the Engineer.
- C. Thoroughly coordinate all changes within the record documents, making adequate and proper entries on each page of the specifications and each sheet of drawings and other documents where such entry is required to properly show the change. Accuracy of records shall be such that future search for items shown in the contract documents may reasonably rely on information obtained from the approved record documents.
- D. Make all entries within 24 hours after receipt of information. One (1) set is to be maintained at the Contractor's job trailer at all times. As-builts are to be updated as a condition of each pay application

1.02 RELATED REQUIREMENTS

- A. Section 01300: Submittals
- B. Section 01152: Applications for Payment
- D. Section 01700: Contract Closeout

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. File documents and samples in accordance with specification format.
- B. Maintain documents in a clean, dry legible condition and in good order. Do not use record documents for construction purposes.
- C. Make documents and samples available at all times for inspection by Engineer and Owner.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
 - 1. Do not conceal any work until required information is recorded.

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- C. Drawings; Legible mark to record actual construction:
 - 1. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements..
 - 2. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by Field Order or by Change Order.
 - 5. Details not on original contract drawings.
 - 6. For gravity sewer lines: Elevation and alignment of line, location of cleanouts, distance between cleanouts, and location of each service line referenced by distance from main trunk line and distance from sewer centerline to end of service line.

- D. Use all means necessary to maintain the job set of record documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of the recorded data to the final record documents. In the event of loss of recorded data, use all means necessary to secure the data to the Engineer's approval; such means shall include, if necessary in the opinion of the Engineer, removal and replacement of concealing materials and, in such case, all replacements shall be to the standards originally specified in the contract documents.

- E. Specifications and Addenda; Legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.

- G. Clearly describe all change orders by note and by graphic line, as required. Date all entries. Call attention to the entry by highlighting around the area or areas affected. In the event of overlapping changes, different colors may be used for each of the changes.

1.05 SUBMITTAL

- A. At Contract close-out, deliver Record Documents to Engineer for the Owner.

- B. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. Title and number of each Record Document
 - 5. Signature of Contractor or his authorized representative.

1.06 PAYMENT

- A. Project record documents are incidental to Work for which no separate payment will be made.

- B. No payment will be made to the Contractor for any portion of the work for which the project record documents including recording are not complete.

END OF SECTION - 01720

Division

Site Work

2

Section 02040

SEEDING FOR EROSION CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. "Seeding for Erosion Control" shall consist of preparing ground, providing for sowing of seeds, mulching with straw, hay or cellulose fiber and other management practices along and across such areas as are designated on the plans and in accordance with these specifications.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for square yard of ground cover using manufacturer recommended application rates.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

PART 2 PRODUCTS

2.01 GENERAL

- A. All seed must meet the requirements of the Texas Seed Law including the labeling requirements for showing pure live seed, (PLS = Purity x Germination), name and type of seed.
- B. Additional materials required shall be provided as required.

2.02 SEED

- A. Seed furnished shall be of the previous season's crop and the date of analysis shown on each bag shall be within nine months of the time of use on the project.
- B. Each variety of seed shall be furnished and delivered in separate bags or containers.
- C. A sample of each variety of seed shall be furnished for analysis and testing when directed by the Engineer.
- D. Buffalo grass shall be treated with a fungicide approved the Engineer.
- E. The amount of seed planted per acre shall be of the type listed in the Table below.

<u>Common Name</u>	<u>Scientific Name</u>
Green Spragletop	Leptochloa dubia
Sidoats Grama (El Reno or Premier)	Bouteloua gracilis
Blue Grama (Texas Grown)	Bouteloua gracilis
Buffalo grass (Treated)	Buchloe dactyloides

Western Wheat grass	Agropyron smithii
Blackwell Switchgrass	Panicum virgatum
Caucasian Bluestem	Andropogon caucasicus
K.R. Bluestem	Andropogon lehmanniana
Lehmann Love grass	Pennisetum ciliare
Rhodegrass	Chloris gayana
Bermuda and Giant	Cynodon dactylon
Bermuda Grass (Hulle)	Sporobolus cryptandrum
Sand Dropseed	Paspalum noatum
Bahiagrass (Pensacola)	Eragrotis curvula
Weeping Lovegrass	Andropogon hallii
Sand Bluestem	

PART 3 EXECUTION

3.01 PLANTING SEASON

- A. All Planting shall be done between the dates specified for each highway district except as specifically authorized in writing
- B. The pure live seed planted per acre shall be of the type specified with the mixture, rate and planting dates as follows except as specifically shown on plans.
 - a. September 15 to March 1: Seeding to be with combination of 2 pounds per 1,000 square feet of un-hulled Bermuda grass (Cynoden Dactolyn) and 2 pounds per 1,000 square feet of winter rye with a purity of 95% germination.
 - b. March 2 to September 14: Seeding to be with hulled Bermuda grass (Cynoden Dactolyn) at a rate of 2 pounds per 1,000 square feet with a purity of 95% with 85% germination.

END OF SECTION

SECTION 02200
EARTHWORK & SITE GRADING

PART 1 - GENERAL**1.1 SCOPE**

- A. Perform all work required to complete the project as indicated by the Contract Documents, and furnish all supplementary items necessary for the completion of all work specified in this Section.
- B. The work included in this Section shall include furnishing all labor, tools, materials and incidentals required to complete the work; excavate and fill to the lines, elevations and limits shown on the drawings for all pavements, buildings, landscaped areas, etc. as indicated below and cleaning up. The landscaped areas shall be graded to an elevation 6 inches below finished grade allowing for topsoil placement. The pavement areas shall be graded to an elevation below finished grade allowing for pavement placement. Building foundation areas shall be prepared in accordance with the geotechnical investigation and these specifications. The Contractor shall comply with all requirements of the city standards, the E.P.A. requirements and with the standards and specifications stated herein. All earthwork shall be done in accordance with the Geotechnical Investigation.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02100 - Site Clearing
- B. Section 02270 - Soil Erosion and Sediment Control
- B. Section 02515 - Portland Cement Concrete Paving

1.3 QUALITY ASSURANCE

- A. Codes and Standards
 - 1. Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction. The contractor shall have a trench safety plan prepared by a registered professional engineer for all excavations in excess of 5 feet deep.
- B. Testing and Inspection Service
 - 1. The owner will engage a soil testing and inspection service for quality control testing during earthwork operations to inspect and test all soil materials proposed for use in all excavation and fill operations.

1.4 JOB CONDITIONS

- A. Existing Utilities
 - 1. It shall be the Contractor's responsibility to verify the location (horizontal and vertical depth) of all utilities prior to beginning earthwork operations. If utilities are to remain in place, provide protection from damage during construction operations.
 - 2. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult owner immediately for directions as to how to proceed. Cooperate with owner, public and private utility companies in keeping services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

3. Do not interrupt existing utilities serving facilities occupied and used by owner or adjacent properties, except when permitted in writing by property owner and then only after temporary utility services have been provided.
- B. Use of Explosives
1. The use of explosives is not permitted.
- C. Protection of Persons and Property
1. Barricade open excavations occurring as part of this work and post with warning lights. Provide traffic control as required by the city and as required to protect the public.
 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damages caused by settlement, lateral movement, undermining, washout and other hazards created by excavation operations.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Fill Material:
1. Onsite excavated material free from trash, vegetation, rocks and lumps of earth larger than 4 inches in diameter or other objectionable material. Imported fill, if required, shall also be clean and have a liquid limit less than 50 percent.
- B. Select Material:
1. Uniformly blended clayey sand to very sandy with a plasticity index between 6 and 15 and liquid limit of less than 35 percent.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which earthwork and site grading operations are to be performed. After excavation to subgrade, proofroll with a heavy pneumatic tired roller, loaded dump truck or similar equipment weighing approximately 25 tons or greater to help compact pockets of loose soil and expose additional areas of weak, soft or wet soils in the presence of the owner's representative. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 EXCAVATION

- A. The Contractor shall excavate to the lines and elevations shown on the drawings, as previously indicated herein, regardless of the type, condition, or moisture content of the material encountered. Conduct excavation operations to provide positive drainage, at contractor's expense, at all times during construction. If positive drainage cannot be maintained, contractor shall keep standing water out of all excavations with adequate dewatering equipment.

- B. All areas shall be cut accurately to the indicated grades. Care shall be taken to prevent excavation below the grades indicated and any bottoms or slopes that have been undercut shall be backfilled with approved materials and compacted to the required fill density.
- C. Excavation required for rough grading shall be finished within a tolerance of 0.10 foot above or below the rough grade and in no case shall depressions be left that will not completely drain.

3.3 BUILDING SUBGRADE

- A. Follow recommendations in geotechnical report and on the structural drawings.

3.4 FILLING

- A. Remove all vegetation, organic materials and debris prior to placing fill.
- B. Fill used below the parking and landscape areas shall be onsite soils encountered in the excavation or imported fill except grass, weeds, roots, vegetation and similar materials. The largest rock, particle or clod shall be less than 4 inches in diameter prior to compaction.
- C. Care should be taken that utility cuts are not left open for extended periods and that cuts are properly backfilled. A positive cut-off of 1' thick compacted clay at the building line shall be used to help prevent water from migrating in the utility trench.
- D. Before fill is placed under pavement or if subgrade is in an excavation, subgrade soils shall be scarified to a depth of 8" and recompacted between 93 and 98 percent of maximum dry density per ASTM D698 at a moisture content from +2 to +5 percent above optimum moisture content.
- E. Fill below all pavement and landscaped areas shall be placed in 6 to 8 inch loose lifts and compacted to a minimum dry density of 95 percent of the standard proctor density (ASTM D698) under pavement and 90 percent elsewhere. The moisture content shall be between -1 and +3 percent above optimum.
- F. Compaction shall be obtained by use of sheeps foot rollers, rubber-tired rollers, or other approved equipment capable of obtaining the required density. In the event the embankment material is too wet or too dry for adequate compaction, the contractor shall add moisture or dry the material as required to the extent necessary to obtain the required density.

3.5 PAVEMENT SUBGRADE

- A. Construct subgrades for paved areas to conform to the grades, lines and cross sections shown on the drawings and per the recommendations in the geotechnical report.
- B. After the pavement subgrades have been shaped and compacted, bring the surface to a firm, unyielding surface by rolling the entire area with an approved vibratory roller. Compact all areas inaccessible to the roller with hand tampers weighing not less than 50 pounds, and with face area not more than 100-square-inches. Unless the material at the time of the rolling contains sufficient moisture to insure proper compaction, add water as directed before compacting. Allow the material containing excess moisture to dry to the proper consistency and moisture content before being compacted.

3.6 MOISTURE CONTROL

- A. Where soil material must be moisture conditioned before compaction, uniformly apply required amount of water to surface of soil material in such manner as to prevent free water appearing on surface during, or subsequent to, compaction operations.
- B. Remove and replace, or scarify and air dry soil material that is too wet to permit compaction to specified percentage of maximum density.
- C. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread on surface where directed by owner's representative and permitted to dry. Assist drying by discing, harrowing or pulverizing until moisture-density relation tests fall within the herein-specified range.

3.7 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction
 - 1. Testing laboratory services shall be in accordance with section 01410.
 - 2. Allow owner's testing service to inspect and approve subgrades and fill layers before further construction work is performed. In the building areas, there will be at least 1 density test per 2500 square feet per lift with a minimum of 3. In the pavement areas there will be at least 1 density test per 5000 square feet per lift with a minimum of 3.
 - 3. If, in the opinion of the owner, based on testing service and inspection, the subgrade or fills which have been placed are below the specified density, the contractor shall provide additional compaction and testing at no additional expense to the owner.
 - 4. The results of density tests which may be selected will be considered satisfactory when they are in each instance equal to or greater than the specified density, and if not more than 1 density test out of 5 has a value greater than 2% below the required density.

3.8 MAINTENANCE

- A. Protection of Graded Areas
 - 1. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
 - 2. Repair and re-establish grades in settled, eroded, and rutted areas to the specified tolerances.
- B. Reconditioning Compacted Areas
 - 1. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction. Use hand tamping for recompaction over underground utilities.

3.8 DISPOSAL OF EXCESS AND WASTE MATERIALS

Remove all excess excavation, trash, debris and waste materials, and legally dispose of off the owner's property, at no additional cost.

END OF SECTION

Section 02233

CLEARING AND GRUBBING

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Removing surface debris and rubbish.
- B. Clearing site of plant life and grass.
- C. Removing trees and shrubs.
- D. Removing root system of trees and shrubs.

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices.

- 1. No Separate payment will be made for work performed under this Section. Include cost of work performed under this Section in pay items for which this work is a component.

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for disposal of debris.
- B. Coordinate clearing work with utility companies.

1.04 SUBMITTALS

- A. Conform to the requirements of Section 01330 – Submittal Procedures.

PART 2 P R O D U C T S - Not Used

PART 3 E X E C U T I O N

3.01 PREPARATION

- A. Verify that existing plant life and features designated to remain are identified and tagged. Submit preconstruction photographs in accordance with the applicable portions of Section 01321 – Construction Photographs.

3.02 PROTECTION

- A. Protect the following from damage or displacement:
 - 1. Living trees located 3 feet or more outside of the intersection of side slopes and original ground line.

2. Plants other than trees and landscape features designated to remain.
3. Utilities designated to remain.
4. Bench marks, monuments, and existing structures designated to remain.

3.03 CLEARING

- A. Remove stumps, main root ball, and root system to:
 1. A depth of 24 inches below the finished subgrade elevation in the area bounded by lines two feet behind back of curbs.
 2. A depth of 24 inches below the finished surface of the required cross section for other areas.
- B. Clear undergrowth and deadwood without disturbing subsoil.
- C. Remove vegetation from top soil scheduled for reuse.

3.04 REMOVAL

- A. Remove debris, rubbish, and extracted plant material life from the site in accordance with requirements of Section 01576 - Waste Material Disposal.

END OF SECTION

SECTION 02270
SOIL EROSION AND SEDIMENT CONTROL**PART 1 - GENERAL****1.1 SECTION INCLUDES**

- A. Furnish all labor, materials, tools, equipment, and services for all soil erosion and sediment control, as indicated, in accord with provisions of Contract Documents.
- B. Completely coordinate with work of all other trades.
- C. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation in order to meet the United States Environmental Protection Agency requirements.

1.2 QUALITY ASSURANCE

- A. Erosion Control Standards:
 - 1. United States Environmental Protection Agency, National Pollutant Discharge Elimination System (NPDES) - Storm Water Management for Construction Activities.
 - 2. North Central Texas Council of Governments (NCTCOG) - Storm Water Quality Best Management Practices for Construction Activities.

1.3 EROSION CONTROL PRINCIPLES:

- A. Perform demolition, construction and other soil disturbances in a manner which minimizes soil erosion.
- B. Retain and protect existing vegetation as much as is feasible.
- C. Keep area which is exposed and free of vegetative cover to a minimum, within practical limits.
- D. Protect exposed critical areas during prolonged construction or other land disturbance by temporary seeding, mulching or other suitable stabilization measures.

1.4 JOB CONDITIONS:

- A. Comply with all requirements of the EPA for implementation of the storm water pollution prevention plan, under the NPDES General Permits for Storm Water Discharges from Construction Sites.

1.5 SUBMITTALS

- A. Project Information:
 - 1. Submit copy of NPDES Storm Water Permit for Construction Activities to Owner prior to construction.

PART 2 - PRODUCTS**2.1 MATERIALS:**

- A. Filter Fabric: Sediment control silt fabrics, AMOCO Style #2125 or approved equal.
- B. Crushed stone.
- C. Metal clips or ties.
- D. Steel fence posts.
- E. Grass Seed: annual ryegrass or Bermuda depending on the season.
- F. Concrete block.
- G. Wire screen.

PART 3 - EXECUTION**3.1 BEGINNING CONSTRUCTION**

- A. Prior to general demolition, install temporary silt fences and stabilized construction entrance as indicated on the storm water pollution prevention plan or where directed by Owner.
- B. Construct erosion control devices in accordance with the storm water pollution prevention plan and as directed by the Owner during demolition and as demolition progresses.
- C. Seed disturbed areas where construction activities temporarily cease at rate necessary to achieve a full stand of grass. Reseed as required until good stand of grass is achieved.

3.2 DURING CONSTRUCTION

- A. Maintain temporary silt fences.
- B. Inspect regularly, especially after rainstorms.
- C. Repair or replace damaged or missing items.
- D. Sow temporary grass cover over disturbed areas where construction activities temporarily cease for more than 21 days and as required by NPDES permit.
- E. Install inlet protection as indicated by the storm water pollution prevention plan at each inlet.
- F. Provide swales and dikes as necessary to direct all water towards a protected device.
- G. Do not disturb existing vegetation (grass and trees) outside limits of demolition.
- H. Remove sediment from behind temporary silt fences when it reaches a depth of 6 in.

3.3 COMPLETION OF CONSTRUCTION AND STABILIZATION OF THE SITE

- A. Remove from site all temporary erosion control devices.

END OF SECTION

Section 02316

EXCAVATION AND BACKFILL FOR STRUCTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Clearing and grubbing, excavation, backfilling, and compaction of backfill for structures.

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices.

1. No payment will be made for structural excavation and backfill under this Section. Include payment in unit price or lump sum for construction of structures.
2. No separate or additional payment will be made for clearing and grubbing, surface water control, ground water control, or for excavation drainage. Include in the unit price or lump sum construction of structures.
3. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 DEFINITIONS

A. Unsuitable Material: Unsuitable soil materials are the following:

1. Materials that are classified as ML, CL-ML, MH, PT, OH, and OL according to ASTM D 2487.
2. Materials that cannot be compacted to the required density due to either gradation, plasticity, or moisture content.
3. Materials that contain large clods, aggregates, stones greater than 4 inches in any dimension, debris, vegetation, waste or any other deleterious materials.
4. Materials that are contaminated with hydrocarbons or other chemical contaminants.

- B. Suitable Material: Suitable soil materials are those meeting specification requirements. Unsuitable soils meeting specification requirements for suitable soils after treatment with lime or cement shall be considered suitable, unless otherwise indicated.

- C. Select Material: Material as defined in Section 02320 - Utility Backfill Materials.

- D. Backfill: Select material meeting specified quality requirements, placed and compacted under controlled conditions around structures.

- E. Foundation Backfill Materials: Natural soil or manufactured aggregate meeting Class I requirements and geotextile filter fabrics as required, to control drainage and material separation. Foundation backfill material is placed and compacted as backfill where needed to provide stable support for the structure foundation base. Foundation backfill materials may include concrete fill and seal slabs.

- F. Foundation Base: For foundation base material, use crushed stone aggregate with filter fabric as required, cement stabilized sand, or concrete seal slab. The foundation base provides a smooth, level working surface for the construction of the concrete foundation.
- G. Foundation Subgrade: Foundation subgrade is the surface of the natural soil which has been excavated and prepared to support the foundation base or foundation backfill, where needed.
- H. Ground Water Control Systems: Installations external to the excavation such as well points, eductors, or deep wells. Ground water control includes dewatering to lower the ground water, intercepting seepage which would otherwise emerge from the side or bottom of the excavation, and depressurization to prevent failure or heaving of the excavation bottom. Refer to Section 01578 - Control of Ground Water and Surface Water.
- I. Surface Water Control: Diversion and drainage of surface water runoff and rain water away from the excavation. Remove rain water and surface water which accidentally enters the excavation as a part of excavation drainage.
- J. Excavation Drainage: Removal of surface and seepage water in the excavation by sump pumping and using French drains surrounding the foundation to intercept the water.
- K. Over-Excavation and Backfill: Excavation of subgrade soils with unsatisfactory bearing capacity or composed of otherwise unsuitable materials below the foundation as shown on Drawings, and backfilled with foundation backfill material.
- L. Shoring System: A structure that supports the sides of an excavation to maintain stable soil conditions and prevent cave-ins.

1.04 REFERENCES

- A. ASTM D 558 - Test Methods for Moisture-Density Relations of Soil Cement Mixtures.
- B. ASTM D 698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, using 5.5-lb (2.49-kg) Rammer and 12-in. (304.88-mm) Drop.
- C. ASTM D 1556 - Density of Soil in Place by the Sand-Cone Method.
- D. ASTM D 2487 - Classification of Soils for Engineering Purposes.
- E. ASTM D 2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- F. ASTM D 3017 - Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depths).
- G. ASTM D 4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- H. TxDOT Tex-101-E - Preparation of Soil and Flexible Base Materials for Testing.
- I. TxDOT Tex-110-E - Determination of Particle Size Analysis of Soils.
- J. Federal Regulations, 29 CFR, Part 1926, Standards - Excavation, Occupational Safety and Health Administration (OSHA).

1.05 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit a work plan for excavation and backfill for each structure with complete written description which identifies details of the proposed method of construction and the sequence of operations for construction relative to excavation and backfill activities. The descriptions, with supporting illustrations, shall be sufficiently detailed to demonstrate to the Engineer that the procedures meet the requirements of the Specifications and Drawings.
- C. Submit excavation safety system plan.
 - 1. The excavation safety system plan shall be in accordance with applicable OSHA requirements for all excavations.
 - 2. The excavation safety system plan shall be in accordance with the requirements of Section 01561 - Trench Safety System, for all excavations that fall under State and Federal trench safety laws.
- D. Submit a ground and surface water control plan in accordance with requirements in this Section and Section 01578 - Control of Ground Water and Surface Water.
- E. Submit backfill material sources and product quality information in accordance with requirements of Section 02320 - Utility Backfill Materials.
- F. Submit project record documents under provisions of Section 01785 - Project Record Documents. Record location of utilities, as installed, referenced to survey benchmarks. Include location of utilities encountered or rerouted. Give horizontal dimensions, elevations, inverts and gradients.

1.06 TESTS

- A. Testing and analysis of backfill materials for soil classification and compaction during construction will be performed by an independent laboratory in accordance with requirements of Section 01454 - Testing Laboratory Services and as specified in this Section.
- B. Contractor shall perform embedment and backfill material source qualification testing in accordance with requirements of Section 02320- Utility Backfill Materials.

PART 2 PRODUCTS**2.01 EQUIPMENT**

- A. Perform excavation with equipment suitable for achieving the requirements of this Specification.
- B. Use equipment which will produce the degree of compaction specified. Backfill within 3 feet of walls shall be compacted with hand operated equipment. Do not use equipment weighing more than 10,000 pounds closer to walls than a horizontal distance equal to the depth of the fill at that time. Use hand operated power compaction equipment where use of heavier equipment is impractical or restricted due to weight limitations.

2.02 MATERIAL CLASSIFICATIONS

- A. Backfill materials shall conform to the classifications and product descriptions of Section 02320 - Utility Backfill Materials. The classification or product description for backfill applications shall be as shown on the Drawings and as specified.

PART 3 EXECUTION**3.01 PREPARATION**

- A. Conduct an inspection to determine condition of existing structures and other permanent installations.
- B. Set up necessary street detours and barricades in preparation for excavation if construction will affect traffic. Conform to requirements of Section 01555 - Traffic Control and Regulation. Maintain barricades and warning devices at all times for streets and intersections where work is in progress, or where affected by the Work, and is considered hazardous to traffic movements.
- C. Perform work in accordance with OSHA standards. Employ an excavation safety system as specified in Section 01561 - Trench Safety Systems.
- D. Project sites, rights-of-way and easements shall be made ready for construction operations in accordance with Section 02233 – Clearing and Grubbing.
- E. Remove existing pavements and structures, including sidewalks and driveways, in accordance with requirements of Section 02221 - Removing Existing Pavements and Structures.
- F. Install and operate necessary dewatering and surface water control measures in accordance with requirements of Section 01578 - Control of Ground Water and Surface Water.

3.02 PROTECTION

- A. Protect trees, shrubs, lawns, existing structures, and other permanent objects outside of grading limits and within the grading limits as designated on the Drawings, and in accordance with requirements of Section 01562 - Tree and Plant Protection.
- B. Protect and support above-grade and below-grade utilities which are to remain.
- C. Restore damaged permanent facilities to pre-construction conditions unless replacement or abandonment of facilities are indicated on the Drawings.
- D. Prevent erosion of excavations and backfill. Do not allow water to pond in excavations.
- E. Maintain excavation and backfill areas until start of subsequent work. Repair and recompact slides, washouts, settlements, or areas with loss of density at no additional cost to the Owner.

3.03 EXCAVATION

- A. Perform excavation work so that the underground structure can be installed to depths and alignments shown on Drawings. Use caution during excavation work to avoid disturbing surrounding ground and existing facilities and improvements. Keep excavation to the absolute minimum necessary. No additional payment will be made for excess excavation.
- B. The use of explosives or headache balls is prohibited.

- C. Upon discovery of unknown utilities, badly deteriorated utilities not designated for removal, or concealed conditions, discontinue work at that location. Notify Resident Project Representative and obtain instructions before proceeding in such areas.
- D. Immediately notify the agency or company owning any line which is damaged, broken or disturbed. Obtain approval from Resident Project Representative and agency for any repairs or relocations, either temporary or permanent.
- E. Avoid settlement of surrounding soil due to equipment operations, excavation procedures, vibration, dewatering, or other construction methods.
- F. Provide surface drainage during construction to protect work and to avoid nuisance to adjoining property. Where required, provide proper dewatering and piezometric pressure control during construction.
- G. Maintain permanent benchmarks, monumentation, and other reference points. Unless otherwise directed by the Engineer, replace those which are damaged or destroyed by the Work.
- H. Provide sheeting, shoring, and bracing where required to safely complete the Work, to prevent excavation from extending beyond limits indicated on Drawings, and to protect the Work and adjacent structures or improvements. Sheeting, shoring, and bracing used to protect workmen and the public shall conform to requirements of Section 01561 - Trench Safety Systems.
- I. Prevent voids from forming outside of sheeting. Immediately fill voids with grout, concrete fill, cement stabilized sand, or other material approved by Resident Project Representative.
- J. After completion of the structure, remove sheeting, shoring, and bracing unless shown on Drawings to remain in place or directed by Engineer in writing that such temporary structures may remain. Remove sheeting, shoring and bracing in such a manner as to maintain safety during backfilling operations and to prevent damage to the Work and adjacent structures or improvements.
- K. Immediately fill and compact voids left or caused by removal of sheeting with cement stabilized sand or material approved by Resident Project Representative.

3.04 HANDLING EXCAVATED MATERIALS

- A. Classify excavated materials. Place material which is suitable for use as backfill in orderly piles at a sufficient distance from excavation to prevent slides or cave-ins.

3.05 DEWATERING

- A. Provide ground water control per Section 01578 - Control of Ground Water and Surface Water.
- B. Keep ground water surface elevation a minimum of 2 feet below the bottom of the foundation base.
- C. Maintain ground water control as directed by Section 01578 - Control of Ground Water and Surface Water and until the structure is sufficiently complete to provide the required weight to resist hydrostatic uplift with a minimum safety factor of 1.2.

3.06 FOUNDATION EXCAVATION

- A. Notify Resident Project Representative at least 48 hours prior to planned completion of foundation excavations. Do not place the foundation base until the excavation is accepted by the Resident Project Representative.
- B. Excavate to elevations shown on Drawings, as needed to provide space for the foundation base, forming a level undisturbed surface, free of mud or soft material. Remove pockets of soft or

otherwise unstable soils and replace with foundation backfill material or a material as directed by the Resident Project Representative. Prior to placing material over it, recompact the subgrade where indicated on the Drawings, scarifying as needed, to 95 percent of the maximum Standard Dry Density according to ASTM D 698. If the specified level of compaction cannot be achieved, moisture condition the subgrade and recompact until 95 percent is achieved, over-excavate to provide a minimum layer of 24 inches of foundation backfill material, or other means acceptable to the Resident Project Representative.

- C. Fill unauthorized excessive excavation with foundation backfill material or other material as directed by the Resident Project Representative.
- D. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in a satisfactory, undisturbed condition. Keep excavations free of standing water and completely free of water during concrete placement.
- E. Soils which become unsuitable due to inadequate dewatering or other causes, after initial excavation to the required subgrade, shall be removed and replaced with foundation backfill material, as directed by Resident Project Representative, at no additional cost to the Owner.
- F. Place foundation base, or foundation backfill material where needed, over the subgrade on same day that excavation is completed to final grade. Where base of excavations are left open for longer periods, protect them with a seal slab or cement-stabilized sand.
- G. Crushed aggregate, and other free draining Class I materials, shall have a filter fabric as specified in Section 02621 - Geotextile, separating it from native soils or select material backfill. The fabric shall overlap a minimum of 12 inches beyond where another material stops contact with the soil.
- H. Crushed aggregate, and other Class I materials, shall be placed in uniform layers of 8-inch maximum thickness. Compaction shall be by means of at least two passes of a vibratory compactor.

3.07 FOUNDATION BASE

- A. After the subgrade is properly prepared, including the placement of foundation backfill where needed, the foundation base shall be placed. The foundation base shall consist of a 12-inch layer of crushed stone aggregate or cement stabilized sand. Alternately, a seal slab with a minimum thickness of 4 inches may be placed. The foundation base shall extend a minimum of 12 inches beyond the edge of the structure foundation, unless shown otherwise on the Drawings.
- B. Where the foundation base and foundation backfill are of the same material, both may be placed in one operation.

3.08 BACKFILL

- A. Complete backfill to surface of natural ground or to lines and grades shown on Drawings. Use existing material that qualifies as select material, unless indicated otherwise. Deposit backfill in uniform layers and compact each layer as specified.
- B. Do not place backfill against concrete walls or similar structures until laboratory test breaks indicate that the concrete has reached a minimum of 85 percent of the specified compressive strength. Where walls are supported by slabs or intermediate walls, do not begin backfill operations until the slab or intermediate walls have been placed and concrete has attained sufficient strength.
- C. Remove concrete forms before starting backfill and remove shoring and bracing as work progresses.
- D. Maintain fill material at no less than 2 percent below nor more than 2 percent above optimum moisture content. Place fill material in uniform 8-inch maximum loose layers. Compaction of fill shall be to at

least 95 percent of the maximum Standard Dry Density according to ASTM D 698 under paved areas. Compact to at least 90 percent around structures under unpaved areas.

- E. Where backfill is placed against a sloped excavation surface, run compaction equipment across the boundary of the cut slope and backfill to form a compacted slope surface for placement of the next layer of backfill.
- F. Place backfill using cement stabilized sand in accordance with Section 02321 - Cement Stabilized Sand.

3.09 FIELD QUALITY CONTROL

- A. Testing will be performed under provisions of Section 01454 - Testing Laboratory Services.
- B. Tests will be performed initially on minimum of one different sample of each material type for plasticity characteristics, in accordance with ASTM D 4318, and for gradation characteristics, in accordance with Tex-101-E and Tex-110-E. Additional classification tests will be performed whenever there is a noticeable change in material gradation or plasticity.
- C. In-place density tests of compacted subgrade and backfill will be performed according to ASTM D 1556, or ASTM D 2922 and ASTM D 3017, and at the following frequencies and conditions:
 - 1. A minimum of one test for every 100 cubic yards of compacted backfill material.
 - 2. A minimum of three density tests for each full work shift.
 - 3. Density tests will be performed in all placement areas.
 - 4. The number of tests will be increased if inspection determines that soil types or moisture contents are not uniform or if compacting effort is variable and not considered sufficient to attain uniform density.
- D. At least one test for moisture-density relationships will be initially performed for each type of backfill material in accordance with ASTM D 698. Additional moisture-density relationship tests will be performed whenever there is a noticeable change in material gradation or plasticity.
- E. If tests indicate work does not meet specified compaction requirements, recondition, recompact, and retest at Contractor's expense.

3.10 DISPOSAL OF EXCESS MATERIAL

- A. Dispose of excess materials in accordance with requirements of Section 01576 - Waste Material Disposal.

END OF SECTION

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Section 02330

EMBANKMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Construction of embankments with excess excavated material and borrow.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

- 1. No separate payment will be made for material embankment under this section. Include payment in unit price for excavation or borrow.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ASTM D 698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- B. ASTM D 2922 – Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- C. ASTM D 3017 – Standard Test Method for Water content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

PART 2 PRODUCTS

2.01 MATERIALS

- A. Refer to Section 02315 – Roadway Excavation for acceptable excess materials from roadway excavation.
- B. Refer to Section 02317 – Excavation and Backfill For Utilities for acceptable excess materials from utility excavation and trenching.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify borrow and excess excavated materials to be reused are approved.
- B. Verify removals and clearing and grubbing operations have been completed.

3.02 PREPARATION

- A. Backfill tests pits, stump holes, small swales and other surface irregularities. Backfill and compact in designated lift depths to requirements for embankment compaction.

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- B. Record location and plug and fill inactive water and oil wells. Conform to Texas State Health Department, Texas Commission on Environmental Quality and Texas Railroad Commission requirements. Notify Project Manager prior to plugging wells.
- C. Excavate and dispose of unsuitable soil and other unsuitable materials which will not consolidate. Backfill and compact to requirements for embankment. Unsuitable soil is defined in Section 02316 – Excavation and Backfill for Structures and Section 02320 – Utility Backfill Materials.
- D. Backfill new utilities below future grade. Conform to requirements of each respective section.

3.03 PROTECTION

- A. Protect trees, shrubs, lawns, existing structures, and other features outside of embankment limits.
- B. Protect utilities above and below grade, which are to remain.
- C. Conform to protection requirements of Section 02315 – Roadway Excavation.

3.04 PLACING EMBANKMENT

- A. Do not conduct placement operations during inclement weather or when existing ground or fill materials exceed 3 percent of optimum moisture content. Contractor may manipulate wet material to facilitate drying, by disking or windrowing.
- B. Do not place embankment fill until density and moisture content of previously placed material comply with the specified requirements.
- C. Scarify areas to be filled to minimum depth of 4 inches to bond existing and new materials. Mix with first fill layer.
- D. Spread fill material evenly, from dumped piles or windrows, into horizontal layers approximately parallel to finished grade. Place to meet specified compacted thickness. Break clods and lumps and mix materials by blading, harrowing, disking or other approved method. Extend each layer across full width of fill.
- E. Each layer shall be homogenous and contain uniform moisture content before compaction. Mix dissimilar abutting materials to prevent abrupt changes in composition of fill.
- F. Layers shall not exceed the following compacted thickness:
 - 1. Areas indicated to be under future paving or shoulders, to be constructed within 6 months: 6 inches when compacted with pneumatic rollers, or 8 inches when compacted with other rollers.
 - 2. Other areas: 12 inches
- G. For steep slopes, cut benches into slope and scarify before placing fill. Place increasingly wider horizontal layers of specified depth to level of each bench.
- H. Build embankment layers on back slopes, adjacent to existing roadbeds, to level of old roadbed. Scarify top of old roadbed to minimum depth of 4 inches and recompact with next fill layer.
- I. Construct to lines and grades shown on Drawings.
- J. Remove unsuitable material and excess soil not being used for embankment from site in accordance with requirements of Section 01576 – Waste Material Disposal.

- K. Maintain moisture content of embankment materials to attain required density.
- L. Compact to following minimum densities at moisture content of optimum to 3 percent above optimum as determined by ASTM D 698, unless otherwise indicated on Drawings:
 - 1. Areas under future paving and shoulders: Minimum density of 95 percent of maximum dry density.
 - 2. Other areas: Minimum density of 90 percent of maximum dry density.

3.05 TOLERANCES

- A. Top of Compacted Surface: Plus or minus 1/2 inch in cross section or 16 foot length.

3.06 FIELD QUALITY CONTROL

- A. Compaction testing will be performed in accordance with ASTM D 698 or ASTM D 2922 and ASTM D 3017 under provisions of Section 01454 - Testing Laboratory Services.
- B. A minimum of three tests will be taken for each 1000 linear feet per lane of roadway or 500 square yards of embankment per lift.
- C. If tests indicate work does not meet specified compaction requirements, recondition, recompact, and retest at no additional cost to the Owner.

END OF SECTION

Section 02506

POLYVINYL CHLORIDE PIPE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Polyvinyl chloride (PVC) pressure pipe for water distribution and sanitary sewer force mains in nominal diameters 4 inches through 16 inches.
- B. Polyvinyl chloride sewer pipe for gravity sanitary sewers in nominal diameters 4 inches through 48 inches.
- C. Polyvinyl chloride pressure pipe for gravity sanitary sewers and force mains in nominal diameters 4 inches through 36 inches.

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices.

~~1. No separate payment will be made for PVC pipe under this section. Include cost in unit price for work included as specified in the following sections:~~

- ~~a. Section 02511 - Water Main~~
- ~~b. Section 02531 - Gravity Sanitary Sewers~~
- ~~c. Section 02532 - Sanitary Sewer Force Mains~~

~~2. Refer to Section 01270 - Measurement and Payment for unit price procedures.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ANSI A21.5 (AWWA C 105) - Polyethylene Encasement for Ductile-Iron Piping for Water and Other Liquids.
- B. ANSI A21.10 (AWWA C 110) - Ductile-Iron and Gray-Iron Fittings, 3 inches through 48 inches for Water and Other Liquids.
- C. ANSI A21.11 (AWWA C 111) - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
- D. ASTM D 1248 - Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.
- E. ASTM D 1784 - Standard Specification for Rigid Polyvinyl Chloride Compound and Chlorinated Polyvinyl Chloride Compounds.
- F. ASTM D 2241 - Standard Specification for Polyvinyl Chloride Plastic Pipe (SDR-PR).
- G. ASTM D 2321 - Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.

- H. ASTM D 2444 - Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight).
 - I. ASTM D 3034 - Specification for Type PSM Polyvinyl Chloride Sewer Pipe and Fittings.
 - J. ASTM D 3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
 - K. ASTM D 3212 - Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
 - L. ASTM F 477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
 - M. ASTM F 679 - Specification for Polyvinyl Chloride Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
 - N. ASTM F 794 - Specification for Polyvinyl Chloride Large-Diameter Ribbed Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.
 - O. AWWA C 909 - Polyvinyl Chloride Pressure Pipe, 4 Inches Through 12 Inches for Water Distribution.
 - P. AWWA C 905 - Polyvinyl Chloride Water Transmission Pipe, Nominal Diameters 14 Inches Through 36 Inches.
 - Q. UNI-B-11 - Recommended Standard Specification for Polyvinyl Chloride Water Transmission Pipe (Nominal Diameters 14 Inches through 36 Inches).
 - R. UNI-B-13 - Recommended Standard Performance Specification for Joint Restraint Devices for Use with Polyvinyl Chloride Pipe.
- 1.04 SUBMITTALS
- A. Conform to requirements of Submittal Procedures Section of this Project Manual.
 - B. Submit shop drawings showing design of new pipe and fittings indicating alignment and grade, laying dimensions, fabrication, fittings, flanges, and special details.
- 1.05 QUALITY CONTROL
- A. Submit manufacturer's certifications that PVC pipe and fittings meet requirements of this Section and AWWA C 900 or AWWA C 905 for pressure pipe applications, or the appropriate ASTM standard specified for gravity sewer pipe.
 - B. Submit manufacturer's certification that PVC pressure pipe has been hydrostatically tested at the factory in accordance with AWWA C 900 or AWWA C 909 and this Section.
 - C. When foreign manufactured material is proposed for use, have material tested for conformance to applicable ASTM requirements by certified independent testing laboratory located in United States. Certification from any other source is not acceptable. Furnish copies of test reports to Engineer for review. Cost of testing shall be borne by Contractor.

PART 2 PRODUCTS

2.01 MATERIAL

- A. Use PVC compounds in the manufacture of pipe that contain no ingredient in an amount that has been demonstrated to migrate into water in quantities considered to be toxic.
- B. Furnish PVC pressure pipe manufactured from Class 12454-B virgin PVC compounds as defined in ASTM D 1784. Provide pipe which is homogeneous throughout, free of voids, cracks, inclusions, and other defects, uniform as commercially practical in color, density, and other physical properties. Deliver pipe with surfaces free from nicks and scratches with joining surfaces of spigots and joints free from gouges and imperfections which could cause leakage.
- C. For PVC pressure pipe used for water mains, provide self-extinguishing PVC pipe that bears Underwriters' Laboratories' mark of approval and is acceptable without penalty to Texas State Fire Insurance Committee for use in fire protection lines.
- D. Gaskets:
 - 1. Gaskets shall meet the requirements of ASTM F 477. Use elastomeric factory-installed gaskets to make joints flexible and watertight.
- E. Lubricant for rubber-gasketed joints: Water soluble, non-toxic, non-objectionable in taste and odor imparted to fluid, non-supporting of bacteria growth, having no deteriorating effect on PVC or rubber gaskets.
- F. PVC pipe for water service shall bear National Sanitation Foundation Seal of Approval (NSF-PW).

2.02 WATER SERVICE PIPE

- A. Pipe 4-inch through 12-inch: AWWA C 909, Class 150, DR 18; nominal 20-foot lengths; cast-iron equivalent outside diameters.
- B. Pipe 16-inch: AWWA C 905; Class 235; DR 18; nominal 20-foot lengths; cast-iron equivalent outside diameter.
- C. Joints: ASTM D 3139; push-on type joints in integral bell or separate sleeve couplings. Do not use socket type or solvent weld type joints.
- D. Make curves and bends by deflecting the joints. Do not exceed maximum deflection recommended by the pipe manufacturer. Submit details of other methods of providing curves and bends for review by Engineer.
- E. Hydrostatic Test: AWWA C 909, AWWA C 905, ANSI A 21.10 (AWWA C 110); at point of manufacture; submit manufacturer's written certification.
- F. Detectable underground warning tape shall be 3" wide Magna Tec or approved equal.

2.03 BENDS AND FITTINGS FOR PVC PRESSURE PIPE

- A. Bends and Fittings: Conform to the requirements of Item 02501 – Ductile Iron Pipe and Fittings.

2.04 GRAVITY SANITARY SEWER PIPE

- A. PVC gravity sanitary sewer pipe shall be in accordance with the provisions in the following table:

WALL CONSTRUCTION	ASTM DESIGNATION	SDR (Max.)/ STIFFNESS (MIN.)	DIAMETER SIZE RANGE
Solid	D3034	SDR 26 / PS 115	6" to 15"
	D3034	SDR 35 / PS 46	6" to 15"
	F679	SDR 35 / PS 46	18" to 27"
	AWWA C909	DR 18 / N/A	4" to 12"
	AWWA C905	DR 18 / N/A	14" to 36"
Profile	F794	N/A / 46 psi	12" TO 48"
	F794	N/A / 46 psi	21" TO 48"

- B. When solid wall PVC pipe 18 inches to 27 inches in diameter is required in SDR 26, provide pipe conforming to ASTM F 679, except provide wall thickness as required for SDR 26 and pipe strength of 115 psi.
- C. For sewers up to 12-inch-diameter crossing over waterlines, or crossing under waterlines with less than 2 feet separation, provide minimum 150 psi pressure-rated pipe conforming to ASTM D 2241 with suitable PVC adapter couplings for a minimum of 10 feet each direction from the waterline.
- D. Joints: Spigot and integral wall section bell with solid cross section elastomeric or rubber ring gasket conforming to requirements of ASTM D 3212 and ASTM F 477, or ASTM D 3139 and ASTM F 477. Gaskets shall be factory-assembled and securely bonded in place to prevent displacement. The manufacturer shall test a sample from each batch conforming to requirements ASTM D 2444.
- E. Fittings: Provide PVC gravity sewer sanitary bends, tee, or wye fittings for new sanitary sewer construction. PVC pipe fittings shall be full-bodied, either injection molded or factory fabricated. Saddle-type tee or wye fittings are not acceptable.

~~2.05 SANITARY SEWER FORCE MAIN PIPE~~

- ~~A. Provide PVC pressure pipe conforming to the requirements for water service pipe, and conforming to the minimum working pressure rating specified in Section 02532 Sanitary Sewage Force Mains.~~
- ~~B. Acceptable pipe joints are integral bell and spigot, containing a bonded-in elastomeric sealing ring meeting the requirements of ASTM F 477. In designated areas requiring restrained joint pipe and fittings, use EBAA Iron Series 2000PV, Uniflange Series 1350 restrainer, or equal joint restraint device conforming to UNI B-13, for PVC pipe 12 inch diameter and less.~~
- ~~C. Fittings: Provide ductile iron fittings as per Paragraph 2.03, except furnish fittings with one of the following internal linings:

 - ~~1. Nominal 40 mils (35 mils minimum) virgin polyethylene complying with ASTM D 1248, heat fused to the interior surface of the fitting, as manufactured by American Cast Iron Pipe "Polybond", or U.S. Pipe "Polyline".~~
 - ~~2. Nominal 40 mils (35 mils minimum) polyurethane, Corro-pipe II by Madison Chemicals, Inc.~~~~

- ~~3. Nominal 40 mils (35 mils minimum) ceramic epoxy, Protecto 401 by Enduron Protective Coatings.~~
- ~~D. Exterior Protection: Provide polyethylene wrapping of ductile iron fittings as required by Section 02528 - Polyethylene Wrap.~~
- ~~E. Hydrostatic Tests: Hydrostatically test pressure rated pipe in accordance with Paragraph 2.02E.~~

PART 3 EXECUTION

3.01 PROTECTION

- A. Store pipe under cover out of direct sunlight and protect from excessive heat or harmful chemicals in accordance with the manufacturer's recommendations.

3.02 INSTALLATION

- A. Conform to requirements of Section 02511 - Water Mains, Section 02531 - Gravity Sanitary Sewers, and Section 02532 - Sanitary Sewage Force Mains, as applicable.
- B. Install PVC pipe in accordance with Section 02317 - Excavation and Backfill for Utilities, ASTM D 2321, and manufacturer's recommendations.
- C. Water service pipe 12 inches in diameter and smaller: Installed to clear utility lines and have minimum 4 feet of cover below lowest property line grade of street, unless otherwise required by Drawings.
- D. Avoid imposing strains that will overstress or buckle the pipe when lowering pipe into trench.
- E. Install 3" wide detectable warning tape approximately 24" below the finished surface above all pipe runs.

END OF SECTION

SECTION 02516
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Furnish all labor, materials, services and equipment as required in conjunction with or properly incidental to placing of concrete as described herein and/or as shown on the drawings.
- B. Includes all cast-in-place concrete for paving, curbs, sidewalks, inlets, culverts and headwalls.

1.2 RELATED DOCUMENTS

- A. Drawing and general provisions of Contract and Division 2 Specification sections, apply to work of this Section.

1.3 CODES AND STANDARDS

- A. The work described in this Section, unless otherwise noted on the Drawings, or herein specified, shall be governed by the latest editions of the following codes or specifications.
 - 1. ACI 304, "Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete".
 - 2. ACI 305, "Hot Weather Concreting".
 - 3. ACI 306, "Cold Weather Concreting".
 - 4. ACI 309, "Standard Practice for Consolidation of Concrete".
 - 5. ACI 311, "ACI Manual of Concrete Inspection".
 - 6. ASTM C33, Standard Specification for Concrete Aggregate.
 - 7. ASTM C94, Standard Specification for Ready-Mix Concrete.
 - 8. ASTM C136, Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 9. ASTM C150, Standard Specification for Portland Cement.
 - 10. ASTM C260, Standard Specification for Air-Entraining Admixtures.
 - 11. ASTM C494, Standard Specification for Chemical Admixtures for Concrete.
 - 12. ASTM C595, Standard Specification for Blended Hydraulic Cements.

1.4 QUALITY ASSURANCE

- A. Concrete production facilities shall meet the requirements for certification by the National Ready Mixed Concrete Association.
- B. Concrete batchers shall be completely interlocked semi-automatic or automatic batchers, as defined by the Concrete Plant Manufacturers Bureau.
- C. Concrete batchers shall have graphic, digital, or photographic recorders, which shall register both empty balance and total weight (or volume of water or admixture) of each batched material, time to the nearest minute, date, identification of batch, and numerical count of each batch. Copies of the record shall be furnished to the Testing Laboratory.

1.5 CONCRETE MIX DESIGN

- A. Design concrete mixes in accordance with ACI 318.
- B. Submit proposed mix designs, including confirmation cylinder test results, in accordance with ACI 318 to the Engineer for evaluation a minimum of 14 days prior to placing concrete. Show:
 - 1. Proportions of cement, fine and coarse aggregates, and water.
 - 2. Combined aggregate gradation.
 - 3. Aggregate specific gravities and gradations.
 - 4. Water-cement ratio, design strength, slump and air content.
 - 5. Type of cement and aggregates.
 - 6. Type and dosage of admixtures.
 - 7. Type, color and dosage of integral coloring compounds, where applicable.
 - 8. Special requirements for pumping.
 - 9. Range of ambient temperature and humidity for which design is valid.
 - 10. Any special characteristics of mix which require precautions in mixing, placing, or finishing techniques to achieve finished product.

The use of fly ash is not permitted.

- C. Mix designs based on record of past performance in accordance with ACI 301 Method 2, may be submitted in lieu of mix designs required above, provided all necessary information is included.
- D. Check mix designs and revise if necessary wherever changes are made in aggregates or in surface water content of aggregate or workability of concrete. Slump shall be minimum to produce workable mix. Laboratory shall prescribe maximum quantity of water.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Mix and deliver concrete to project ready-mixed in accordance with ASTM C94. Mix concrete a minimum of 70 revolutions of transit mix drum at mixing speed. A minimum of 40 revolutions shall be at the production plant.
- B. Schedule delivery so that continuity of any pour will not be interrupted for over 15 minutes.
- C. Place concrete on site within 90 minutes after proportioning materials at batch plant.

1.7 JOB CONDITIONS

- A. Hot Weather Requirements:
 - 1. Follow ACI 301 and ACI 305.
 - 2. Provide retarding type admixture conforming to ASTM C494, Type A or D in accordance with manufacturer's recommendations.
 - 3. Maximum concrete temperature shall not exceed 95°F.
 - a. Maximum concrete temperature for concrete with a specified strength greater than 6000 psi shall not exceed 90°F.
- B. Cold Weather Concreting:

1. Follow ACI 301 and ACI 306.
 2. When ambient temperature at site is below 40°F, or is expected to fall to that temperature within ensuing 24 hours, heat water and/or aggregate prior to adding to mix so that temperature of concrete will be between 60°F and 90°F at time of placement.
 3. Maintain temperature of deposited concrete above 32°F and for a minimum of seven days after placing.
- C. Temperature Changes: Maintain changes in concrete temperature as uniformly as possible, but in no case exceed change of 5°F per hour or 25°F in any 24 hour period.
- D. Combustion heaters shall not be used during the first 48 hours without precautions to prevent exposure of concrete and workmen to exhaust gases containing carbon dioxide and/or carbon monoxide.
- E. Admixtures intended to accelerate hardening of concrete or produce higher than normal strength at early periods will not be permitted unless specified. The use of calcium chloride is specifically prohibited.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cement:
1. Portland Cement, Type I or III, conforming to the requirements of ASTM C150.
 2. Blended Hydraulic Cements, Type 1P, conforming to the requirements of ASTM C595.
- B. Aggregate:
1. Fine: ASTM C33; clean, hard, durable, uncoated, natural sand, free from silt, loam or clay.
 2. Coarse: ASTM C33; hard, durable, uncoated, crushed stone, gradation in accordance with Size No. 467 for piers and footings and Size No. 67 for all other concrete. Maximum aggregate size shall be in accordance with ACI 318.
 3. Grading shall be in accordance with "Standard Method for Sieve Analysis of Fine and Coarse Aggregates" (ASTM C136).
- C. Water: ASTM C94, Paragraph 4.1.3; potable, clean and free from oil, acid and injurious amounts of vegetable matter, alkalies, and other impurities.
- D. Admixtures:
1. Cement-dispersing, water-reducing types that follow water-cement ratio law. Admixtures shall conform to ASTM C494, Type A or D, and shall be used strictly in accordance with manufacturer's recommendations and as determined by the Testing Laboratory. Admixture shall not discolor concrete or in any way affect the appearance of the concrete.

- a. High-range water reducing admixture conforming to ASTM C494, Type F, may be used as required and shall be one of the following types or equal:
 1. Gifford-Hill PSI Super
 2. Master Builders Admixture LA-35
 3. SIKA Sikament
 4. W.R. Grace WRDA-19

 2. An air-entraining admixture conforming to ASTM C260 shall be used and shall be one of the following types or equal:
 - a. Gifford-Hill Air-Tite
 - b. Master Builders MB-VR
 - c. SIKA AER
 - d. W.R. Grace Darex AEA

 3. Use of calcium chloride is specifically prohibited.
- E. Non-Shrink Cement Grout:
1. Qualities: Premixed non-shrink grout requiring only addition of water. Non-metallic type grout where grout will be sight exposed.
 - a. Minimum compressive strength of 5000 psi at 7 days and 7500 psi at 28 days when placed at a plastic consistency of 115% flow factor.
 - b. Free of chlorides, sulphates or gas producing agents.

 2. Standards:
 - a. Overall product: CRD - C-621.
 - b. Compressive Strength: ASTM C109, 2 inch cubes.
 - c. Bleed Performance: CRD - C-611.
 - d. Flow Factor: ASTM C230.

2.2 CONCRETE MIXES

- A. Strength: Concrete is classified and specified by ultimate compressive strength ($f'c$) at the age of 28 days.

- B. Design concrete to yield strengths indicated on the Drawings.

- C. Concrete permanently exposed to weather shall contain an air-entraining admixture to produce a range of 4.5% to 7.5% air by volume of concrete.

- D. Proportions: Proportions of cement, aggregate, and water to attain required plasticity and compressive strength shall be in accordance with ACI 318.

PART 3 - EXECUTION

3.1 GENERAL

- A. Inserts: Give the various trades and subcontractors ample notification and opportunity to furnish any and all anchors, nailers, pipes, conduits, boxes, inserts, thimbles, sleeves, frame vents, wires, supports, or other items required to be built into the concrete by the provisions of the drawings or of the specification governing the work of such trades and subcontractors, or as it may be necessary for the proper execution of their work. Obtain suitable templates or instructions for the installations of such items which are required to be placed in the forms.
- B. Slump: Concrete shall not be placed when its plasticity, as measured by slump tests, is outside the following limits: 5 inches maximum, 2 inches minimum.
- C. Classes of Concrete and Usage: Concrete of the several classes of concrete required shall have the characteristics shown on the Drawings.
- D. Mixing: Transit-mixed concrete conforming to the requirements of ASTM C94 shall be used in lieu of concrete mixed at the job site. Concrete shall not be transported or used in any case after a period in excess of ninety (90) minutes has elapsed after the introduction of water into the mixer. The agency supplying transit-mixed concrete shall have a plant of sufficient capacity and adequate transportation facilities, to assure continuous delivery at the rate required. The frequency of deliveries to the site of the work must be such as to provide for placing the concrete continuously throughout any one (1) pour.
- E. Conveying Concrete: Convey concrete from the mixer to the place of final deposit by methods which will prevent the separation or loss of the ingredients. Concrete to be conveyed by pumping shall be submitted to the Testing Laboratory for evaluation for each class of concrete specified before being used. Test cylinders for pumped concrete shall be taken at the discharge end of the pumping equipment.
- F. Equipment for chuting, pumping, and pneumatically conveying concrete shall be of such size and design as to assure a practically continuous flow of concrete at the delivery end without separation of the materials. The use of gravity-flow or aluminum chutes or conveyors for transporting concrete horizontally will not be permitted.

3.2 FIELD CONCRETE CONTROL AND TESTING

- A. Secure composite samples in accordance with ASTM C172. Each sample shall be obtained from a different batch of concrete on a random basis, avoiding any selection of the test batch other than by a number selected at random before commencement of concrete placement.
- B. All concrete with required strength of 6000 psi or less shall be tested as follows:
 - 1. Mold and cure five (5) specimens from each sample in accordance with ASTM C31.
 - 2. Two (2) specimens shall be tested at seven days for information, two shall be tested at 28 days for acceptance, and the remaining cylinder shall be tested as directed.
- C. Any deviations from the requirements of ASTM Specifications shall be recorded in the test report. Test concrete specimens in accordance with ASTM C39.
- D. Make at least one strength test (five specimens) for each 100 cu. yd. or fraction thereof, of

each mix design of concrete placed in any one day. Determine slump of the concrete sample for each strength test and whenever consistency of concrete appears to vary, in accordance with ASTM C143.

- E. Determine air content of air-entrained, normal weight and/or lightweight, concrete sample for each strength test, in accordance with either ASTM C231, ASTM C173, or ASTM C138. Determine temperature of concrete sample for each strength test.
- F. Inspect each batch of concrete, adjust amounts of mixing water to assure uniform consistency from truck to truck. Check mixing from mixers before mix begins to set and within time limits set forth in ASTM C94.
 - 1. Control addition of water to concrete at job site and length of time concrete is allowed to remain in truck during placement.
 - 2. Certify each delivery ticket indicating class of concrete delivered, amount of water added and time at which cement and aggregate was discharged into truck, and time at which concrete was discharged from truck.
- G. Should the strength of concrete fall below the minimum, then additional tests, including load tests, may be required. These tests, if required, shall be made at the contractor's expense and shall be in accordance with ASTM C42 and ACI 318. If tests do not meet the applicable requirements, then the structure, or any part of the structure, shall be removed and replaced at the contractor's expense. The specified strength must be met at 28 days. If not, the concrete is considered not acceptable and must be removed and replaced. The .85 factor in ACI 318 will not be allowed.
- H. Test reports shall show concrete mix identification number or give proportions of ingredients, time test was made, truck ticket, number, slump and time of batching, and location of each placement.
- I. Report promptly to Engineer all details of reasons for rejection of any and all quantities of concrete. Give all information concerning locations of the concrete pours, quantities, date of pours, and other pertinent facts concerning concrete represented by the specimens.
- J. Grout: For every one third (1/3) cubic yards of grout placed, grout strength shall be tested with a set of cubes as follows:
 - 1. A set of cubes shall consist of three cubes to be tested at 7 days, and three cubes to be tested at 28 days.
 - 2. Test cubes shall be made and tested in accordance with ASTM C109, with the exception that the grout should be restrained from expansion by a top plate.

3.3 PLACING CONCRETE

- A. Place concrete in reasonably uniform layers, approximately horizontal, and not more than eighteen inches (18") deep, exercising care to avoid vertical joints or inclined planes. The piling up of concrete in the forms in such a manner as to cause the separation or loss of any of its ingredients will not be permitted. Concrete which has partially set or hardened shall not, under any circumstances, be deposited in the work.
- B. Place concrete in the forms as nearly in its final position as is practical to avoid rehandling. Exercise special care to prevent splashing the forms or reinforcement with concrete.

Remove any hardened or partially hardened concrete which has accumulated on the forms or reinforcement before the work proceeds. Do not place concrete on previously deposited concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the respective member or section, except as hereinafter specified.

- C. Do not permit concrete to drop freely any distance greater than five feet (5'). Where longer drops are necessary, use a chute, tremie, or other acceptable conveyance to assist the concrete into place without separation. Do not pour directly into any excavations where water is standing.
- D. Vibration: As soon as concrete is deposited, thoroughly agitate same by means of mechanical vibrators and suitable hand tools, so manipulated as to work the mixture well into all parts and corners of the forms, and entirely around the reinforcement and inserts. Mechanical vibrators shall maintain frequencies in accordance with the recommendations of ACI 309, Table 5.1.4 and shall be operated by competent workmen. Over vibrating and use of vibrators to transport concrete within forms shall not be allowed. A spare vibrator shall be kept on the job site during all concrete placing operations.
- E. Bonding: Before depositing any new concrete on or against previously deposited concrete which has partially or entirely set, the surface of the latter shall be thoroughly roughened and cleaned of all foreign matter, scum and laitance.
- F. Construction Joints: Except as otherwise specifically indicated on the drawings, each concrete member shall be considered as a single unit of operations, and all concrete for the same shall be placed continuously in order that such unit will be monolithic in construction. Should construction joints prove to be absolutely unavoidable, same shall be located at or near the midpoints of spans. Additional construction joints shall not be made under any circumstances without prior review by the engineer.
- G. Protect all freshly placed concrete from washing by rain, flowing water, etc. Do not allow the concrete to dry out from the time it is deposited in the forms until the expiration of the curing period.
- H. Grout shall be mixed only in such quantities as are needed for immediate use. No retempering shall be permitted and materials which have been mixed for a period exceeding thirty (30) minutes shall in no case be used upon any portion of the work.
- I. Imperfect or damaged work, or any material damaged or determined to be defective before final completion and acceptance of the entire job, shall be satisfactorily replaced at the contractor's expense and shall be in conformity with all of the requirements of the contract documents. Removal and replacement of concrete work shall be done in such a manner as not to impair the appearance or strength of the structure in any way.
- J. Cleaning: Upon completion of the work, all forms, equipment, protective coverings and any rubbish resulting therefrom shall be removed from the premises. Finished concrete surfaces shall be left in a clean and perfect condition, satisfactory to the owner. Sweep with an ordinary broom and remove all mortar, concrete droppings, loose dirt, mud, etc.

END OF SECTION

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SECTION 02580
PAVEMENT MARKING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Pavement striping and handicap symbols.
2. Primer adhesive.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product literature and installations instructions including guidelines and templates as required.
- B. Samples: Submit test samples when requested.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Handicap parking space marking shall comply with state of Texas and city requirements.

1.4 PROJECT CONDITIONS

- A. Apply marking when surfaces are thoroughly dry and when air temperature is above 40 degrees F.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:

1. Sherwin-Williams.
2. Pratt & Lambert.

2.2 MATERIALS

A. Latex Paint:

1. Colors: White, yellow, red, and blue as required.
2. Acceptable products - Sherwin-Williams:
 - a. White or Yellow: Set Fast Latex Traffic Marking Paint or Acrylic Water Borne Traffic Marking Paint.
 - b. Red or Blue: Metalatex Semi-Gloss Coatings.
3. Acceptable Products - Devco:
 - a. White or Yellow: #416XX Traffic-Line Water Based Traffic Marking Paint.
 - b. Red or Blue: #83XX Mirrolac W.B.

- B. Paint Primer: As recommended by paint manufacturer.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Ensure new concrete and asphaltic concrete paving has cured for 30 days minimum prior to application of pavement marking.

3.2 PREPARATION

- A. Clean surface of scale, dirt, mud, sand gravel, oil, grease and other foreign material.
- B. On portland cement concrete, apply primer for striping as recommended by paint manufacturer to act as barrier coat with curing compound.
- C. Layout lines and symbols in advance of making application. Space control points at intervals to ensure accurate location of markings.

3.3 PAINT STRIPING APPLICATION

- A. Lay out markings using guide line, templates and forms as required. Use white or yellow, match existing paint to distinguish parking spaces. Use red paint for fire lanes.
- B. Apply 4" wide stripes at manufacturer's recommended rate.
- C. Stencil "FIRE LANE - NO PARKING" in 4" high white block letters on red background 6" high and of appropriate length for lettering background at intervals not closer than 25 ft. and not farther apart than 50 ft. on curbs and pavement throughout length of fire lane.
- E. Place suitable warning signs near work site to alert approaching traffic from all directions to prevent damage to newly painted surfaces.

3.4 PROTECTION

- A. Protect pavement markings in accordance with manufacturer's instructions.

END OF SECTION

Section 02741

ASPHALTIC CONCRETE PAVEMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface courses of compacted mixture of coarse and fine aggregates and asphaltic material.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. Payment for asphaltic concrete pavement is on square yard basis. Separate pay items re-used for each different required thickness of pavement.~~
- ~~2. Payment for asphaltic concrete pavement includes payment for associated work performed in accordance with Section 02743 - Tack Coat.~~
- ~~3. Payment for asphaltic concrete in miscellaneous areas is on a square yard basis. Miscellaneous areas include tie-in to existing driveways.~~
- ~~4. No separate payment will be made under this section for asphaltic concrete provided for Section 02951 - Pavement Replacement for Utility Construction~~
- ~~5. Refer to Paragraph 3.08 for unit price adjustments.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ASTM C 33 - Standard Specification for Concrete Aggregates.
- B. ASTM C 131 - Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- C. ASTM C 136 - Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
- D. TxDOT Tex-126-E - Molding, Testing, and Evaluation of Bituminous Black Base Material.
- E. TxDOT Tex-106-E - Method of Calculating the Plasticity Index of Soils.
- F. TxDOT Tex-203-F - Sand Equivalent Test.
- G. TxDOT Tex-204-F - Design of Bituminous Mixtures.
- H. TxDOT Tex-207-F - Determination of Density of Compacted Bituminous Mixtures.
- I. TxDOT Tex-208-F - Test for Stabilometer Value of Bituminous Mixtures.
- J. TxDOT Tex-217-F - Determination of Deleterious Material and Decantation Test for

Coarse Aggregates.

- K. TxDOT Tex-227-F - Theoretical Maximum Specific Gravity of Bituminous Mixtures

1.04 SUBMITTALS

- A. Submittals shall conform to requirements of Submittal Procedures Section of this Project Manual.
- B. Submit certificates that asphaltic materials and aggregates meet requirements of Article 2.01, Materials, of this Section.
- C. Submit proposed design mix and test data for each type and strength of surface course in Work.
- D. Submit manufacturer's description and characteristics of mixing plant for approval.
- D. Submit manufacturer's description and characteristics of spreading and finishing machine for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Coarse Aggregate: Gravel or crushed stone, or combination thereof, that is retained on No. 10 sieve, uniform in quality throughout and free from dirt, organic or other injurious matter occurring either free or as coating on aggregate. Aggregate shall conform to ASTM C 33 except for gradation. Furnish rock or gravel with Los Angeles abrasion loss not to exceed 40 percent by weight when tested in accordance with ASTM C 131.
- B. Fine Aggregate: Sand or stone screenings or combination of both passing No. 10 sieve. Aggregate shall conform to ASTM C 33 except for gradation. Use sand composed of sound, durable stone particles free from loams or other injurious foreign matter. Furnish screenings of same or similar material as specified for coarse aggregate. Plasticity index of that part of fine aggregate passing No. 40 sieve shall be not more than 6 when tested by Tex-106-E. Sand equivalent shall have a minimum value of 45 when tested by Tex-203-F.
- C. Composite Aggregate: Conform to following limits when graded in accordance with ASTM C 136.

GRADUATION OF COMPOSITE AGGREGATE	
Sieve Size	Percent Passing
1/2"	100
3/8"	85 to 100
#4	50 to 70
#10	32 to 42
#40	11 to 26
#80	4 to 14
#200	1 to 6*
*2 to 8 when Test Method Tex – 200 - F, Part II (Washed Sieve Analysis) is used	

- D. Asphaltic Material: Moisture-free homogeneous material which will not foam when heated to 347 degrees F, meeting following requirements:

VISCOSITY GRADE				
TEST	AC-10		AC-20	
	Min.	Max.	Min.	Max.
Viscosity, 140° F stokes	1000	+ 200	2000	+ 400
Viscosity, 275° F stokes	1.9	-	2.5	-
Penetration, 77° F, 100g, 5 sec.	85	-	55	-
Flash Point, C.O.C., F.	450	-	450	-
Solubility in trichloroethylene, percent	99.0	-	99.0	-
Tests on residues from thin film oven tests:				
Viscosity, 140° F stokes		3000	-	6000
Ductility, 77° F, 5 cms per min., cms	100	-	70	-
Spot tests	Negative for all grades			

1. Material shall not be cracked.

2.02 EQUIPMENT

- A. Mixing Plant: Weight-batching or drum mix plant with capacity for producing Continuously mixtures meeting specifications. Plant shall have satisfactory conveyors, power units, aggregate handling equipment, hot aggregate screens and bins, and dust collectors. Provide equipment to supply materials adequately in accordance with rated capacity of plant and produce finished material within specified tolerances. Following equipment is essential:

1. Cold aggregate bins and proportioning device.
2. Dryer.
3. Screens.
4. Aggregate weight box and batching scales.
5. Mixer.
6. Asphalt storage and heating devices.
7. Asphalt measuring devices.
8. Truck scales.

- B. Bins: Separate aggregate into minimum of four bins to produce consistently uniform grading and asphalt content in completed mix.

2.03 MIXES

- A. Employ a certified testing laboratory to prepare design mixes. Test in accordance with Tex-126-E or Tex-204-F and Tex-208-F.

B. Density and Stability Requirements:

Percent Density		Percent	HVEEM Stability Percent
<u>Min.</u>	<u>Max.</u>	<u>Optimum</u>	<u>Not Less Than</u>
94.5	97.5	96	35

C. Proportions for Asphaltic Material: Provide 4 to 8 percent of mixture by weight. Aggregate by weight shall not contain more than 1.0 percent by weight of fine dust, clay-like particles, or silt when tested in accordance with Tex-217-F, Part II.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify compacted base course is ready to support imposed loads.
- B. Verify lines and grades are correct.

3.02 PREPARATION

- A. Prime Coat: If indicated on the Drawings, apply a prime coat conforming to requirements of Section 02742 - Prime Coat. Do not apply a tack coat until primed base has cured to satisfaction of Resident Project Representative.
- B. Tack Coat: Conform to requirements of Section 02743 - Tack Coat.
- C. Prepare sub-grade in advance of asphaltic concrete paving operation.
- D. Do not use cutback asphalt during the period of April 16 to September 15.

3.03 PLACEMENT

- A. Do not place asphaltic mixture when air temperature is below 50 degrees F and falling. Mixture may be placed when air temperature taken in shade and away from artificial heat is above 40 degrees F and rising.
- B. Haul prepared and heated asphaltic concrete mixture to the project in tight vehicles previously cleaned of foreign material. Mixture shall be at temperature between 250 degrees F and 325 degrees F when laid.
- C. Spread material into place with approved mechanical spreading and finishing machine of screening or tamping type.
- D. Surface Course Material: Surface course 2 inches or less in thickness may be spread in one lift. Spread lifts in such manner that, when compacted, finished course will be smooth, of uniform density, and will be to section, line and grade as shown. Place construction joints on surface courses to coincide with lane lines or as directed by Resident Project Representative.
- E. Place courses as nearly continuously as possible. Pass roller over unprotected ends of Freshly laid mixture only when mixture has cooled. When work is resumed, cut back laid material to produce slightly beveled edge for full thickness of course. Remove old material which has been cut away and lay new mix against fresh cut.
- F. When new asphalt is laid against existing or old asphalt, existing or old asphalt shall be saw cut full depth to provide straight smooth joint.

- G. In restricted areas where use of paver is impractical, spread and finish asphalt by Mechanical compactor. Use wood or steel forms, rigidly supported to assure correct grade and cross section. Carefully place materials to avoid segregation of mix. Do not broadcast material. Remove any lumps that do not break down readily. Place asphalt courses in same sequence as if placed by machine.

3.04 COMPACTION

- A. Begin rolling while pavement is still hot and as soon as it will bear roller without undue displacement or hair cracking. Keep wheels properly moistened with water to prevent adhesion of surface mixture. Do not use excessive water.
- B. Compress surface thoroughly and uniformly, first with power-driven, 3-wheel, or tandem rollers weighing from 8 to 10 tons. Obtain subsequent compression by starting at side and rolling longitudinally toward center of pavement, overlapping on successive trips by at least one-half width of rear wheels. Make alternate trips slightly different in length. Continue rolling until no further compression can be obtained and rolling marks are eliminated. Complete rolling before mixture temperature drops below 175 degrees F.
- C. Use tandem roller for final rolling. Double coverage with approved pneumatic roller on asphaltic concrete surface is acceptable after flat wheel and tandem rolling has been completed.
- D. Along walls, curbs, headers and similar structures, and in locations not accessible to rollers, compact mixture thoroughly with lightly oiled tamps.
- E. Compact binder course and surface course to density not less than 94 percent nor more than 98 percent of the maximum possible density of voidless mixture composed of same materials in like proportions.

3.05 TOLERANCES

- A. Furnish templates for checking surface in finished sections. Maximum deflection of templates, when supported at center, shall not exceed 1/8 inch.
- B. Completed surface, when tested with 10-foot straightedge laid parallel to center line of pavement, shall show no deviation in excess of 1/8 inch in 10 feet. Correct any surface not meeting this requirement.

3.06 FIELD QUALITY CONTROL

- A. Testing will be performed under provisions of Section 01454 - Testing Laboratory Services.
- B. Minimum of one core will be taken at random locations per 1000 feet per lane of roadway or 500 square yards of base to determine in-place depth and density.
- C. In-place density will be determined in accordance with Tex-207-F and Tex-227-F from cores or sections. Other methods of determining in-place density, which correlate satisfactorily with results obtained from roadway specimens, may be used when approved by Engineer.
- D. Contractor may, at his own expense, request three additional cores in vicinity of cores indicating nonconforming in-place depths. In-place depth at these locations shall be average depth of four cores.
- E. Fill cores and density test sections with new compacted asphaltic concrete.

3.07 NONCONFORMING PAVEMENT

- A. Remove and replace any non – conforming pavement.
- B. Remove and replace areas of asphalt found deficient in thickness by more than 10 percent. Use new asphaltic base of thickness shown on Drawings.
- C. Replace nonconforming pavement sections.

3.08 UNIT PRICE ADJUSTMENT

- A. Unit price adjustments shall be made for in-place depth determined by cores as follows:

~~1. Reference Section 02740 Asphalt Overlay and Base Repair.~~

3.09 PROTECTION

- A. Do not open pavement to traffic until 12 hours after completion of rolling, or as shown on Drawings.
- B. Maintain asphaltic concrete pavement in good condition until completion of Work.
- C. Repair defects immediately by replacing asphaltic concrete pavement to full depth.

END OF SECTION

Section 02742

PRIME COAT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Prime coat for asphaltic concrete paving

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. No separate payment will be made for prime coat under this Section. Include payment in unit price for material being primed.

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit product data for proposed prime coat.
- C. Submit report of recent calibration of distributor.

PART 2 PRODUCTS

- A. Cutback Asphalt
- B. Provide moisture-free homogeneous material which will not foam when heated to 347 degrees F and which meets following requirements:
- C. Asphalt material for prime coat shall be MC-30 or MC-70 and shall meet following requirements:

PROPERTIES	TYPE - GRADE			
	MC-30		MC-70	
	MIN.	MAX.	MIN.	MAX.
Water, Percent	---	0.2	---	0.2
Flash Point, T.O.C., °F	100	---	100	---
Kinematic Viscosity at 140°F, cst	30	60	70	140

- 2. Distillate shall be as follows, expressed as percent by volume of total distillate to 680 degrees F:

TEMPERATURE	TYPE-GRADE			
	MC-30		MC-70	
	MIN.	MAX.	MIN.	MAX.
to 437°F	---	25	---	20
to 500°F	40	70	20	60
to 600°F	75	93	65	90
Residue from 680°F Distillation, Volume, Percent	50	---	55	---

3. Tests on Distillation Residue:

TEST	TYPE-GRADE			
	MC-30		MC-70	
	MIN.	MAX.	MIN.	MAX.
Penetration at 77°F, 100g, 5 sec., cm	120	250	120	250
Ductility at 77°F, 5 cm/min., cm	100*	---	100*	---
Solubility in Trichloroethylene, %	99	---	99	---
Spot Test	All Negative			

*If penetration of residue is more than 200 and ductility at 77 degrees F is less than 100 cm, material will be acceptable if its ductility at 60 degrees F is more than 100 cm.

2.02 EMULSIFIED PETROLEUM RESIN

- A. EPR-1 Prime: Slow curing emulsion of petroleum resin and asphalt cement conforming to the following requirements:

PROPERTIES	MIN.	MAX.
Fural Viscosity at 77°F, Sec	14	40
Residue by Evaporation, % by Weight	60	-
Sieve Test, %	-	0.1
Particle Charge Test	Positive	
Tests on the Distillation Residue:		
Flash Point, COC (F)	400	-
Kinematic Viscosity @ 140 F (cst)	190	350

- B. For use, EPR-1 may be diluted with water up to a maximum three parts water to one part EPR-1 in order to achieve desired concentration of residual resin/asphalt to facilitate application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify base is ready to support imposed loads.
- B. Verify lines and grades are correct.

3.02 PREPARATION

- A. Thoroughly clean base course surface of loose material by brooming prior to application of prime coat.
- B. Prepare sufficient base in advance of paving for efficient operations.

3.03 APPLICATION, BASIC

- A. Apply prime coat with approved type of self-propelled pressure distributor. Distribute prime coat evenly and smoothly under pressure necessary for proper distribution.
- B. Keep storage tanks, piping, retorts, booster tanks, and distributors used in handling asphaltic materials clean and in good operating condition. Conduct operations so that asphaltic material does not become contaminated.
- C. If yield of asphaltic material appears to be in error, recalibrate distributor prior to continuing work.
- D. Maintain the surface until Work is accepted by Owner.

3.04 APPLICATION, CUTBACK ASPHALT

- A. Do not place prime coat when air temperature is below 60 degrees F and falling. Materials may be placed when air temperature taken in shade and away from artificial heat is above 50 degrees F and rising.
- B. Distribute at rate of 0.25 to 0.35 gallons per square yard.
- C. Equipment shall be capable of reporting temperature of asphaltic material in heating equipment and in distributor, for determining rate of application, and for obtaining uniformity at junction of two distributor loads. Maintain in accurate working order, including recording thermometer at storage heating unit at all times.
- D. Temperature of application shall be based on temperature-viscosity relationship that will permit application of asphalt with viscosity of 100 to 125 centistokes. Maintain asphalt within 15 degrees F of temperature required to meet viscosity. Selected temperature shall be within following range.

<u>Prime Coat Type</u>	<u>Minimum (°F)</u>	<u>Maximum (°F)</u>
MC-30	70	150
MC-70	125	175

- E. Do not allow temperature of MC-30 to exceed 175 degrees F at any time.
- F. Do not allow temperature of MC-70 to exceed 200 degrees F at any time.

3.05 APPLICATION, EMULSIFIED PETROLEUM RESIN

- A. Do not place prime coat when air temperature is below 36 degrees F and falling.

- B. Distribute at rate of 0.15 to 0.25 gallons per square yard.

3.06 PROTECTION

- A. Prevent traffic or placement of subsequent courses over freshly applied prime coat until authorized by Resident Project Representative.

END OF SECTION

Section 02743

TACK COAT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tack coat for asphaltic concrete paving.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. No separate payment will be made for tack coat under this Section. Include payment in unit price for asphaltic pavements.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ASTM D 244 - Standard Test Methods for Emulsified Asphalts.

1.04 SUBMITTALS

- A. Submittals shall conform to requirements of Submittal Procedures Section of this Project Manual.
- B. Submit product data for proposed tack coat.
- C. Submit report of recent calibration of distributor.

PART 2 PRODUCTS

2.01 CUTBACK ASPHALT

- A. Provide moisture-free homogeneous material which will not foam when heated to 347 degrees F and which meets following requirements:
 - 1. Asphalt material for tack coat: RC-250 and meet following:

PROPERTIES	RC - 250	
	MIN.	MAX.
Water, Percent	---	0.2
Flash Point, T.O.C., °F	80	---
Kinematic Viscosity at 140°F, cst	250	400

2. Distillate: Expressed as percent by volume of total distillate to 680 F:

TEMPERATURE	RC – 250	
	MIN.	MAX.
to 437°F	40	75
to 500°F	65	90
to 600°F	85	---
Residue from 680°F Distillation, Volume, Percent	70	---

3. Tests on Distillation Residue:

PROPERTIES	RC – 250	
	MIN.	MAX.
Penetration at 77°F, 100g, 5 sec.	100	150
Ductility at 77°F, 5 cm/min. cms	100	---
Solubility in Trichloroethylene, %	99	---
Spot Test	All Negative	

2.02 EMULSION

A. Provide homogeneous material which shall show no separation of asphalt after mixing and shall meet the viscosity requirements at any time within 30 days after delivery.

1. Emulsion material for tack coat: SS-1 and meet following:

PROPERTIES	SS – 1	
	MIN.	MAX.
Furol Viscosity at 77°F, sec.	30	100
Residue by Distillation, %	60	---
Oil Portion of Distillate, %	---	2
Sieve Test, %	---	0.1
Miscibility (Standard Test)	Passing	Passing
Cement Mixing, %	---	2.0
Storage Stability, 1 Day, %	---	1
Test on Residue: Penetration at 77°F, 100g, 5 sec.	120	160

Solubility in Trichloroethylene, %	97.5	---
Ductility at 77°F, 5 cm/min., cms	100	---

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify compacted base is ready to support imposed loads.
- B. Verify lines and grades are correct.

3.02 PREPARATION

- A. Thoroughly clean base course or concrete surface of loose material by brooming prior to application of tack coat.

3.03 APPLICATION

- A. Apply tack coat uniformly by use of approved distributor at rate not to exceed 0.05 gallons per square yard of surface.
- B. Paint contact surfaces of curbs and structures, and joints with thin uniform coat of tack coat.
- C. Cutback Asphalt:
 - 1. Do not place tack coat when air temperature is below 50 degrees F and falling. Materials may be placed when air temperature taken in shade and away from artificial heat is above 40 degrees F and rising.
 - 2. Temperature of tack coat shall be between 125 degrees F and 180 degrees F when applied.
 - 3. Do not heat tack coat above 200 degrees F at any time.

3.04 PROTECTION

- A. Prevent traffic or placement of subsequent courses over freshly applied tack coat until authorized by Resident Project Representative.

END OF SECTION

Section 02751

CONCRETE PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Portland cement concrete paving.

1.02 MEASUREMENT AND PAYMENT

A. ~~Unit Prices.~~

~~1. Payment for concrete paving is on square yard basis. Separate pay items are used for each different required thickness of pavement.~~

~~2. Payment for concrete paving, high early strength, is on square yard basis.~~

~~3. Measurement for utility projects: Match actual pavement replaced but no greater than maximum pavement replacement limits shown on Drawings.~~

~~a. When removed pavement is greater than one-half of pavement lane width or within 18 inches of longitudinal joint, replace pavement for full lane width or to nearest longitudinal joint.~~

~~b. No payment will be made for work outside pavement limits or in areas removed or replaced for Contractor's convenience. Maximum payment limits are shown on Drawings. When extent of pavement replacement is increased to full lane width or to nearest longitudinal joint, maximum payment limits are increased to same extent.~~

~~4. Refer to Section 01270 – Measurement and Payment for unit price procedures.~~

~~5. Refer to Paragraph 3.15, Unit Price Adjustment.~~

B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for Work in this Section is included in total Stipulated Price.

1.03 REFERENCES

A. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.

B. ASTM A 185 - Standard Specifications for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.

C. ASTM A 615 - Standard Specification for Deformed and Plain Billet - Steel Bars for Concrete Reinforcement.

D. ASTM C 31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.

E. ASTM C 33 - Standard Specifications for Concrete Aggregates.

F. ASTM C 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.

G. ASTM C 40 - Standard Test Method for Organic Impurities in Fine Aggregates for Concrete.

H. ASTM C 42 - Standard Test Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.

- I. ASTM C 78 - Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third Point Loading).
- J. ASTM C 94 - Standard Specification for Ready-Mixed Concrete.
- K. ASTM C 131 - Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- L. ASTM C 136 - Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
- M. ASTM C 138 - Standard Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete.
- N. ASTM C 143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
- O. ASTM C 150 - Standard Specification for Portland Cement.
- P. ASTM C 174 - Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores.
- Q. ASTM C 231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- R. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete.
- S. ASTM C 494 - Standard Specification for Chemical Admixtures for Concrete.
- T. ASTM C 618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use as a Mineral Admixture in Portland Cement Concrete.
- U. TxDOT Tex-203-F - Sand Equivalent Test.
- V. TxDOT Tex-406-A - Material Finer than 75 Fm (No. 200) Sieve In Mineral Aggregates (Decantation Test for Cement Aggregates).

1.04 SUBMITTALS

- A. Conform to requirements of Submittal Procedures.
- B. Submit proposed mix design and test data for each type and strength of concrete in Work. Include proportions and actual flexural strength obtained from design mixes at required test ages.
- C. Submit for approval manufacturer's description and characteristics for mixing equipment, and for traveling form paver, when proposed for use.
- D. Submit manufacturer's certificates giving properties of reinforcing steel. Include certificate of compliance with ASTM A 82. Provide specimens for testing when required by Engineer.

1.05 HANDLING AND STORAGE

- A. Do not mix different classes of aggregate without written permission of Engineer.
- B. Class of aggregate being used may be changed before or during Work with written permission of Engineer. Comply new class with specifications.
- C. Reject segregated aggregate. Before using aggregate whose particles are separated by size, mix them uniformly to grading requirements.

D. Reject aggregates mixed with dirt, weeds, or foreign matter.

E. Do not dump or store aggregate in road bed.

PART 2 PRODUCTS

2.01 MATERIALS

A. Portland Cement:

1. Sample and test cement to verify compliance with Standards of ASTM C 150, Type I or Type III.
2. Bulk cement which meets referenced standards may be used when method of handling is approved by Engineer. When using bulk cement, provide satisfactory weighing devices.
3. Fly ash, which meets standards of ASTM C 618, may be used as mineral fill when method of handling is approved by Engineer.

B. Water: Conform to requirements for water in ASTM C 94.

C. Coarse Aggregate: Crushed stone, gravel, or combination thereof, which is clean, hard, durable, conforms to requirements of ASTM C 33, and has abrasion loss not more than 45 percent by weight when subjected to Los Angeles Abrasion Test (ASTM C 131).

1. Maximum percentage by weight of deleterious substances shall not exceed following values:

<u>Item</u>	<u>Percent by Weight of Total Sample Maximum</u>
Clay lumps and friable particles	3.0
Material finer than 75-µm (No. 200) sieve:	
Concrete subject to abrasion	3.0*
All Other concrete	5.0*
Coal and lignite:	
Where surface appearance of concrete	0.5
All other concrete	1.0

* In case of manufactured sand, when material finer than 75-µm (No. 200) sieve consists of dust of fracture, essentially free from clay or shale, these limits may be increased to 5 and 7 percent, respectively.

2. Conform coarse aggregate (size 12 inch to No. 4 sieve) to requirements of ASTM C 33. Use gradation within following limits when graded in accordance with ASTM C 136:

<u>Sieve Designation (Square Openings)</u>	<u>Percentage by Weight</u>
Retained on 1:" sieve	0
Retained on 12"sieve	0 to 5
Retained on : " sieve	30 to 65
Retained on d" sieve	70 to 90
Retained on No. 4 sieve	95 to 100
Loss by Decantation Test *Method Tex-406-A	1.0 maximum

* In case of aggregates made primarily from crushing of stone, when material finer than 200 sieve is dust of fracture essentially free from clay or shale as established by Part III of TxDOT Tex-406-A, percent may be increased to 1.5.

D. Fine Aggregate: Sand, manufactured sand, or combination thereof, composed of clean, hard, durable, uncoated grains, free from loams or other injurious foreign matter. Conform fine aggregate for concrete to requirements of ASTM C 33. Use gradation within following limits when graded in accordance with ASTM C 136:

Sieve Designation (Square Openings)	Percentage by Weight
Retained on 3/8" sieve	0
Retained on No. 4 sieve	0 to 5
Retained on No. 8 sieve	0 to 20
Retained on No. 16 sieve	15 to 50
Retained on No. 30 sieve	35 to 75
Retained on No. 50 sieve	65 to 90
Retained on No. 100 sieve	90 to 100
Retained on No. 200 sieve	97 to 100

1. When subjected to color test for organic impurities (ASTM C 40), fine aggregate shall not show color darker than standard color. Fine aggregate shall be subjected to Sand Equivalent Test (Tex-203-F). Sand equivalent value shall not be less than 80, unless higher value is shown on Drawings.
- E. Mineral Filler: Class C fly ash of acceptable quality and meeting requirements of ASTM C 618 may be used as mineral admixture in concrete mixture. When fly ash mineral filler is used, store and inspect in accordance with ASTM C 618. Do not use fly ash in amounts to exceed 30 percent by absolute volume of cementitious material in mix design. Cement content may be reduced when strength requirements can be met. Note: When fly ash is used, term "cement" is defined as cement plus fly ash.
- F. Air Entraining Agent: Furnish air-entraining agent conforming to requirements of ASTM C 260.
- G. Water Reducer: Water reducing admixture conforming to requirements of ASTM C 494 may be used when required to improve workability of concrete. Amount and type of admixture subject to approval by Engineer.
- H. Reinforcing Steel:
1. Provide new billet steel manufactured by open hearth process and conforming to ASTM A 615, Grade 60. Store steel to protect it from mechanical injury and rust. At time of placement, steel shall be free from dirt, scale, rust, paint, oil, or other injurious materials.
 2. Cold bend reinforcing steel to shapes shown. Once steel has been bent, it may not be rebent.
 3. Provide wire fabric conforming to ASTM A 82. Use fabric in which longitudinal and transverse wires have been electrically welded at points of intersection. Welds shall have sufficient strength not to be broken during handling or placing. Conform welding and fabrication of fabric sheets to ASTM A 185.
- I. Fibrous Reinforcing: Conform to requirements of Section 03240 - Fibrous Reinforcing.

2.02 EQUIPMENT

A. Conform Equipment to requirements of ASTM C 94.

2.03 MIXING

A. Flexural strength shall be as specified using test specimens prepared in accordance with ASTM C 31 and tested in accordance with ASTM C78 (using simple beam with third-point loading).

Compressive strength shall be as specified using test specimens prepared in accordance with ASTM C 31 and tested in accordance with ASTM C 39. Determine and measure batch quantity of each ingredient, including water for batch designs and all concrete produced for Work. Mix shall conform to these specifications and other requirements indicated on Drawings.

B. Mix design to produce concrete, which will have flexural strength of 500 psi at 7 days and 600 psi at 28 days. Slump of concrete shall be at least 2 inches but no more than 4 inches, when tested in accordance with ASTM C 143.

1. Concrete pavement, including curb, curb and gutter, and saw-tooth curb, shall contain at least 52 sacks (94 pounds per sack) of cement per cubic yard, with not more than 6.5 gallons of water, net, per sack of cement (water-cement ratio maximum 0.57). Determine cement content in accordance with ASTM C 138. Addition of mineral filler may be used to improve workability or plasticity of concrete to limits specified.
2. Coarse dry aggregate shall not exceed 85 percent of loose volume of concrete.
3. Add air-entraining admixture to ensure uniform distribution of agent throughout batch. Base air content of freshly mixed air-entrained concrete upon trial mixes with materials to be used in Work, adjusted to produce concrete of required plasticity and workability. Percentage of air entrainment in mix shall be 42 percent plus or minus 12 percent. Determine air content by testing in accordance with ASTM C 231.
4. Use retardant when temperature exceeds 90 degrees F. Proportion as recommended by manufacturer. Use same brand as used for air-entraining agent. Add and batch material using same methods as used for air-entraining agent.

C. Use high early strength concrete pavement to limits shown on Drawings. Design to meet following:

1. Concrete Mix: Flexural strength greater than or equal to 500 psi at 72 hours.
2. Cement: Minimum of 7 sacks of cement per cubic yard of concrete.
3. Water-Cement Ratio: Less than or equal to 5 gallons per sack. Changes in water-cement ratio and mix design including increase in cement factor when necessary, will be made when 72-hour flexural strength does not meet minimum value of 500 psi.
4. Other requirements for proportioning, mixing, execution, testing, etc., shall be in accordance with this Section 02751 - Concrete Paving.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify compacted base is ready to support imposed loads and meets compaction requirements.
- B. Verify lines and grades are correct.

3.02 PREPARATION

- A. Properly prepare, shape and compact each section of sub grade before placing forms, reinforcing steel or concrete. After forms have been set to proper grade and alignment, use sub grade planer to shape sub grade to its final cross section. Check contour of sub grade with template.
- B. Remove sub grade that will not support loaded form. Replace and compact sub grade to required density.

3.03 EQUIPMENT

- A. Alternate equipment and methods, other than those required by this Section, may be used provided equal or better results will be obtained. Maintain equipment for preparing sub grade and for finishing and compacting concrete in good working order.
- B. Sub grade Planer and Template:
1. Use sub grade planer with adjustable cutting blades to trim sub grade to exact section shown on Drawings. Select planer mounted on visible rollers, which ride on forms. Planer frame must have sufficient weight so that it will remain on form, and have strength and rigidity that, under tests made by changing support from wheels to center, planer will not develop deflection of more than c inch. Tractors used to pull planer shall not produce ruts or indentations in sub grade. When slip form method of paving is used, operate sub grade planer on prepared track grade or have it controlled by electronic sensor system operated from string line to establish horizontal alignment and elevation of subbase.
 2. Provide template for checking contour of sub grade. Template shall be long enough to rest upon side forms and have strength and rigidity that, when supported at center, maximum deflection shall not exceed c inch. Fit template with accurately adjustable rods projecting downward at 1-foot intervals. Adjust these rods to gauge cross sections of slab bottom when template is resting on side forms.
- C. Machine Finisher: Provide power-driven, transverse finishing machine designed and operated to strike off and consolidate concrete. Machine shall have two screeds accurately adjusted to crown of pavement and with frame equipped to ride on forms. Use finishing machine with rubber tires when it operates on concrete pavement.
- D. Hand Finishing:
1. Provide mechanical strike and tamping template 2 feet longer than width of pavement to be finished. Shape template to pavement section.
 2. Provide two bridges to ride on forms and span pavement for finishing expansion and dummy joints. Provide floats and necessary edging and finishing tools.
- E. Burlap Drag for Finishing Slab: Furnish four plies of 10-ounce burlap material fastened to bridge to form continuous strip of burlap full width of pavement. Maintain contact 3-foot width of burlap material with pavement surface. Keep burlap drags clean and free of encrusted mortar.
- F. Vibrators: Furnish mechanically operated, synchronized vibrators mounted on tamping bar which rides on forms and hand-manipulated mechanical vibrators. Furnish vibrators with frequency of vibration to provide maximum consolidation of concrete without segregation.
- G. Traveling Form Paver: Approved traveling form paver may be used in lieu of construction methods employing forms, consolidating, finishing and floating equipment. Meet requirements of this specification for sub grade, pavement tolerances, pavement depth, alignments, consolidation, finishing and workmanship. When traveling form paver does not provide concrete paving that meets compaction, finish, and tolerance requirements of this Specification, immediately discontinue its use and use conventional methods.
1. Equip traveling paver with longitudinal transangular finishing float adjustable to crown and grade. Use float long enough to extend across pavement to side forms or edge of slab.
 2. Ensure that continuous deposit of concrete can be made at paver to minimize starting and stopping. Use conventional means of paving locations inaccessible to traveling paver, or having horizontal or vertical curvature that traveling paver cannot negotiate.
 3. Where Drawings require tie bars for adjacent paving, securely tie and support bars to

prevent displacement. Tie bars may be installed with approved mechanical bar inserter mounted on traveling-form paver. Replace pavement in which tie bars assume final position other than that shown on Drawings.

3.04 FORMS

A. Side Forms: Use metal forms of approved shape and section. Preferred depth of form equal to required edge thickness of pavement. Forms with depths greater or less than required edge thickness of pavement will be permitted, provided difference between form depth and edge thickness when not greater than 1 inch, and further provided that forms of depth less than pavement edge are brought to required edge thickness by securely attaching wood or metal strips to bottom of form, or by grouting under form. Bottom flange of form shall be same size as thickness of pavement. Aluminum forms are not allowed. Forms shall be approved by Engineer. Length of form sections shall be not less than 10 feet and each section shall provide for staking in position with not less than 3 pins. Flexible or curved forms of wood or metal of proper radius shall be used for curves of 200-foot radius or less. Forms shall have ample strength and shall be provided with adequate devices for secure setting so that when in-place they will withstand, without visible springing or settlement, impact and vibration of finishing machine. In no case shall base width be less than 8 inches for form 8 inches or more in height. Forms shall be free from warp, bends or kinks and shall be sufficiently true to provide straight edge on concrete. Top of each form section, when tested with straight edge, shall conform to requirements specified for surface of completed pavement. Provide sufficient forms for satisfactory placement of concrete. For short radius curves, forms less than 10 feet in length or curved forms may be used. For curb returns at street intersections and driveways, wood forms of good grade and quality may be used.

B. Form Setting:

1. Rest forms directly on sub grade. Do not shim with pebbles or dirt. Accurately set forms to required grade and alignment and, during entire operation of placing, compacting and finishing of concrete, do not deviate from this grade and alignment more than $\frac{1}{8}$ inch in 10 feet of length. Do not remove forms for at least 8 hours after completion of finishing operations. Provide supply of forms that will be adequate for orderly and continuous placing of concrete. Set forms and check grade for at least 300 feet ahead of mixer or as approved by Engineer.
2. Adjacent slabs may be used instead of forms, provided that concrete is well protected from possible damage by finishing equipment. Do not use adjacent slabs for forms until concrete has aged at least 7 days.

3.05 REINFORCING STEEL AND JOINT ASSEMBLIES

- A. Place reinforcing steel and joint assemblies and position securely as indicated on Drawings. Wire reinforcing bars securely together at intersections and splices. Bars and coatings shall be free of rust, dirt or other foreign matter when concrete is placed. Secure reinforcing steel to chairs.
- B. Position pavement joint assemblies at required locations and elevations, and rigidly secure in position. Install dowel bars in joint assemblies, each parallel to pavement surface and to centerline of pavement, as shown.
- C. Cut header boards, joint filler, and other material used for forming joints to receive each dowel bar.
- D. Secure in required position to prevent displacement during placing and finishing of concrete.
- E. Drill dowels into existing pavement, secure with epoxy, and provide paving headers as required to provide rigid pavement sections.

- F. Use sufficient number of chairs for steel reinforcement bars to maintain position of bars within allowable tolerances. Place reinforcement as shown on Drawings. In plane of steel parallel to nearest surface of concrete, bars shall not vary from plan placement by more than 1/12 of spacing between bars. In plane of steel perpendicular to nearest surface of concrete, bars shall not vary from plan placement by more than 3 inch.

3.06 FIBROUS REINFORCING

- A. Do not use fibrous reinforcing to replace structural, load-bearing, or moment-reinforcing steel.
- B. Mix and place in accordance with requirements of Section 03240.

3.07 PLACEMENT

- A. Place concrete when air temperature taken in shade and away from artificial heat is above 35 degrees F and rising. Do not place concrete when temperature is below 40 degrees F and falling.
- B. Place concrete within 90 minutes after initial water had been added. Remove and dispose of concrete not placed within this period.
- C. Concrete slump during placement shall be 1 to 4 inches, except when using traveling-form paver, slump shall be maximum of 2 inches.
- D. Deposit concrete continuously in successive batches. Distribute concrete in manner that will require as little rehandling as possible. Where hand spreading is necessary, distribute concrete with shovels or by other approved methods. Use only concrete rakes in handling concrete. At placement interruption of more than 30 minutes, place transverse construction joint at stopping point. Remove and replace sections less than 10 feet long.
- E. Take special care in placing and spading concrete against forms and at longitudinal and transverse joints to prevent honeycombing. Voids in edge of finished pavement will be cause for rejection.

3.08 COMPACTION

- A. Consolidate concrete using mechanical vibrators as specified herein. Extend vibratory unit across pavement, not quite touching side forms. Space individual vibrators at close enough intervals to vibrate and consolidate entire width of pavement uniformly. Mount mechanical vibrators to avoid contact with forms, reinforcement, transverse or longitudinal joints.
- B. Furnish enough hand-manipulated mechanical vibrators for proper consolidation of concrete along forms, at joints and in areas not covered by mechanically controlled vibrators.

3.09 FINISHING

- A. Finish concrete pavement with power-driven transverse finishing machines or by hand finishing methods.
 - 1. Use transverse finishing machine to make at least two trips over each area. Make last trip continuous run of not less than 40 feet. After transverse screeding, use hand-operated longitudinal float to test and level surface to required grade.
 - 2. Hand finish with mechanical strike and tamping template in same width as pavement to be finished. Shape template to pavement section shown on Drawings. Move strike template forward in direction of placement, maintaining slight excess of material in front of cutting edge. Make minimum of two trips over each area. Screed pavement surface to required section. Work screed with combined transverse and longitudinal motion in

direction work is progressing. Maintain screed in contact with forms. Use longitudinal float to level surface.

- B. On narrow strips and transitions, finish concrete pavement by hand. Thoroughly work concrete around reinforcement and embedded fixtures. Strike off concrete with strike-off screed. Move strike-off screed forward with combined transverse and longitudinal motion in direction work is progressing, maintaining screed in contact with forms, and maintaining slight excess of materials in front of cutting edge. Tamp concrete with tamping template. Use longitudinal float to level surface.
- C. After completion of straightedge operation, make first pass of burlap drag as soon as construction operations permit and before water sheen has disappeared from surface. Follow with as many passes as required to produce desired texture depth. Permit no unnecessary delays between passes. Keep drag wet, clean and free from encrusted mortar during use.

3.10 JOINTS AND JOINT SEALING

- A. Conform to requirements of Section 02752 - Concrete Pavement Joints.

3.11 CONCRETE CURING

- A. Conform to requirements of Section 02753 - Concrete Pavement Curing.

3.12 TOLERANCES

- A. Test entire surface before initial set and correct irregularities or undulations. Bring surface within requirements of following test and then finish. Place 10-foot straightedge parallel to center of roadway to bridge depressions and touch high spots. Do not permit ordinates measured from face of straight edge to surface of pavement to exceed 1/16 inch per foot from nearest point of contact. Maximum ordinate with 10-foot straightedge shall not exceed c inch. Grind spots in excess of required tolerances to meet surface test requirements. Restore texture by grooving concrete to meet surface finishing specifications.

3.13 FIELD QUALITY CONTROL

- A. Perform testing under provisions of Section 01454 - Testing Laboratory Services.
- B. Compressive Strength Test Specimens: Make four test specimens for compressive strength test in accordance with ASTM C 31 for each 150 cubic yards or less of pavement that is placed in one day. Test two specimens at 7 days. Test remaining two specimens at 28 days. Test specimens in accordance with ASTM C 39. Minimum compressive strength shall be 3000 pounds per square inch at 7 days and 3500 pounds per square inch at 28 days.
- C. When compressive test indicates failure, make yield test in accordance with ASTM C 138 for cement content per cubic yard of concrete. When cement content is found to be less than that specified per cubic yard, increase batch weights until amount of cement per cubic yard of concrete conforms to requirements.
- D. Minimum of one 4-inch core will be taken at random locations per 375 feet per 12 feet lane or 500 square yards of pavement to measure in-place depth. Measure depth in accordance with ASTM C 174. Each core may be tested for 28-day compressive strength according to methods of ASTM C 42. 28-day compressive strength of each core tested shall be minimum of 3000 pounds per square inch.
- E. Request, at option, three additional cores in vicinity of cores indicating nonconforming in-place depths at no cost to City. In-place depth at these locations shall be average depth of four cores.

F. Fill cores and density test sections with new concrete paving or non-shrink grout.

3.14 NONCONFORMING PAVEMENT

- A. Remove and replace areas of pavement found deficient in thickness by more than 10 percent, or that fail compressive strength tests, with concrete of thickness shown on Drawings.
- B. When measurement of any core is less than specified thickness by more than 10 percent, actual thickness of pavement in this area will be determined by taking additional cores at 10-foot intervals parallel to centerline in each direction from deficient core until, in each direction, core is taken which is not deficient by more than 10 percent. Exploratory cores for deficient thickness will not be used in averages for adjusted unit price. Exploratory cores are to be used only to determine length of pavement in unit that is to be removed and replaced. Replace nonconforming pavement sections at no additional cost to City.

3.15 UNIT PRICE ADJUSTMENT

- A. Unit price adjustments shall be made for in-place depth determined by cores as follows:
 - 1. Adjusted Unit Price shall be ratio of average thickness as determined by cores to thickness bid upon, times unit price.
 - 2. Apply adjustment to lower limit of 95 percent and upper limit of 100 percent of unit price.
 - 3. Average depth below 95 percent but greater than 90 percent may be accepted by Engineer at adjusted Unit Price of :
$$\text{Unit Price Bid} - [2 \times (1 - \text{ratio}) \times \text{Unit Price Bid}]$$
 - 4. Average depth below 90 percent will be rejected by Engineer.

3.16 PAVEMENT MARKINGS

- A. Restore pavement markings to match those existing in accordance with standard specifications and details and Engineer's requirements.

3.17 PROTECTION

- A. Barricade pavement section to prevent use until concrete has attained minimum design strength. Cure barricade pavement section for minimum 72 hours before use. Do not open pavement to traffic until concrete is at least 10 days old. Pavement may be open to traffic earlier provided Contractor pays for testing and additional beam once 7 day specified flexural strength is obtained. Pavement may be opened when high early strength concrete is used meeting specified 72-hour strength.
- B. High early strength concrete may be used to provide access at driveways, street intersections, esplanades and other locations approved by Engineer.
- C. On those sections of pavement to be opened to traffic, seal joints, clean pavement, and place earth against pavement edges before permitting use by traffic. Opening of pavement to traffic shall not relieve responsibility for Work.
- D. Maintain concrete paving in good condition until completion of Work.
- E. Repair defects by replacing concrete to full depth.

END OF SECTION

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Section 02752

CONCRETE PAVEMENT JOINTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Joints for concrete paving; concrete sidewalks; concrete driveways, curbs, and curb and gutters.
- B. Saw-cutting existing concrete or asphalt pavements for new joints.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. Payment for saw cutting existing concrete or asphalt pavement for new joints is on linear foot basis. Saw cutting existing standard concrete curb will be measured as 1-1/2 linear feet and existing standard concrete curb and gutter will be measured as 3 linear feet.~~
- ~~2. No separate payment will be made for expansion joints, formed or sawed street pavement contraction joints and longitudinal weakened plane joints. Include payment in unit price for Concrete Paving.~~
- ~~3. No separate payment will be made for joints for Curb, Curb and Gutter, Saw-tooth Curb, Concrete Sidewalks, and Concrete Driveways. Include payment in unit price for Curb and Gutter, Concrete Sidewalks, and Concrete Driveways.~~
- ~~4. Refer to Section 01270 - Measurement and Payment for unit price procedures.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ASTM A 615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- B. ASTM D 994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- C. ASTM D 1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- D. ASTM D 3405 - Standard Specification for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements.

1.04 SUBMITTALS

- A. Submit product data and samples in accordance with requirements of Submittal Procedures Section of this Project Manual.
- B. Submit product data for joint sealing compound and proposed sealing equipment for approval.

- C. Submit samples of dowel cup, metal supports, and deformed metal strip for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Board Expansion Joint Material: Filler board of selected stock. Use wood of density and type as follows:
 - 1. Clear, all-heart cypress weighing no more than 40 pounds per cubic foot, after being oven dried to constant weight.
 - 2. Clear, all-heart redwood weighing no more than 30 pounds per cubic foot, after being oven dried to constant weight.
- B. Preformed Expansion Joint Material: Bituminous fiber and bituminous mastic composition material conforming to ASTM D 994 and ASTM D 1751.
- C. Joint Sealing Compound: Hot-poured rubber-asphalt compound conforming to ASTM D 3405.
- D. Load Transmission Devices:
 - 1. Smooth, steel dowel bars conforming to ASTM A 615, Grade 60. When indicated on Drawings, encase one end of dowel bar in approved cap having inside diameter 1/16 inch greater than diameter of dowel bar.
 - 2. Deformed steel tie bars conforming to ASTM A 615, Grade 60.
- E. Metal Supports for Reinforcing Steel and Joint Assembly: Employ metal supports of approved shape and size that will secure reinforcing steel and joint assembly in correct position during placing and finishing of concrete.

PART 3 EXECUTION

3.01 PLACEMENT

- A. When new work is adjacent to existing concrete, place joints at same location as existing joints in adjacent pavement.
- B. If the limit of removal of existing concrete or asphaltic pavement does not fall on existing joint, saw cut existing pavement minimum of 2 inches deep to provide straight, smooth joint surface without chipping, spalling or cracks.

3.02 CONSTRUCTION JOINTS

- A. Place transverse construction joint wherever concrete placement must be stopped for more than 30 minutes. Place longitudinal construction joints at interior edges of pavement lanes using No. 6 deformed tie bars, 30 inches long and spaced 18 inches on centers.

3.03 EXPANSION JOINTS

- A. Place 3/4-inch expansion joints at radius points of curb returns for cross street intersections, or as located in adjacent pavement but no further than 80 feet apart. Use no boards shorter than 6 feet. When pavement is 24 feet or narrower, use not more than 2 lengths of board. Secure pieces to form straight joint. Shape board filler accurately to cross section of concrete slab. Use load transmission

devices of type and size shown on Drawings unless otherwise specified or shown as “No Load Transfer Device”. Seal with joint sealing compound.

3.04 CONTRACTION JOINTS

- A. Place contraction joints at same locations as in adjacent pavement or at spaces indicated on Drawings. Place smoothed, painted and oiled dowels accurately and normal to joint. Seal groove with joint sealing compound.

3.05 LONGITUDINAL WEAKENED PLANE JOINTS

- A. Place longitudinal weakened plane joints at spaces indicated on Drawings. Seal groove with joint sealing compound.

3.06 SAWED JOINTS

- A. Use sawed joints as an alternate to contraction and weakened plane joints. Circular cutter shall be capable of cutting straight line groove minimum of 1/2 inch wide. Depth shall be one quarter of pavement thickness plus 1/2 inch. Commence sawing as soon as concrete has hardened sufficiently to permit cutting without chipping, spalling or tearing and prior to initiation of cracks. Once sawing has commenced, it shall be continued until completed. Make saw cut with one pass. Complete sawing within 24 hours of concrete placement. Saw joints at required spacing consecutively in sequence of concrete placement.
- B. Concrete Saw: Provide sawing equipment adequate in power to complete sawing to required dimensions and within required time. Provide at least one standby saw in good working order. Maintain an ample supply of saw blades at work site at all times during sawing operations. Sawing equipment shall be on job at all times during concrete placement.

3.07 JOINTS FOR CURB, CURB AND GUTTER

- A. Place 3/4-inch preformed expansion joints through curb and gutters at locations of expansion and contraction joints in pavement; at end of radius returns at street intersections and driveways; and at curb inlets. Maximum spacing shall be 120-foot centers.

3.08 JOINTS FOR CONCRETE SIDEWALKS

- A. Provide 3/4-inch expansion joints conforming to ASTM A 1751 along and across sidewalk at back of curbs, at intersections with driveways, steps, and walls; and across walk at intervals not to exceed 36 feet. Provide expansion joint material conforming to ASTM D 994 for small radius curves and around fire hydrants and utility poles. Extend the expansion joint material full depth of the slab.

3.09 JOINTS FOR CONCRETE DRIVEWAYS

- A. Provide 3/4-inch expansion joints conforming to ASTM D 1751 across driveway in line with street face of sidewalks, at existing concrete driveways, and along intersections with sidewalks and other structures. Extend expansion joint material full depth of slab.

3.10 JOINT SEALING

- A. Seal joints only when surface and joints are dry, ambient temperature is above 50 degrees F and less than 85 degrees F, and weather is not foggy or rainy.
- B. Joint sealing equipment shall be in like new working condition throughout the joint sealing operation, and be approved by Resident Project Representative. Use concrete grooving machine or power-

operated wire brush and other equipment such as plow, brooms, brushes, blowers or hydro or abrasive cleaning as required to produce satisfactory joints.

- C. Clean joints of loose scale, dirt, dust and curing compound. The term joint includes wide joint spaces, expansion joints, dummy groove joints or cracks, either preformed or natural. Remove loose material from concrete surfaces adjacent to joints.
- D. Fill joints neatly with joint sealer to depth shown. Pour sufficient joint sealer into joints so that, upon completion, surface of sealer within joint will be 1/4 inch above level of adjacent surface or at elevation as directed.

3.11 PROTECTION

- A. Maintain joints in good condition until completion of Work.
- B. Replace damaged joints material with new material as required by this Section.

END OF SECTION

Section 02753

CONCRETE PAVEMENT CURING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Curing of Portland cement concrete paving.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. No separate payment will be made for concrete curing under this Section. Include payment in unit price for Concrete Paving, Concrete Sidewalks, Curbs, and Curb and Gutters.~~
- ~~2. Refer to Section 01270 - Measurement and Payment for unit price procedures.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ASTM C 171 - Standard Specifications for Sheet Materials for Curing Concrete.
- B. ASTM C 309 - Standard Specifications for Liquid Membrane-Forming Compounds for Curing Concrete.

1.04 SUBMITTALS

- A. Submittals shall conform to requirements of Submittal Procedures of this Project Manual.
- B. Submit manufacturer's product data for cover materials and liquid membrane-forming compounds.

PART 2 PRODUCTS

2.01 COVER MATERIALS FOR CURING

- A. Curing materials shall conform to one of the following:
 - 1. Polyethylene Film: Opaque pigmented white film conforming to requirements of ASTM C 171.
 - 2. Waterproofed Paper: Paper conforming to requirements of ASTM C 171.
 - 3. Cotton Mats: Single layer of cotton filler completely enclosed in cover of cotton cloth. Mats shall contain not less than 3/4 of a pound of uniformly distributed cotton filler per square yard of mat. Cotton cloth used for covering materials shall weigh not less than 6 ounces per square yard. Mats shall be stitched so that mat will contact surface of pavement at all points when saturated with water.

2.02 LIQUID MEMBRANE-FORMING COMPOUNDS

- A. Liquid membrane-forming compounds shall conform to ASTM C 309. Membrane shall restrict loss of water to not more than 0.55 kg/m² of surface in 72 hours.

PART 3 EXECUTION

3.01 CURING REQUIREMENT

- A. Concrete pavement shall be cured by protecting it against loss of moisture for period of not less than 72 hours immediately upon completion of finishing operations. Do not use membrane curing for concrete pavement to be overlaid by asphaltic concrete.
- B. Failure to provide sufficient cover material shall be cause for immediate suspension of concreting operations.

3.02 POLYETHYLENE FILM CURING

- A. Immediately after finishing surface, and after concrete has taken its initial set, apply water in the form of a fine spray. Cover surface with polyethylene film so film will remain in direct contact with surface during specified curing period.
- B. Cover entire surface and both edges of pavement slab. Joints in film sheets shall overlap minimum of 12 inches. Immediately repair tears or holes occurring during curing period by placing acceptable moisture-proof patches or by replacing.

3.03 WATERPROOFED PAPER CURING

- A. Immediately after finishing surface, and after concrete has taken its initial set, apply water in form of fine spray. Cover surface with waterproofed paper so paper will remain in direct contact with surface during specified curing period.
- B. Prepare waterproofed paper to form blankets of sufficient width to cover entire surface and both edges of pavement slab, and not be more than 60 feet in length. Joints in blankets caused by joining paper sheets shall lap not less than 5 inches and shall be securely sealed with asphalt cement having melting point of approximately 180 degrees F. Place blankets to secure an overlap of at least 12 inches. Tears or holes appearing in paper during curing period shall be immediately repaired by cementing patches over defects.

3.04 COTTON MAT CURING

- A. Immediately after finishing surface, and after concrete has taken its initial set, completely cover surface with cotton mats, thoroughly saturated before application, in such manner that they will contact surface of pavement equally at all points.
- B. Mats shall remain on pavement for specified curing period. Keep mats saturated so that, when lightly compressed, water will drip freely from them. Keep banked earth or cotton mat covering edges saturated.

3.05 LIQUID MEMBRANE-FORMING COMPOUNDS

- A. Immediately after finishing surface, and after concrete has taken its initial set, apply liquid membrane-forming compound in accordance with manufacturer's instructions.

END OF SECTION

Section 02771

CURB, CURB AND GUTTER, AND HEADERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforced concrete curb, reinforced monolithic concrete curb and gutter, and mountable curb.
- B. Paving headers and railroad headers poured monolithically with concrete base or pavement.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. Payment for curbs and for curbs and gutter is on linear foot basis measured along face of curb.~~
- ~~2. Payment for headers is on linear foot basis measured between lips of gutters adjacent to concrete base and measured between backs of curbs adjacent to streets.~~
- ~~3. Refer to Section 01270 - Measurement and Payment for unit price procedures.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 SUBMITTALS

- A. Submittals shall conform to requirements of Submittal Procedures.
- B. Submit details of proposed formwork for approval.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete: Conform to material and proportion requirements for concrete of Section 02751 - Concrete Paving.
- B. Reinforcing Steel: Conform to material requirements for welded wire fabric of Section 02751 - Concrete Paving.
- C. Grout: Nonmetallic, nonshrink grout containing no chloride producing agents conforming to the following requirements.
 - 1. Compressive strength
 - a. at 7 days: 3500 psi
 - b. at 28 days: 8000 psi
 - 2. Initial set time: 45 minutes
 - 3. Final set time: 1.5 hours

- D. Preformed Expansion Joint Material: Conform to material requirements for preformed expansion joint material of Section 02752 - Concrete Pavement Joints.
- E. Expansion Joint Filler: Conform to material requirements for expansion joint filler of Section 02752 - Concrete Pavement Joints.
- F. Mortar: Mortar finish composed of one part Portland cement and 1-1/2 parts of fine aggregate. Use only when approved by Resident Project Representative.

PART 3 EXECUTION**3.01 PREPARATION**

- A. Prepare subgrade in accordance with applicable portions of sections on excavation and fill, embankment, and subgrade and roadbed.

3.02 PLACEMENT

- A. Guideline: Set to follow top line of curb. Attach indicator to provide constant comparison between top of curb and guideline. Ensure flow lines for monolithic curb and gutters conform to slopes indicated on Drawings.
- B. Forms: Brace to maintain position during pour. Use metal templates cut to section shown on Drawings.
- C. Reinforcement: Secure in position so that steel will remain in place throughout placement. Reinforcing steel shall remain at approximate center of base or pavement as indicated on Drawings.
- D. Joints: Place in accordance with Section 02752 - Concrete Pavement Joints. Place dummy groove joints at 6-foot centers at right angles to curb lines. Cut dummy grooves 1/4 inch deep using an approved edging tool.
- E. Place concrete in forms to required depth. Consolidate thoroughly. Do not permit rock pockets in form. Entirely cover top surfaces with mortar.

3.03 MANUAL FINISHING

- A. After concrete is in place, remove front curb forms. Form exposed portions of curb, and of curb and gutter, using mule which conforms to curb shape, as shown on Drawings.
- B. Thin coat of mortar may be worked into exposed face of curb using mule and two-handled wooden darby at least 3 feet long.
- C. Before applying final finish move 10-foot straightedge across gutter and up curb to back form of curb. Repeat until curb and gutter are true to grade and section. Lap straightedge every 5 feet.
- D. Steel trowel finish surfaces to smooth, even finish. Make face of finished curb true and straight.
- E. Edge outer edge of gutter with 1/4-inch edger. Finish edges with tool having 1/4-inch radius.
- F. Finish visible surfaces and edges of finished curb and gutter free from blemishes, form marks and tool marks. Finished curb or curb and gutter shall have uniform color, shape and appearance.

3.04 MECHANICAL FINISHING

- A. Mechanical curb forming and finishing machines may be used instead of, or in conjunction with, previously described methods. Use of mechanical methods shall provide specified curb design and finish.

3.05 CURING

- A. Immediately after finishing operations, cure exposed surfaces of curbs and gutters in accordance with Section 02753 - Concrete Pavement Curing.

3.06 TOLERANCES

- A. Top surfaces of curb and gutter shall have uniform width and shall be free from humps, sags or other irregularities. Surfaces of curb top, curb face and gutter shall not vary more than 1/8 inch from edge of straightedge laid along them.

3.07 PROTECTION

- A. Maintain curbs and gutters in good condition until completion of the Work.
- B. Replace damaged curbs and gutters to comply with this Section.

END OF SECTION

Section 02775

CONCRETE SIDEWALKS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforced concrete sidewalks.
- B. Wheelchair Ramps.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. Payment for concrete sidewalks is on square foot basis.~~
- ~~2. Payment for wheelchair ramps of each type specified is on a per ramp basis. The removal of existing sidewalk and curb or curb and gutter is included in the cost of the ramp.~~
- ~~3. Refer to Section 01270 - Measurement and Payment for unit price procedures.~~

- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ASTM C 31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- B. ASTM C 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- C. ASTM C 42 - Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
- D. ASTM C 138 - Standard Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete.
- E. ASTM C 143 - Test Method for Slump of Hydraulic Cement Concrete.
- F. ASTM C 172 - Practice for Sampling Freshly Mixed Concrete.
- G. ASTM D 698 - Standard Test Methods for Moisture - Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5-Pound Rammer and 12-inch Drop.

1.04 SUBMITTALS

- A. Submittals shall conform to requirements of Submittal Procedures Section of this Project Manual.
- B. Submit certified testing results and certificates of compliance.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete: Conform to material and proportion requirements for concrete paving.

- B. Reinforcing Steel: Conform to material requirements for welded wire fabric of Section 02751 - Concrete Paving.
- C. Preformed Expansion Joint Material: Conform to material requirements for preformed expansion joint material of Section 02752 - Concrete Pavement Joints.
- D. Expansion Joint Filler: Conform to material requirements for expansion joint material of Section 02752 - Concrete Pavement Joints.
- E. Forms: Use straight, unwarped wood or metal forms with nominal depth equal to or greater than the proposed sidewalk thickness. The use of 2" by 4" lumber as forms will not be allowed.
- F. Sand Bed: Conform to material requirements for bank run sand of Section 02320 - Utility Backfill Materials.
- G. Sodding: Conform to material requirements for sodding of Section 02922 - Sodding.

PART 3 EXECUTION

3.01 REPLACEMENT

- A. Replace sidewalks which are removed or damaged during construction with sidewalk of thickness and width equivalent to those removed or damaged.
- B. Provide replaced and new sidewalks with wheelchair ramps if sidewalk intersects curb at street or driveway.

3.02 PREPARATION

- A. Identify and protect utilities which are to remain.
- B. Protect living trees, other plant growth, and features designated to remain.
- C. Conduct clearing and grubbing operations in accordance with Section 02233 - Clearing and Grubbing.
- D. Excavate subgrade to the line, grade, and cross section shown on Drawings. Remove soft spots and pumping soils and replace with select fill material in accordance with the applicable portions of Item 02317 - Excavation and Backfill for Utilities.
- E. Immediately after subgrade is prepared, cover with compacted sand bed to depth as shown on Drawings. Pour concrete when sand is moist but not saturated.

3.03 PLACEMENT

- A. Setting Forms: Securely stake forms to line and grade. Maintain position during concrete placement.
- B. Reinforcement: Install 6x6, W2.9 x W2.9 welded wire fabric or No. 3 reinforcing steel bars on 18-inch centers longitudinally and transversely. Lay longitudinal bars in walk continuously, except through expansion joints. Support reinforcement in manner to maintain reinforcement in center of slab vertically during placement.
- C. Expansion Joints: Install expansion joints in accordance with Section 02752 - Concrete Pavement Joints.

- ~~D. Colored Concrete: Apply coloring agent in accordance with Section 02761—Colored Concrete for Medians and Sidewalks if called for on the Drawings.~~
- E. Place concrete in forms to specified depth and consolidate with immersion type vibrator or manual tamping device. Manual tamping devices shall only be used with approval of the Resident Project Representative. Bring mortar to surface.
- F. Strike off to smooth finish with wood strike board. Finish smoothly with wood hand float. Brush across sidewalk lightly with fine-haired brush.
- G. Unless otherwise indicated on Drawings, mark off joints 1/8 inch deep, at spacing equal to width of walk. Use joint tool equal in width to edging tool.
- H. Finish edges with tool having 1/4-inch radius.
- I. After concrete has set sufficiently, refill space along sides of sidewalk to top of walk with suitable material. Tamp until firm and solid. Dispose of excess material in accordance with Waste Material Disposal. Repair driveways and parking lots damaged by sidewalk excavation.

3.04 CURING

- A. Conform to requirements of concrete pavement curing.

3.05 FIELD QUALITY CONTROL

- A. Testing will be performed under provisions of the testing laboratory services.
- B. Compressive Strength Test Specimens: Four test specimens for compressive strength test will be made in accordance with ASTM C 31 for each 30 cubic yards or less of sidewalk that is placed in one day. Two specimens will be tested at 7 days. The remaining two specimens will be tested at 28 days. Specimens will be tested in accordance with ASTM C 39.
- C. Yield test for cement content per cubic yard of concrete will be made in accordance with ASTM C 138. If such cement content is found to be less than that specified per cubic yard, reduce batch weights until amount of cement per cubic yard of concrete conforms to requirements.
- D. If the Contractor places concrete without notifying the laboratory, the Owner will have the concrete tested by means of a core test as specified in ASTM C 42. If the concrete does not meet the specification, the cost of the test will be deducted from payment due the Contractor.
- E. Sampling of fresh concrete shall be in accordance with ASTM C 172.
- F. Take slump tests when cylinders are made and when concrete slump appears excessive.
- G. If any 28-day laboratory test indicates that concrete of low strength has been placed, the concrete in question shall be tested by taking cores as directed by the Resident Project Representative. At least three representative cores shall be taken and tested as specified in ASTM C 42 and the cost deducted from payment due the Contractor.

3.06 NONCONFORMING PAVEMENT

- A. Remove and replace areas of sidewalk that fail compressive strength tests, with concrete of thickness shown on Drawings.
- B. Nonconforming sidewalk sections shall be replaced at no additional cost to the Owner.

3.07 PROTECTION

- A. Maintain sidewalks in good condition until completion of the Work.
- B. Replace damaged sidewalks in accordance with Paragraph 3.01, Replacement.

END OF SECTION

SECTION 02920

TOPSOILING AND FINISHED GRADING

PART 1 - GENERAL**1.1 SECTION INCLUDES**

- A. Furnish all labor, materials, tools, equipment, and services for all topsoiling and finished grading, as indicated, in accord with provisions of contract documents.
- B. Completely coordinate with work of all other trades.
- C. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.

1.2 LOCATION OF WORK

- A. All areas within limits of construction, areas of surplus material disposal, and all areas which are disturbed in the course of the work.

1.3 RELATED SECTIONS

- A. Section 02200 - Earthwork and Site Grading
- B. Section 02233 - Clearing and Grubbing

1.4 QUALITY ASSURANCE

- A. Finish Grading Tolerance:
 - 1. 0.1 ft. (30 mm) plus/minus from required elevations.

1.5 JOB CONDITIONS:

- A. Verify amount of topsoil stockpiled and determine amount of additional topsoil, if necessary to complete work.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Topsoil:
 - 1. Original fertile, friable surface soil typical of the area, capable of supporting native plant growth, reasonably free of subsoil, clay, weeds, roots, and stones larger than 1 inch.
 - a. Use existing topsoil stockpiled under Section 02100.
 - b. If amount of topsoil stockpiled is less than amount necessary for the work, furnish all additional topsoil required at no additional cost to the Owner.
 - c. Contractor may import topsoil to the site with prior review and approval by the Owner's Representative.
- B. Surplus Material:
 - 1. Legally dispose of surplus material offsite.

PART 3 - EXECUTION**3.1 ROUGH GRADE REVIEW**

- A. Rough grading shall be inspected and approved by owner's representative before site work proceeds.

3.2 PREPARATION

- A. Correct, adjust and/or repair rough graded areas.
 - 1. Cut off mounds and ridges.
 - 2. Fill gullies and depressions.
 - 3. Perform other necessary repairs.
 - 4. Bring all sub-grades to specified contours, even and properly compacted.
- B. Remove all stones and debris over 2 in. (50 mm) in any dimension.

3.3 PLACING TOPSOIL

- A. Do not place topsoil when subgrade is either wet or frozen enough to cause clodding.
- B. Spread topsoil to minimum compacted depth of 6 in. (100 mm) for all disturbed earth areas.
- C. Make finished surface free of stones, sticks, dirt clods or other material 1 in. (25 mm) or more in any dimension.
- D. Drag finish with harrow (or hand rake) to insure smooth finish to the lines and grades indicated.
- E. Restore areas occupied by stockpiles to condition of rest of finished work.

3.4 ACCEPTANCE

- A. Upon completion of topsoiling, obtain owner's representative acceptance of grade and surface.

END OF SECTION

Section 02921

HYDRO MULCH SEEDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Seeding, fertilizing, mulching, and maintenance of areas indicated on Drawings.

1.02 MEASUREMENT AND PAYMENT

~~A. Unit Prices.~~

- ~~1. Payment for hydro mulch seeding is on an acre basis.~~
- ~~2. Refer to Section 01270 – Measurement and Payment for unit price procedures.~~

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 SUBMITTALS

- A. Conform to requirements of Submittal Procedures Section of this Project Manual.
- B. Submit certification from supplier that each type of seed conforms to these specifications and requirements of Texas Seed Law. Certification shall accompany seed delivery.
- C. Submit certificate stating that fertilizer complies with these specifications and requirements of Texas Fertilizer Law.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Topsoil: Conform to material requirements of Topsoil.
- B. Seed: Conform to U.S. Department of Agriculture rules and regulations of Federal Seed Act and Texas Seed Law. Seed shall be certified 90 percent pure and furnish 80 percent germination and meet following requirements:
 1. Rye: Fresh, clean, Italian rye grass seed (*Lolium multi-florum*), mixed in labeled proportions. As tested, minimum percentages of impurities and germination must be labeled. Deliver in original unopened containers.
 2. Bermuda: Extra-fancy, treated, lawn type common bermuda (*Cynodon dactylon*). Deliver in original, unopened container showing weight, analysis, name of vendor, and germination test results.
 3. Wet, moldy, or otherwise damaged seed will not be accepted.

4. Seed requirements, application rates, and planting dates are:

TYPE	APPLICATION RATE POUNDS/A	PLANTING DATE
Hulled Common Bermuda Grass 98/88 Unhulled Common Bermuda Grass 98/88	40 40	Jan 1 to Mar 31
Hulled Common Bermuda Grass 98/88	40	Apr 1 to Sep 30
Hulled Common Bermuda Grass 98/88 Unhulled Common Bermuda Grass 98/88 Annual Rye Grass (Gulf)	40 40 30	Oct 1 to Dec 31

C. Fertilizer: Dry and free flowing, inorganic, water-soluble commercial fertilizer, which is uniform in composition. Deliver in unopened containers, which bear manufacturers guaranteed analysis. Caked, damaged, or otherwise unsuitable fertilizer will not be accepted. Fertilizer shall contain minimum percentages of following elements:

1. Nitrogen: 10 Percent
2. Phosphoric Acid: 20 Percent
3. Potash: 10 Percent

D. Mulch:

1. Virgin wood cellulose fibers from whole wood chips having minimum of 20 percent fibers 0.42 inches in length and 0.01 inches in diameter.
2. Cellulose fibers manufactured from recycled newspaper and meeting same fiber content and size as for cellulose fibers from wood chips.
3. Dye mulch green for coverage verification purposes.

E. Soil Stabilizer: "Terra Tack 1" or approved equal.

F. Weed control agent: Pre-emergent herbicide for grass areas, such as "Benefin," or approved equal.

PART 3 EXECUTION

3.01 PREPARATION

- A. Place and compact topsoil in accordance with requirements of Topsoil.
- B. Dispose of Objectionable and Waste Materials in accordance with Waste Material Disposal.

3.02 APPLICATION

- A. Seed: Apply uniformly at rates given in Paragraph 2.01 B for type of seed and planting date.

- B. Fertilizer: Apply uniformly at rate of 500 pounds per acre.
- C. Mulch: Apply uniformly at rate of 50 pounds per 1000 square feet.
- D. Soil Stabilizer: Apply uniformly at rate of 40 pounds per acre.
- E. Weed Control Agent: Apply at manufacturer's recommended rate prior to hydro mulching.
- F. Sod: Lay single row of sod along perimeter where topsoil and pavement intersect.
- G. Suspend operations under conditions of drought, excessive moisture, high winds, or extreme or prolonged cold. Obtain Engineer approval before resuming operations.

3.03 MAINTENANCE

- A. Maintain grassed areas minimum of 90 days, or as required to establish an acceptable lawn. For areas seeded in fall, continue maintenance following spring until acceptable lawn is established.
- B. Maintain grassed areas by watering, fertilizing, weeding, and trimming.
- C. Repair areas damaged by erosion by regrading, rolling and replanting.
- D. Reseed small, sparse grass areas. When sparse areas exceed 20 percent of planted area, reseed by hydro mulch.
- E. Mow grass when height reaches 32 inches or greater on average before final acceptance. Mow to height of 22 inches.

END OF SECTION

Division

Concrete

3

Section 03211

REINFORCING STEEL

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Structural concrete reinforcement and grouting of reinforcement dowel bars into hardened concrete.

1.02 UNIT PRICES

- A. No separate payment will be made for reinforcing steel or grouting that is part of the Work as bid. Include payment in unit price for structural concrete.
- B. Measurement for reinforcing steel installed as extra work is on a per-pound basis.
- C. Refer to Section 01270 - Measurement and Payment for unit price procedures.

1.03 REFERENCES

- A. ACI 315 - Details and Detailing of Concrete Reinforcement.
- B. ACI 318 - Building Code Requirements for Reinforced Concrete.
- C. ASTM A 36 - Standard Specification for Structural Steel.
- D. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- E. ASTM A 185 - Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
- F. ASTM A 497 - Standard Specification for Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement.
- G. ASTM A 615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- H. ASTM A 675 - Standard Specification for Steel Bars, Carbon, Hot-Wrought, Special Quality, Mechanical Properties.
- I. ASTM A 775/A 775M - Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
- J. ASTM C 881 - Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
- K. AWS D 1.4 - Structural Welding Code - Reinforcing Steel.
- L. WRI - Manual of Standard Practice for Welded Wire Fabric.
- M. CRSI MSP-1 - Manual of Standard Practice.

1.04 SUBMITTALS

- A. Conform to Section 01330 – Submittal Procedures.
- B. Shop Drawings:

1. Submit shop drawings detailing reinforcement fabrication, bar placement location, splices, spacing, bar designation, bar type, length, size, bending, number of bars, bar support type and other pertinent information, including dimensions. Provide sufficient detail for placement of reinforcement without use of Contract Drawings. Information shall correspond directly to data listed on bill of materials.
 2. Use of reproductions of Contract Drawings by Contractor, Subcontractor, erector, fabricator or material supplier in preparation of shop drawings (or in lieu of preparation of shop drawings) signifies acceptance by that party of information shown thereon as correct, and acceptance of obligation to pay for any job expense, real or implied, arising due to errors that may occur thereon. Remove references to Design Engineer, including seals, when reproductions of Contract Drawings are used as shop drawings.
 3. Detail shop drawings in accordance with ACI 315, Figure 6.
 4. Submit shop drawings showing location of proposed additional construction joints as required under Section 03351 - Joints in Concrete Structures, and obtain approval of Engineer, prior to submitting reinforcing steel shop drawings.
- C. Bill of Materials: Submit with shop drawings.
- D. Product Data:
1. Mechanical Bar Splices: Submit manufacturer's technical literature, including specifications and installation instructions.
 2. Epoxy grout proposed for anchoring reinforcing dowels to hardened concrete: Submit manufacturer's technical literature including recommended installation procedures.
- E. Certificates:
1. Submit steel manufacturer's certificates of mill tests giving properties of steel proposed for use. List manufacturer's test number, heat number, chemical analysis, yield point, tensile strength and percentage of elongation. Identify proposed location of steel in work.
 2. Foreign-manufactured reinforcing bars shall be tested for conformance to ASTM requirements by a certified independent testing laboratory located in United States. Certification from any other source is not acceptable. Submit test reports for review. Do not begin fabrication of reinforcement until material has been approved.
- 1.05 HANDLING AND STORAGE
- A. Store steel reinforcement above ground on platforms, skids or other supports. Protect reinforcing from mechanical injury, surface deterioration and formation of excessive, loose or flaky rust caused by exposure to weather. Protect epoxy-coated reinforcing from formation of any amount of rust.
- 1.06 QUALITY ASSURANCE
- A. Notify Resident Project Representative at least 48 hours before concrete placement so that reinforcement may be inspected, and errors corrected, without delaying Work.
- PART 2 P R O D U C T S

2.01 MATERIAL

- A. Reinforcing Bars: Deformed bars conforming to ASTM A 615, grade as indicated on Drawings, except column spirals and those shown on Drawings to be smooth bars. Where grade is not shown on Drawings, use Grade 60.
- B. Smooth Bars: Where indicated on Drawings, use smooth bars conforming to ASTM A 36; ASTM A 615, Grade 60; or ASTM A 675, Grade 70.
- C. Column Spirals: Bars conforming to ASTM A 615, Grade 60, or wire conforming to ASTM A 82.
- D. Epoxy-Coated Deformed Bars, Column Spirals and Smooth Bars: Conform to ASTM A 775/A 775M.
- E. Welded Wire Fabric:
 - 1. Welded Smooth Wire Fabric: Conform to ASTM A 185.
 - 2. Welded Deformed Wire Fabric: Conform to ASTM A 497.
 - 3. Provide wire size, type and spacing as shown. Where type is not shown on Drawings, use welded smooth wire fabric.
 - 4. Furnish welded wire fabric in flat sheets only.
- F. Tie Wire: 16-1/2 gage or heavier annealed steel wire. Use plastic-coated tie wire with epoxy-coated reinforcing steel.
- G. Bar Supports: Provide chairs, riser bars, ties and other accessories made of plastic or metal, except as otherwise specified. Use bar supports and accessories of sizes required to provide required concrete cover. Where concrete surfaces are exposed to weather, water or wastewater, provide plastic accessories only; do not use galvanized or plastic-tipped metal in such locations. Provide metal bar supports and accessories rated Class 1 or 2 conforming to CRSI MSP-1 Manual of Standard Practice. Use epoxy-coated bar supports with epoxy-coated reinforcing bars.
- H. Slabs on Grade: Provide chairs with sheet metal bases or provide precast concrete bar supports 3 inches wide, 6 inches long, and thick enough to allow required cover. Embed tie wires in 3-inch by 6-inch side.
- I. Mechanical Bar Splices:
 - 1. Conform to ACI 318; use where indicated on Drawings.
 - a. Compression splices shall develop ultimate stress of reinforcing bar.
 - b. Tension splices shall develop 125 percent of minimum yield point stress of reinforcing bar.
 - 2. Regardless of chemical composition of steel, any heat effect shall not adversely affect performance of reinforcing bar.
- J. Welded Splices:

1. Provide welded splices where shown and where approved by the Engineer. Welded splices of reinforcing steel shall develop a tensile strength exceeding 125 percent of the yield strength of the reinforcing bars connected.
 2. Provide materials for welded splices conforming to AWS D1.4.
- K. Epoxy Grout: High-strength rigid epoxy adhesive, conforming to ASTM C 881, Type IV, manufactured for purpose of anchoring dowels into hardened concrete and the moisture condition, application temperature and orientation of the hole to be filled. Unless otherwise shown, depth of embedment shall be as required to develop the full tensile strength (125 percent of yield strength) of dowel, but not less than 12 diameters.

2.02 FABRICATION

- A. Bending: Fabricate bars to shapes indicated on Drawings by cold bending. Bends shall conform to minimum bend diameters specified in ACI 318. Do not straighten or rebend bars. Fabricate epoxy-coated reinforcing steel to required shapes in a manner that will not damage epoxy coating. Repair any damaged epoxy coating with patching material conforming to Item 4.4 of ASTM A 775/A 775M.
- B. Splices:
1. Locate splices as indicated on Drawings. Do not locate splices at other locations without approval of Engineer. Use minimum number of splices located at points of minimum stress. Stagger splices in adjacent bars.
 2. Length of lap splices: As shown on Drawings.
 3. Prepare ends of bars at mechanical splices in accordance with splice manufacturer's requirements.
- C. Construction Joints: Unless otherwise shown, continue reinforcing through construction joints.
- D. Bar Fabrication Tolerances: Conform to tolerances listed in ACI 315, Figures 4 and 5.
- E. Standard Hooks: Conform to the requirements of ACI 318.
- F. Marking: Clearly mark bars with waterproof tags showing number of bars, size, mark, length and yield strength. Mark steel with same designation as member in which it occurs.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean reinforcement of scale, loose or flaky rust and other foreign material, including oil, mud or coating that will reduce bond to concrete.

3.02 INSTALLATION

- A. Placement Tolerances: Place reinforcement within tolerances of Table 03210A at the end of this Section. Bend tie wire away from forms to maintain the specified concrete coverage.
- B. Interferences: Maintain 2-inch clearance from embedded items. Where reinforcing interferes with location of other reinforcing steel, conduit or embedded items, bars may be moved within specified tolerances or one bar diameter, whichever is greater. Where greater movement of

- bars is required to avoid interference, notify Engineer. Do not cut reinforcement to install inserts, conduit, mechanical openings or other items without approval of Engineer.
- C. Concrete Cover: Provide clear cover measured from reinforcement to face of concrete as listed in Table 03210B at the end of this Section, unless otherwise indicated on Drawings.
- D. Placement in Forms: Use spacers, chairs, wire ties and other accessory items necessary to assemble, space and support reinforcing properly. Provide accessories of sufficient number, size and strength to prevent deflection or displacement of reinforcement due to construction loads or concrete placement. Use appropriate accessories to position and support bolts, anchors and other embedded items. Tie reinforcing bars at each intersection, and to accessories. Blocking reinforcement with concrete or masonry is prohibited.
- E. Placement for Concrete on Ground: Support bar and wire reinforcement on chairs with sheet metal bases or precast concrete blocks spaced at approximately 3 feet on centers each way. Use minimum of one support for each 9 square feet. Tie supports to reinforcing bars and wires.
- F. Vertical Reinforcement in Columns: Offset vertical bars by at least one bar diameter at splices. Provide accurate templates for column dowels to ensure proper placement.
- G. Splices:
1. Do not splice bars, except at locations indicated on Drawings or reviewed shop drawings, without approval of Engineer.
 2. Lap Splices: Unless otherwise shown or noted, Class B, conforming to ACI 318-89, Section 12.15.1. Tie securely with wire prior to concrete placement, to prevent displacement of splices during concrete placement.
 3. Mechanical Bar Splices: Use only where indicated on Drawings or approved by the Engineer. Install in accordance with manufacturer's instructions.
 - a. Couplers located at a joint face shall be of a type which can be set either flush or recessed from the face as shown. Seal couplers prior to concrete placement to completely eliminate concrete or cement paste from entering.
 - b. Couplers intended for future connections: Recess 1/2 inch minimum from concrete surface. After concrete is placed, plug coupler and fill recess with sealant to prevent contact with water or other corrosive materials.
 - c. Unless noted otherwise, match mechanical coupler spacing and capacity to that shown for the adjacent reinforcing.
- H. Construction Joints: Place reinforcing continuous through construction joints, unless noted otherwise.
- I. Welded Wire Fabric: Install wire fabric in as long lengths as practicable. Unless otherwise indicated on Drawings, lap adjoining pieces at least 6 inches or one full mesh plus 2 inches, whichever is larger. Lace splices with wire. Do not make end laps midway between supporting beams, or directly over beams of continuous structures. Offset end laps in adjacent widths to prevent continuous laps. Conform to WRI - Manual of Standard Practice for Welded Wire Fabric.
- J. Field Bending: Shape reinforcing bent during construction operations to conform to Drawings. Bars shall be cold-bent; do not heat bars. Closely inspect reinforcing for breaks. When reinforcing is damaged, replace, Cadweld, or otherwise repair, as directed by Engineer. Do not

bend reinforcement after it is embedded in concrete.

- K. Epoxy-coated Reinforcing Steel: Install in accordance with Paragraph 3.02J, Field Bending, and in a manner that will not damage epoxy coating. Repair damaged epoxy coating with patching material as specified in Paragraph 2.02A, Bending.
- L. Field Cutting: Cut reinforcing bars by shearing or sawing. Do not cut bars with cutting torch.
- M. Welding of reinforcing bars is prohibited, except where shown on Drawings.

3.03 GROUTING OF REINFORCING AND DOWEL BARS

- A. Use epoxy grout for anchoring reinforcing and dowel steel to existing concrete in accordance with epoxy manufacturer's instructions. Drill hole not more than 1/4 inch larger than steel bar diameter (including height of deformations for deformed bars) in existing concrete. Just before installation of steel, blow hole clean of all debris using compressed air. Partially fill hole with epoxy, using enough epoxy so when steel bar is inserted, epoxy grout will completely fill hole around bar. Dip end of steel bar in epoxy and twist bar while inserting into partially-filled hole.

Table 03210A
 REINFORCEMENT PLACEMENT TOLERANCES

PLACEMENT	TOLERANCE IN INCHES
Clear Distance - To formed soffit: To other formed surfaces: Minimum spacing between bars:	-1/4 "1/4 -1/4
Clear distance from unformed surface to top reinforcement - Members 8 inches deep or less: Members more than 8 inches deep but less than 24 inches deep: Members 24 inches deep or greater: Uniform spacing of bars (but the required number of bars shall not be reduced): Uniform spacing of stirrups and ties (but the required number of stirrups and ties shall not be reduced):	"1/4 -1/4, +1/2 -1/4, +1 "2 "1
Longitudinal locations of bends and ends of reinforcement - General: Discontinuous ends of members: Length of bar laps:	"2 "1/2 -1-1/2
Embedded length - For bar sizes No. 3 through 11: For bar sizes No. 14 and 18:	-1 -2

Table 03210B
 MINIMUM CONCRETE COVER FOR REINFORCEMENT

SURFACE	MINIMUM COVER IN INCHES
Slabs and Joists - Top and bottom bars for dry conditions - No. 14 and No. 18 bars: No. 11 bars and smaller:	1-1/2 1
Formed concrete surfaces exposed to earth, water or weather; over, or in contact with, sewage; and for bottoms bearing on work mat, or slabs supporting earth cover - No. 5 bars and smaller: No. 6 through No. 18 bars:	1-1/2 2
Beams and Columns - For dry conditions - Stirrups, spirals and ties: Principal reinforcement: Exposed to earth, water, sewage or weather - Stirrups and ties: Principal reinforcement:	1-1/2 2 2 2-1/2
Walls - For dry conditions - No. 11 bars and smaller: No. 14 and No. 18 bars: Formed concrete surfaces exposed to earth, water, sewage or weather, or in contact with ground - Circular tanks with ring tension: All others:	1 1-1/2 2 2
Footings and Base Slabs - At formed surfaces and bottoms bearing on concrete work mat: At unformed surfaces and bottoms in contact with earth: Over top of piles: Top of footings -- same as slabs	2 3 2

SECTION 03315

CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cast-in-place concrete work for utility construction or rehabilitation, such as slabs on grade, small vaults, site-cast bases for precast units, and in-place liners for manhole rehabilitation.

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices.

1. No payment will be made for concrete for utility construction under this Section. Include cost in applicable utility structure.
2. Obtain services of and pay for certified testing laboratory to prepare design mixes.
3. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ACI 117 - Standard Tolerances for Concrete Construction and Materials.
- B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
- C. ACI 302.1R - Guide for Concrete Floor and Slab Construction.
- D. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- E. ACI 308 - Standard Practice for Curing Concrete.
- F. ACI 309R - Guide for Consolidation of Concrete.
- G. ACI 311 - Guide for Concrete Plant Inspection and Field Testing of Ready-Mix Concrete.
- H. ACI 315 - Details and Detailing of Concrete Reinforcement.
- I. ACI 318 - Building Code Requirements for Reinforced Concrete and Commentary.
- J. ACI 544 - Guide for Specifying, Mixing, Placing, and Finishing Steel Fiber Reinforced Concrete.
- K. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
- L. ASTM A 185 - Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
- M. ASTM A 615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- N. ASTM A 767 - Standard Specifications for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement.

- O. ASTM A 775 - Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
- P. ASTM A 820 - Standard Specification for Steel Fibers for Fiber-Reinforced Concrete.
- Q. ASTM A 884 - Specification for Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement.
- R. ASTM C 31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- S. ASTM C 33 - Standard Specification for Concrete Aggregates.
- T. ASTM C 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- U. ASTM C 42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
- V. ASTM C 94 - Standard Specification for Ready-Mixed Concrete.
- W. ASTM C 138 - Standard Test Method for Unit Weight Yield and Air Content (Gravimetric) of Concrete.
- X. ASTM C 143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
- Y. ASTM C 150 - Standard Specification for Portland Cement.
- Z. ASTM C 172 - Standard Practice for Sampling Freshly Mixed Concrete.
- AA. ASTM C 173 - Standard Test Method for Air Content of Freshly Mixed Concrete by Volumetric Method.
- AB. ASTM C 231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- AC. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete.
- AD. ASTM C 309 - Standard Specifications for Liquid Membrane-Forming Compounds for Curing Concrete.
- AE. ASTM C 494 - Standard Specification for Chemical Admixtures for Concrete.
- AF. ASTM C 595 - Standard Specification for Blended Hydraulic Cements.
- AG. ASTM C 685 - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing.
- AH. ASTM C 1064 - Standard Test Method for Temperature of Freshly Mixed Portland Cement Concrete.
- AI. ASTM C 1077 - Standard Practice for Laboratory Testing of Concrete and Concrete Aggregate for Use in Construction and Criteria for Laboratory Evaluation.
- AJ. CRSI MSP-1 - Manual of Standard Practice.
- AK. CRSI - Placing Reinforcing Bars.
- AL. Federal Specification SS-S-210A - Sealing Compound, Preformed Plastic, for Expansion Joints

and Pipe Joints

AM. NRMCA - Concrete Plant Standards.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit proposed mix design and test data for each type and strength of concrete in Work.
- C. Submit laboratory reports prepared by independent testing laboratory stating that materials used comply with requirements of this Section.
- D. Submit manufacturer's mill certificates for reinforcing steel. Provide specimens for testing when required by Engineer.
- E. Submit certification from concrete supplier that materials and equipment used to produce and deliver concrete comply with this Specification.
- F. Submit shop drawings showing reinforcement type, quantity, size, length, location, spacing, bending, splicing, support, fabrication details, and other pertinent information.
- G. For waterstops, submit product information sufficient to indicate compliance with this Section, including manufacturer's descriptive literature and specifications.

1.05 HANDLING AND STORAGE

- A. Cement: Store cement off of ground in well-ventilated, weatherproof building.
- B. Aggregate: Prevent mixture of foreign materials with aggregate and preserve gradation of aggregate.
- C. Reinforcing Steel: Store reinforcing steel to protect it from mechanical injury and formation of rust. Protect epoxy-coated steel from damage to coating.

PART 2 PRODUCTS

2.01 CONCRETE MATERIALS

- A. Cementitious Material:
 - 1. Portland Cement: ASTM C 150, Type II, unless use of Type III is authorized by Engineer; or ASTM C 595, Type IP. For concrete in contact with sewage use Type II cement.
 - 2. When aggregates are potentially reactive with alkalis in cement, use cement not exceeding 0.6 percent alkali content in form of $\text{Na}_2\text{O} + 0.658\text{K}_2\text{O}$.
- B. Water: Clean, free from harmful amounts of oils, acids, alkalis, or other deleterious substances, and meeting requirements of ASTM C 94.
- C. Aggregate:
 - 1. Coarse Aggregate: ASTM C 33. Unless otherwise indicated, use following ASTM standard sizes: No. 357 or No. 467; No. 57 or No. 67, No. 7. Maximum size: Not larger than 1/5 of narrowest dimension between sides of forms, nor larger than 3/4 of minimum clear spacing between reinforcing bars.

2. Fine Aggregate: ASTM C 33.
 3. Determine potential reactivity of fine and coarse aggregate in accordance with Appendix to ASTM C 33.
- D. Air Entraining Admixtures: ASTM C 260.
- E. Chemical Admixtures:
1. Water Reducers: ASTM C 494, Type A.
 2. Water Reducing Retarders: ASTM 494, Type D.
 3. High Range Water Reducers (Superplasticizers): ASTM C 494, Types F and G.
- F. Prohibited Admixtures: Admixtures containing calcium chloride, thiocyanate, or materials that contribute free chloride ions in excess of 0.1 percent by weight of cement.
- G. Reinforcing Steel:
1. Use new billet steel bars conforming to ASTM A 615, ASTM A 767, or ASTM A 775, grade 40 or grade 60, as shown on Drawings. Use deformed bars except where smooth bars are specified. When placed in work, keep steel free of dirt, scale, loose or flaky rust, paint, oil or other harmful materials.
 2. Where shown, use welded wire fabric with wire conforming to ASTM A 185 or ASTM A884. Supply gauge and spacing shown, with longitudinal and transverse wires electrically welded together at points of intersection with welds strong enough not to be broken during handling or placing.
 3. Wire: ASTM A 82. Use 16 1/2 gauge minimum for tie wire, unless otherwise indicated.
- H. Fiber:
1. Fibrillated Polypropylene Fiber:
 - a. Addition Rate: 1.5 pounds of fiber per cubic yard of concrete.
 - b. Physical Properties:
 1. Material: Polypropylene
 2. Length: 1/2 inch or graded
 3. Specific Gravity: 0.91
 - c. Acceptable Manufacturer: W. R. Grace Company, Fibermesh, or approved equal.
 2. Steel Fiber: Comply with applicable provisions of ACI 544 and ASTM A 820.
 - a. Ratio: 50 to 200 pounds of fiber per cubic yard of concrete.
 - b. Physical Properties
 1. Material: Steel
 2. Aspect Ratio (for fiber lengths of 0.5 to 2.5 inch, length divided by

diameter or equivalent diameter): 30:1 to 100:1

3. Specific Gravity: 7.8
 4. Tensile Strength: 40-400 ksi.
 5. Young's Modulus: 29,000 ksi
 6. Minimum Average Tensile Strength: 50,000 psi
 7. Bending Requirements: Withstand bending around 0.125-inch diameter mandrel to angle of 90 degrees, at temperatures not less than 60 degrees F, without breaking
- I. Curing Compounds: Type 2 white-pigmented liquid membrane-forming compounds conforming to ASTM C 309.

2.02 FORM WORK MATERIALS

- A. Lumber and Plywood: Seasoned and of good quality, free from loose or unsound knots, knot holes, twists, shakes, decay and other imperfections which would affect strength or impair finished surface of concrete. Use S4S lumber for facing or sheathing. Forms for bottoms of caps: At least 2 inch (nominal) lumber or 3/4 inch form plywood backed adequately to prevent misalignment. For general use, provide lumber of 1-inch nominal thickness or form plywood of approved thickness.
- B. Form work for Exposed Concrete Indicated to Receive Rubbed Finish: Form or form-lining surfaces free of irregularities; plywood of 1/4 inch minimum thickness, preferably oiled at mill.
- C. Chamfer Strips and Similar Moldings: Redwood, cypress, or pine that will not split when nailed and which can be maintained to true line. Use mill-cut molding dressed on all faces.
- D. Form Ties: Metal or fiberglass of approved type with tie holes not larger than 7/8 inch in diameter. Do not use wire ties or snap ties.
- E. Metal Forms: Clean and in good condition, free from dents and rust, grease, or other foreign materials that tend to disfigure or discolor concrete in gauge and condition capable of supporting concrete and construction loads without significant distortion. Countersink bolt and rivet heads on facing sides. Use only metal forms which present smooth surface and which line up properly.

2.03 PRODUCTION METHODS

- A. Use either ready-mixed concrete conforming to requirements of ASTM C 94, or concrete produced by volumetric batching and continuous mixing in accordance with ASTM C 685.

2.04 MEASUREMENT OF MATERIALS

- A. Measure dry materials by weight, except volumetric proportioning may be used when concrete is batched and mixed in accordance with ASTM C 685.
- B. Measure water and liquid admixtures by volume.

2.05 DESIGN MIX

- A. Use design mixes prepared by certified testing laboratory in accordance with ASTM C 1077 and conforming to requirements of this section.

- B. Proportion concrete materials based on ACI 211.1 to comply with durability and strength requirements of ACI 318, Chapters 4 and 5, and this specification. Prepare mix design of Class A concrete so minimum cementitious content is 564 pounds per cubic yard. Submit concrete mix designs to Engineer for review.
- C. Proportioning on basis of field experience or trial mixtures in accordance with requirements at Section 5.3 of ACI 318 may be used, when approved by Engineer.
- D. Classification:

Class	Cement Sks Per CY	Minimum Strength, psi (MPa)		Maximum W/C Ratio ¹	Air Entrain.
		28 Days	7 Days		
A	5.0 (280 kg/m ³)	3000 (20.6)	2100 (14.5)	0.6	Yes
B	4.0 (225 kg/m ³)	2000 (13.8)	1400 (9.7)	0.6	No
C	6.0 (335 kg/m ³)	3600(24.8)	2520 (17.4)	0.45	Yes
D	4.5 (252 kg/m ³)	2500 (17.2)	1750 (12.1)	0.6	No
H	6.0 (335 kg/m ³)	As indicated	As Indicated	0.45	Yes
I	5.5 (308 kg/m ³)	3500 (24.1)	2450 (16.9)	0.45	Yes
J	2.0 (112 kg/m ³)	800 (5.5)	560 (3.9)	N/A	No
S	6.0 (335 kg/m ³)	4000 (27.6)	2800 (19.3)	0.45	Yes

- E. Add steel or polypropylene fibers only when called for on Drawings or in another section of these Specifications.
- F. Determine air content in accordance with ASTM C 138, ASTM C 173 or ASTM C 231.
- G. Use of Concrete Classes: Use classes of concrete as indicated on Drawings and other Specifications. Use Class B for unreinforced concrete used for plugging pipes, seal slabs, thrust blocks, trench dams, tunnel inverts and concrete fill unless indicated otherwise. Use Class A for all other applications.

2.06 PVC WATERSTOPS

- A. Extrude from virgin polyvinyl chloride elastomer. Use no reclaimed or scrap material. Submit waterstop manufacturer's current test reports and manufacturer's written certification that material furnished meets or exceeds Corps of Engineers Specification CRD-C572 and other specified requirements.
- B. Flat Strip and Center-Bulb Waterstops:
1. Thickness: not less than 3/8 inch
 2. Acceptable Manufacturers:
 - a. Kirkhill Rubber Co., Brea, California
 - b. Water Seals, Inc., Chicago, Illinois
 - c. Progress Unlimited, Inc., New York, New York
 - d. Greenstreak Plastic Products Co., St. Louis, Missouri

- e. Approved equal.

PART 3 EXECUTION

3.01 FORMS AND SHORING

- A. Provide mortar-tight forms sufficient in strength to prevent bulging between supports. Set and maintain forms to lines designated such that finished dimensions of structures are within tolerances specified in ACI 117. Construct forms to permit removal without damage to concrete. Forms may be given slight draft to permit ease of removal. Provide adequate clean out openings. Before placing concrete, remove extraneous matter from within forms.
- B. Install rigid shoring having no excessive settlement or deformation. Use sound timber in shoring centering. Shim to adjust and tighten shoring with hardwood timber wedges.
- C. Design Loads for Horizontal Surfaces of Forms and Shoring: Minimum fluid pressure, 175 pounds per cubic foot; live load, 50 pounds per square foot. Maximum unit stresses: 125 percent of allowable stresses used for form materials and for design of support structures.
- D. Back form work with sufficient number of studs and wales to prevent deflection.
- E. Re-oil or lacquer liner on job before using. Facing may be constructed of 3/4 inch plywood made with waterproof adhesive backed by adequate studs and wales. In such cases, form lining will not be required.
- F. Unless otherwise indicated, form outside corners and edges with triangular 3/4 inch chamfer strips (measured on sides).
- G. Remove metal form ties to depth of at least 3/4 inch from surface of concrete. Do not burn off ties. Do not use pipe spreaders. Remove spreaders which are separate from forms as concrete is being placed.
- H. Treat facing of forms with approved form coating before concrete is placed. When directed by Engineer, treat both sides of face forms with coating. Apply coating before reinforcement is placed. Immediately before concrete is placed, wet surface of forms which will come in contact with concrete.

3.02 PLACING REINFORCEMENT

- A. Place reinforcing steel accurately in accordance with approved Drawings. Secure steel adequately in position in forms to prevent misalignment. Maintain reinforcing steel in place using approved concrete and hot-dip galvanized metal chairs and spacers. Place reinforcing steel in accordance with CRSI Publication "Placing Reinforcing Bars." Request inspection of reinforcing steel by Engineer and obtain acceptance before concrete is placed.
- B. Minimum spacing center-to-center of parallel bars: 2 1/2 times nominal bar diameter. Minimum cover measured from surface of concrete to face of reinforcing bar unless shown otherwise on Drawings: 3 inches for surfaces cast against soil or subgrade, 2 inches for other surfaces.
- C. Detail bars in accordance with ACI 315. Fabricate reinforcing steel in accordance with CRSI Publication MSP-1, "Manual of Standard Practice." Bend reinforcing steel to required shape while steel is cold. Excessive irregularities in bending will be cause for rejection.
- D. Do not splice bars without written approval of Engineer. Approved bar bending schedules or placing drawings constitute written approval. Splice and development length of bars shall conform to ACI 318, Chapters 7 and 12, and as shown on Drawings. Stagger splices or locate at points of low tensile stress.

3.03 EMBEDDED ITEMS

- A. Install conduit and piping as shown on Drawings. Accurately locate and securely fasten conduit, piping, and other embedded items in forms.
- B. Install waterstops as specified in other sections and according to manufacturer's instructions. Securely position waterstops at joints as indicated on Drawings. Protect waterstops from damage or displacement during concrete placing operations.

3.04 BATCHING, MIXING AND DELIVERY OF CONCRETE

- A. Measure, batch, mix, and deliver ready-mixed concrete in accordance with ASTM C 94, Sections 8 through 11. Produce ready-mixed concrete using automatic batching system as described in NRMCA Concrete Plant Standards, Part 2 - Plant Control Systems.
- B. Measure, mix and deliver concrete produced by volumetric batching and continuous mixing in accordance with ASTM C 685, Sections 6 through 8.
- C. Maintain concrete workability without segregation of material and excessive bleeding. Obtain approval of Engineer before adjustment and change of mix proportions.
- D. Ready-mixed concrete delivered to site shall be accompanied by batch tickets providing information required by ASTM C 94, Section 16. Concrete produced by continuous mixing shall be accompanied by batch tickets providing information required by ASTM C 685, Section 14.
- E. When adverse weather conditions affect quality of concrete, postpone concrete placement. Do not mix concrete when air temperature is at or below 40 degrees F and falling. Concrete may be mixed when temperature is 35 degrees F and rising. Take temperature readings in shade, away from artificial heat. Protect concrete from temperatures below 32 degrees F until concrete has cured for minimum of 3 days at 70 degrees F or 5 days at 50 degrees F.
- F. Clean, maintain and operate equipment so that it thoroughly mixes material as required.
- G. Hand-mix only when approved by Engineer.

3.05 PLACING CONCRETE

- A. Give sufficient advance notice to Engineer (at least 24 hours prior to commencement of operations) to permit inspection of forms, reinforcing steel, embedded items and other preparations for placing concrete. Place no concrete prior to Engineer's approval.
- B. Schedule concrete placing to permit completion of finishing operations in daylight hours. However, when necessary to continue after daylight hours, light site as required. When rainfall occurs after placing operations are started, provide covering to protect work.
- C. Use troughs, pipes and chutes lined with approved metal or synthetic material in placing concrete so that concrete ingredients are not separated. Keep chutes, troughs and pipes clean and free from coatings of hardened concrete. Allow no aluminum material to be in contact with concrete.
- D. Limit free fall of concrete to 4 feet. Do not deposit large quantities of concrete at one location so that running or working concrete along forms is required. Do not jar forms after concrete has taken initial set; do not place strain on projecting reinforcement or anchor bolts.
- E. Use tremies for placing concrete in walls and similar narrow or restricted locations. Use tremies made in sections, or provide in several lengths, so that outlet may be adjusted to proper height during placing operations.

- F. Place concrete in continuous horizontal layers approximately 12 inches thick. Place each layer while layer below is still plastic.
- G. Compact each layer of concrete with concrete spading implements and mechanical vibrators of approved type and adequate number for size of placement. When immersion vibrators cannot be used, use form vibrators. Apply vibrators to concrete immediately after depositing. Move vibrator vertically through layer of concrete just placed and several inches into plastic layer below. Do not penetrate or disturb layers previously placed which have partially set. Do not use vibrators to aid lateral flow concrete. Closely supervise consolidation to ensure uniform insertion and duration of immersion.
- H. Handling and Placing Concrete: Conform to ACI 302.1R, ACI 304R and ACI 309R.

3.06 WATERSTOPS

- A. Embed waterstops in concrete across joints as shown. Waterstops shall be continuous for extent of joint; make splices necessary to provide continuity in accordance with manufacturer's instructions. Support and protect waterstops during construction operations; repair or replace waterstops damaged during construction.
- B. Install waterstops in concrete on one side of joints, leaving other side exposed until next pour. When waterstop will remain exposed for 2 days or more, shade and protect exposed waterstop from direct rays of sun during entire exposure and until exposed portion of waterstop is embedded in concrete.

3.07 CONSTRUCTION JOINTS

- A. Definitions:
 - 1. Construction joint: Contact surface between plastic (fresh) concrete and concrete that has attained initial set.
 - 2. Monolithic: Manner of concrete placement to reduce or eliminate construction joints; joints other than those indicated on Drawings will not be permitted without written approval of Engineer. Where so approved, make additional construction joints with details equivalent to those indicated for joints in similar locations.
 - 3. Preparation for Construction Joints: Roughen surface of concrete previously placed, leaving some aggregate particles exposed. Remove laitance and loose materials by sandblasting or high-pressure water blasting. Keep surface wet for several hours prior to placing of plastic concrete.

3.08 CURING

- A. Comply with ACI 308. Cure by preventing loss of moisture, rapid temperature change and mechanical injury for period of 7 curing days when Type II or IP cement has been used and for 3 curing days when Type III cement has been used. Start curing as soon as free water has disappeared from concrete surface after placing and finishing. A curing day is any calendar day in which temperature is above 50 degrees F for at least 19 hours. Colder days may be counted when air temperature adjacent to concrete is maintained above 50 degrees F. In continued cold weather, when artificial heat is not provided, removal of forms and shoring may be permitted at end of calendar days equal to twice required number of curing days. However, leave soffit forms and shores in place until concrete has reached specified 28 day strength, unless directed otherwise by Engineer.
- B. Cure formed surfaces not requiring rubbed-finished surface by leaving forms in place for full

curing period. Keep wood forms wet during curing period. Add water as needed for other types of forms. Or, at Contractor's option, forms may be removed after 2 days and curing compound applied.

C. Rubbed Finish:

1. At formed surfaces requiring rubbed finish, remove forms as soon as practicable without damaging surface.
2. After rubbed-finish operations are complete, continue curing formed surfaces by using either approved curing/sealing compounds or moist cotton mats until normal curing period is complete.

D. Unformed Surfaces: Cure by membrane curing compound method.

1. After concrete has received final finish and surplus water sheen has disappeared, immediately seal surface with uniform coating of approved curing compound, applied at rate of coverage recommended by manufacturer or as directed by Engineer. Do not apply less than 1 gallon per 180 square feet of area. Provide satisfactory means to properly control and check rate of application of compound.
2. Thoroughly agitate compound during use and apply by means of approved mechanical power pressure sprayers equipped with atomizing nozzles. For application on small miscellaneous items, hand-powered spray equipment may be used. Prevent loss of compound between nozzle and concrete surface during spraying operations.
3. Do not apply compound to dry surface. When concrete surface has become dry, thoroughly moisten surface immediately prior to application. At locations where coating shows discontinuities, pinholes or other defects, or when rain falls on newly coated surface before film has dried sufficiently to resist damage, apply additional coat of compound at specified rate of coverage.

3.09 REMOVAL OF FORMS AND SHORING

- A. Remove forms from surfaces requiring rubbing only as rapidly as rubbing operation progresses. Remove forms from vertical surfaces not requiring rubbed-finish when concrete has aged for required number of curing days. When curing compound is used, do not remove forms before 2 days after concrete placement.
- B. Leave soffit forms and shores in place until concrete has reached specified 28-day strength, unless directed otherwise by Engineer.

3.10 DEFECTIVE WORK

- A. Immediately repair defective work discovered after forms have been removed. When concrete surface is bulged, uneven, or shows excess honeycombing or form marks which cannot be repaired satisfactorily through patching, remove and replace entire section.

3.11 FINISHING

- A. Patch honeycomb, minor defects and form tie holes in concrete surfaces with cement mortar mixed one part cement to two parts fine aggregate. Repair defects by cutting out unsatisfactory material and replacing with new concrete, securely keyed and bonded to existing concrete. Finish to make junctures between patches and existing concrete as inconspicuous as possible. Use stiff mixture and thoroughly tamp into place. After each patch has stiffened sufficiently to allow for greatest portion of shrinkage, strike off mortar flush with surface.

- B. Apply rubbed finish to exposed surfaces of formed concrete structures as noted on Drawings. After pointing has set sufficiently, wet surface with brush and perform first surface rubbing with No. 16 carborundum stone, or approved equal. Rub sufficiently to bring surface to paste, to remove form marks and projections, and to produce smooth, dense surface. Add cement to form surface paste as necessary. Spread or brush material, which has been ground to paste, uniformly over surface and allow to reset. In preparation for final acceptance, clean surfaces and perform final finish rubbing with No. 30 carborundum stone or approved equal. After rubbing, allow paste on surface to reset; then wash surface with clean water. Leave structure with clean, neat and uniform-appearing finish.
- C. Apply wood float finish to concrete slabs.

3.12 FIELD QUALITY CONTROL

- A. Testing shall be performed under provisions of Section 01454 - Testing Laboratory Services.
- B. Unless otherwise directed by Engineer, following minimum testing of concrete is required. Testing shall be performed by qualified individuals employed by approved independent testing agency, and conform to requirements of ASTM C 1077.
 - 1. Take concrete samples in accordance with ASTM C 172.
 - 2. Make one set of four compression test specimens for each mix design at least once per day and for each 150 cubic yards or fraction thereof. Make, cure and test specimens in accordance with ASTM C 31 and ASTM C 39.
 - 3. When taking compression test specimens, test each sample for slump according to ASTM C 143, for temperature according to ASTM C 1064, for air content according to ASTM C 231, and for unit weight according to ASTM C 138.
 - 4. Inspect, sample and test concrete in accordance with ASTM C 94, Section 13, 14, and 15, and ACI 311-5R.
- C. Test Cores: Conform to ASTM C 42.
- D. Testing High Early Strength Concrete: When Type III cement is used in concrete, specified 7 day and 28 day compressive strengths shall be applicable at 3 and 7 days, respectively.
- E. If 7-day or 3-day test strengths (as applicable for type of cement being used) fail to meet established strength requirements, extended curing or resumed curing on those portions of structure represented by test specimens may be required. When additional curing fails to produce required strength, strengthening or replacement of portions of structure which fail to develop required strength may be required by Engineer, at no additional cost to Owner.

3.13 PROTECTION

- A. Protect concrete against damage until final acceptance by Owner.
- B. Protect fresh concrete from damage due to rain, hail, sleet, or snow. Provide protection while concrete is still plastic, and whenever precipitation is imminent or occurring.
- C. Do not backfill around concrete structures or subject them to design loadings until components of structure needed to resist loading are complete and have reached specified 28 day compressive strength, except as authorized otherwise by Engineer.

END OF SECTION

EXHIBIT “B”

BID PAGE

Hidalgo County
Hidalgo County Precinct No. 4 – Construction of Parking Lot at
San Carlos CRC and Sunflower Park
Bid No.: 2016-115-03-30-MSS

SCOPE OF WORK DESCRIPTION:
Construction of Parking Lot at San Carlos CRC and Sunflower Park

BID PRICE: \$ _____

BIDDER/COMPANY NAME: _____

ADDRESS: _____

CITY/STATE/ZIP CODE: _____

PHONE & FAX NO.'S: _____

CELLULAR #: _____

AUTHORIZED SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

BID FOR UNIT PRICE CONTRACTS

PLACE _____
DATE _____
PROJECT NO. 2016-115-03-30-MSS

Proposal of _____ (hereinafter called "Bidder") a corporation/ a partnership, or an individual doing business as: _____.

TO the **Hidalgo County – Precinct No. 4** (hereinafter called "Owner")

Gentlemen:

The Bidder, in compliance with your invitation for bids for the construction of _____ having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies; and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is part.

Bidder hereby agrees to commence work under this contract on or about date to be specified in written "Notice to Proceed" of the owner and to fully complete the project within 150 consecutive calendar days thereafter as stipulated in the specifications. Bidder further agrees to pay as liquidated damages the sum of \$500.00 for each consecutive calendar day thereafter as herein after provided in Paragraph 19 of the General Conditions.

BIDDER ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDUM:

*Insert corporation, partnership or individual as applicable.

Bidder agrees to perform all of the _____ work described in the specifications and shown on plans, for the following unit prices:

ITEM NO.	ITEM DESCRIPTION		UNIT	UNIT QTY.	UNIT PRICE IN FIGURES ⁽¹⁾	TOTAL FIGURES
General Project						
1-1	Mobilization, Bonds and Insurance (not to exceed 3% of Total Bid) and project signage.		LS	1		
		Total General Project				
Construction of Parking Lot at San Carlos CRC and Sunflower Park						
2-1	Install and furnish parking lot at San Carlos CRC and Sunflower Park as per plans and specifications		LS	1		
		Construction of Parking Lot at San Carlos CRC and Sunflower Park				
		Total Base Bid				

TOTAL BASE BID: \$ _____

(words)

(AMOUNTS ARE TO BE SHOWN IN BOTH WORDS AND FIGURES. IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN)

The above unit price shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within 10 days and deliver a Surety Bond, or Bonds as required by Paragraph 29 of the General Conditions. The bid security attached in the sum of \$ _____.

(\$ _____) is to become the property of the Owner in the event that contract and the bond are not executed within the time above set forth, as liquidated damages for the delay and additional expenses to the owner caused thereby.

Respectfully submitted:

By: _____
(Title)

(SEAL – if bid is by a corporation)

(Business Address and Zip Code)

EXHIBIT “C”
Insurance Requirements
Applicable to the Acquisition of Goods and /or Services
(other than Professional Services)

The Bidder awarded the contract shall furnish proof of insurance, which will also include any subcontractor that is subcontracted by the bidder in at least the following limits, to be in place prior to providing any services under this Contract and to continue at all times in force in effect during the term of this Contract:

1. A Five Hundred Thousand Dollar (\$500,000.00) Comprehensive General Liability insurance policy providing additional coverage to all underlying liabilities of County.
2. Automobile liability insurance policy with limits of at least Three Hundred Thousand Dollars (\$300,000.00) per person and Five Hundred Thousand Dollars (\$500,000.00) per occurrence. Coverage should include injury to or death of persons and property damage claims with limits up to Five Hundred Thousand (\$500,000.00) arising out of the services provided to County hereunder.
3. Uninsured/Underinsured motorist coverage in an amount equal to the bodily injury limits set forth immediately above;
4. Workers compensation insurance in amounts established by Texas law, unless the Bidder is specifically exempted from the Texas Workers Compensation Act, Texas Labor Code Chapter 401, et. seq.

Hidalgo County will only accept certificates of insurance on an Acord form (as attached hereto). Certificates of insurance naming County as an **additional insured** shall be submitted to County for approval prior to any services being performed by Contractor. Each policy of insurance required hereunder shall extend for a period equivalent to, or longer than the term of the Contract, and any insurer hereunder shall be required to give at least thirty (30) days written notice to the County prior to the cancellation of any such coverage on the termination date, or otherwise. This Contract shall be automatically suspended upon the cancellation, or other termination, of any required policy of insurance hereunder, and such suspension shall continue until evidence adequate replacement coverage is provided to County. If replacement coverage is not provided within thirty (30) days following suspension of the Contract, this Contract shall automatically terminate.

ACORD	CERTIFICATE OF INSURANCE	DATE (MM/DD/YY)
PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED	INSURERS AFFORDING COVERAGE	
	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
		INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THEIR TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY				EACH OCCURRENCE \$
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY				FIRE DAMAGE (Any one fire) \$
	<input type="checkbox"/> CLAIMS MADE OCCUR				MEDICAL (Any one person) \$
	<input type="checkbox"/> OWNER'S & CONT. PROT				PERSONAL & ADV INJURY \$
	<input type="checkbox"/> OWNER'S PROTECTIVE LIABILITY				GENERAL AGGREGATE \$
	<input type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC				PRODUCTS - COMP/OP AGG \$
B	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident) \$
	<input type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS				
<input type="checkbox"/> NON-OWNED AUTOS					
	GARAGE LIABILITY				AUTO ONLY-EA ACCIDENT \$
	<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC AGG \$
C	EXCESS LIABILITY				EACH OCCURRENCE \$
	<input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE \$
	<input type="checkbox"/> DEDUCTIBLE				\$
	<input type="checkbox"/> RETENTION \$				\$
D	WORKERS COMPENSATION AND EMPLOYER'S LIABILITY				WC STATU- <input type="checkbox"/> OTHER TORY LIMITS
					E.L. EACH ACCIDENT \$
					E.L. DISEASE-EA EMPLOYEE \$
					E.L. DISEASE-POLICY LIMIT \$
	OTHER				

DESCRIPTION OF OPERATIONS / LOCATION / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS
 County of Hidalgo shall be named as additional insured on all Commercial General Liability policies.

CERTIFICATE HOLDER	ADDITIONAL INSURED; INSURER LETTER:	CANCELLATION
Hidalgo County Attn: Purchasing Department 2812 S Highway Bus. 281 Edinburg, Texas 78539		SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BY CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.
		AUTHORIZED REPRESENTATIVE

Insurance Requirement Acknowledgment

I, _____, authorized representative for _____,
Company/Vendor

hereby acknowledge receipt of the County's required insurance limits. Said requirements:

- will be acquired within 10 working days after notification from Purchasing Department of bid awarded by the Hidalgo County Commissioners' Court;
- will acquire additional amounts required to meet the County's requirements within 10 working days after notification from Purchasing Department of bid award by the Hidalgo County Commissioners' Court; currently carry the following:

Automobile Liability: \$_____ General Liability: \$_____

- have already been met, see attached copy of insurance certificate.

Authorized Representative

Date

Notice to Bidder:

A certificate of insurance for the required insurance limits shall be provided to the Purchasing Department's Contract Managers in order to qualify for award of bid and to execute a contract between your Company and the County

Failure to provide Certificates of Insurance to the Purchasing Department's Contract Managers will cause the bid award to be rescinded and re-awarded to next lowest bidder. Certificates of Insurance will be monitored and verified on a **quarterly basis** to ensure coverage policy is in place. It is the Company's obligation to maintain the appropriate insurance coverage throughout the term of the contract.

THIS FORM MUST ACCOMPANY BID PACKET

PROJECT REQUIREMENTS ACKNOWLEDGMENT

This is to certify that I, _____, possess all of the APPLICABLE:

1. Licenses: _____.

2. Bond (if applicable) _____.

3. Certificates: _____.

4. Permits: _____.

5. Other: _____.

necessary to carry out the required project. Furthermore, I am providing copies of the required documentation so that, if my company is awarded this bid, I may be eligible to enter into a contract with Hidalgo County and proceed to complete the project in a timely manner.

* Any licenses, bonds (if applicable), certificates, permits, etc. which are required must be presented as part of the bid packet in order to expedite the bid evaluation process.

Authorized Signature

Date

Company

Address

City, State, Zip

THIS FORM MUST ACCOMPANY BID PACKET

EXHIBIT D-1

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

2 Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information is being disclosed.

Name of Officer

4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

Yes No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

Yes No

5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

6 Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;
or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or
(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

EXHIBIT D-2

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

FORM CIS

(Instructions for completing and filling this form are provided on the next page.)

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This is the notice to the appropriate local governmental entity that the following local government officer has become aware of facts that require the officer to file this statement in accordance with Chapter 176, Local Government Code.

OFFICE USE ONLY

Date Received

1 Name of Local Government Officer

2 Office Held

3 Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code

4 Description of the nature and extent of each employment or other business relationship and each family relationship with vendor named in Item 3.

5 List gifts accepted by the local government officer and any family member, if aggregate value of the gifts accepted from vendor named in item 3 exceeds \$100 during the 12-month period described by Section 176.003(a)(2)(B).

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

Date Gift Accepted _____ Description of Gift _____

(attach additional forms as necessary)

6 **AFFIDAVIT**

I swear under penalty of perjury that the above statement is true and correct. I acknowledge that the disclosure applies to each family member (as defined by Section 176.001(2), Local Government Code) of this local government officer. I also acknowledge that this statement covers the 12-month period described by Section 176.003(a)(2)(B), Local Government Code.

Signature of Local Government Officer

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

Signature of officer administering oath

Printed name of officer administering oath

Title of officer administering oath

LOCAL GOVERNMENT OFFICER CONFLICTS DISCLOSURE STATEMENT

Section 176.003 of the Local Government Code requires certain local government officers to file this form. A "local government officer" is defined as a member of the governing body of a local governmental entity; a director, superintendent, administrator, president, or other person designated as the executive officer of a local governmental entity; or an agent of a local governmental entity who exercises discretion in the planning, recommending, selecting, or contracting of a vendor. This form is required to be filed with the records administrator of the local governmental entity not later than 5 p.m. on the seventh business day after the date on which the officer becomes aware of the facts that require the filing of this statement.

A local government officer commits an offense if the officer knowingly violates Section 176.003, Local Government Code. An offense under this section is a misdemeanor.

Refer to chapter 176 of the Local Government Code for detailed information regarding the requirement to file this form.

INSTRUCTIONS FOR COMPLETING THIS FORM

The following numbers correspond to the numbered boxes on the other side.

1. **Name of Local Government Officer.** Enter the name of the local government officer filing this statement.
2. **Office Held.** Enter the name of the office held by the local government officer filing this statement.
3. **Name of vendor described by Sections 176.001(7) and 176.003(a), Local Government Code.** Enter the name of the vendor described by Section 176.001(7), Local Government Code, if the vendor: a) has an employment or other business relationship with the local government officer or a family member of the officer as described by Section 176.003(a)(2)(A), Local Government Code; b) has given to the local government officer or a family member of the officer one or more gifts as described by Section 176.003(a)(2)(B), Local Government Code; or c) has a family relationship with the local government officer as defined by Section 176.001(2-a), Local Government Code.
4. **Description of the nature and extent of each employment or other business relationship and each family relationship with vendor named in item 3.** Describe the nature and extent of the employment or other business relationship the vendor has with the local government officer or a family member of the officer as described by Section 176.003(a)(2)(A), Local Government Code, and each family relationship the vendor has with the local government officer as defined by Section 176.001(2-a), Local Government Code.
5. **List gifts accepted, if the aggregate value of the gifts accepted from vendor named in item 3 exceeds \$100.** List gifts accepted during the 12-month period (described by Section 176.003(a)(2)(B), Local Government Code) by the local government officer or family member of the officer from the vendor named in item 3 that in the aggregate exceed \$100 in value.
6. **Affidavit.** Signature of local government officer.

Local Government Code § 176.001(2-a): "Family relationship" means a relationship between a person and another person within the third degree by consanguinity or the second degree by affinity, as those terms are defined by Subchapter B, Chapter 573, Government Code.

Local Government Code § 176.003(a)(2)(A):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

PROPOSER'S AFFIDAVIT
Exhibit "E"

PROPOSER'S AFFIDAVIT OF NON-COLLUSION NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING
--

STATE OF TEXAS
COUNTY OF HIDALGO

Affiant, _____, being first duly sworn, deposes that:

(1) Affiant does hereby state neither the Proposer nor any of the Proposer's officers, partners, owners, agents, representatives, employees, or parties in interest, has in any way colluded, conspired, agreed, directly or indirectly with any person, firm, corporation, or other proposer, or potential proposer, to provide any money or other valuable consideration for assistance in procuring or attempting to procure a contract or fix the prices in the attached proposed or the proposal of any other proposer, and further states that no such money or other reward will be hereinafter paid.

(2) Affiant further states they have neither recommended or suggested to Hidalgo County or any of its officials or employees, any of the terms or provisions set forth in their Request for Proposal and subsequent agreement, except at a meeting open to all interested proposers, of which proper notice was given.

(3) Affiant, further states their officers, employees, or agents have not, and will not attempt to lobby, directly or indirectly, the Hidalgo County Commissioner's Court between proposal submission date and award by the Hidalgo County Commissioner's Court.

(4) Affiant further states no officer, or stockholder of the Proposer is a member of the staff, or related to any employee of the Hidalgo County except as noted herein below:

Signature/Title: _____

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public

My commission expires: _____, 20____

**Certification
Regarding Debarment, Suspension and Ineligibility**

As is required by the Federal Regulations Implementing Executive Order 12549, Debarment and Suspension, 45 CFR Part 76, Government-wide Debarment and Suspension, the applicant certifies, to the best of his or her knowledge and belief, that both it and its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency;
- b. Have not within a three-year period preceding this bid proposal and/or application 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;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a government entity with commission of any of the offenses enumerated herein; and
- d. Have not within a three-year period preceding this bid proposal and/or application had one or more public transactions terminated for cause or default.

Signature: _____
Print Name: _____
Title: _____
Telephone Number: _____
Date: _____

If the bidder is unable to certify to all of the statements in this Certification, such bidder should attach an explanation to this proposal.

**Non-Collusion Affidavit
Of Prime Bidder**

State of Texas §
 §
County of Hidalgo §

_____, being first duly sworn, deposes and says that:

(1) He _____, of _____, the Bidder that has submitted the attached Bid:

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such bid:

(3) Such bid is genuine and is not a collusive or sham Bid:

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

(Title)

Subscribed and sworn to before me this
day of _____, 20_____.

(Title)

My Commission expires _____

HISTORICALLY UNDERUTILIZED BUSINESS (HUB) DECLARATION

The primary objective of the Hidalgo County HUB Program is to ensure Historically Underutilized Businesses receive a fair and equal opportunity for participation in the County's procurement process. This fact holds true for Services (Professional & Non-Professional), Commodities, and Construction contracts and any subcontracts thereto. The program strongly encourages Prime Contractors to provide subcontracting opportunities to Certified Hub Contractors/Vendors. Our goal for HUB contractor/vendor participation, as well as HUB subcontractor participation is 30%. To be considered as a "Certified HUB Contractor/Vendor" the contractor/vendor must have been certified by, and hold a current and valid certification with any of the three agencies listed below.

Have you been Certified as a HUB or an MBE/WBE source?: Yes No

If yes, by whom?: Texas Building & Procurement Commission Other _____

Indicate Certification No(s): _____ or Are Certificate(s) Attached?: Yes No

LIST OF CERTIFIED HUB SUBCONTRACTORS

(Attach additional pages if necessary)

What percentage of the Bid, RFP, or RFQ is to be subcontracted with Certified HUB sources?: _____%
(List HUB Subcontractor information below).

HUB Subcontractor Name: _____ HUB Status: _____
Certifying Agency (Check all applicable): Texas Building & Procurement Commission Other
Address: _____ City: _____ State: _____ Zip: _____
Contact Person: _____ Title: _____ Phone No.: () _____
Subcontract Amount: \$ _____ Description of Work to be Performed: _____

HUB Subcontractor Name: _____ HUB Status: _____
Certifying Agency (Check all applicable): Texas Building & Procurement Commission Other
Address: _____ City: _____ State: _____ Zip: _____
Contact Person: _____ Title: _____ Phone No.: () _____
Subcontract Amount: \$ _____ Description of Work to be Performed: _____

HUB Subcontractor Name: _____ HUB Status: _____
Certifying Agency (Check all applicable): Texas Building & Procurement Commission Other
Address: _____ City: _____ State: _____ Zip: _____
Contact Person: _____ Title: _____ Phone No.: () _____
Subcontract Amount: \$ _____ Description of Work to be Performed: _____

**CONSTRUCTION
CONTRACT**

This Agreement entered into this _____, **2016** by and between **Hidalgo County**, hereinafter called the "OWNER", and _____ (**a corporation**) (a partnership) (an individual) of _____, State of Texas, hereinafter called "CONTRACTOR".

WITNESSETH

That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

PROJECT NAME: **Hidalgo County Precinct No. 4 – Construction of Parking Lot at San Carlos CRC and Sunflower Park**

PROJECT No.: **2016-115-03-30-MSS**
PROJECT DESCRIPTION: **Construction of Parking Lot at San Carlos CRC and Sunflower Park**

Heinafter called the project, for the sum of (\$XXX,XXX.XX) – and all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, Supplemental General Conditions and Special Conditions of the contract, the plans, which include all maps, plats, blue prints, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by LeFevre Engineering & Management Consulting, LLC and as enumerated in Paragraph 1 of the Supplemental General Conditions, all of which are made a part hereof and collectively evidence and constitute the contract.

The CONTRACTOR hereby agrees to commence work under this contract on or after a date to be specified in a written "Notice to Proceed" of the OWNER and to fully complete the project within (150) One hundred and fifty consecutive calendar days thereafter. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of (\$500.00) Five hundred dollars and zero cents for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in the General Conditions of the contract, and to make payments on account thereof as provided in Paragraph 25, "Payments to Contractor", of the General Conditions.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in four (4) counterparts, each of which shall be deemed an original, in year and day first above mentioned.

Name of Signatory
Name of Firm

Name of Firm: _____

Address: _____

Federal I.D./S.S.: _____

STATE OF TEXAS :

:

COUNTY OF HIDALGO :

This instrument was acknowledged before me on this the ___ day of _____, 20____,
by _____, _____ of and on behalf of _____.
(title) (a corporation) (a partnership) (an individual)

Notary Public - Signature

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <i>Note.</i> For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	
	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>	
	5 Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number	
	-
or	
Employer identification number	
	-

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
------------------	----------------------------	--------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.
Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
 - Form 1099-C (canceled debt)
 - Form 1099-A (acquisition or abandonment of secured property)
- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.
- If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.*
- By signing the filled-out form, you:
1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
 2. Certify that you are not subject to backup withholding, or
 3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
 4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note. ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

- A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)
- B—The United States or any of its agencies or instrumentalities
- C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)
- E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)
- F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state
- G—A real estate investment trust
- H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940
- I—A common trust fund as defined in section 584(a)
- J—A bank as defined in section 581
- K—A broker
- L—A trust exempt from tax under section 664 or described in section 4947(a)(1)
- M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.ssa.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/businesses and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. **Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.
2. **Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.
3. **Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.
4. **Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).
5. **Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee ¹ The actual owner ¹
5. Sole proprietorship or disregarded entity owned by an individual	The owner ³
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor ⁴
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity ³
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

*Note. Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spam@uce.gov or contact them at www.ftc.gov/idtheft or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

STATEMENT OF CREDENTIALS

1. GENERAL: In order to assist the Owner in determining the ability of each Bidder to properly fulfill the requirements of this proposed contract, the Bidder will complete the following items. All questions must be answered and the data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he/she desires.

Name of Bidder: _____

Address: _____

Date Organized: _____ Date Incorporated: _____

Office Number: _____ Fax Number: _____

Number of years in business under present name: _____

Type of work performed by your company: _____

Have you ever failed to complete any work awarded to you? _____

Have you ever defaulted on a contract? _____

2. EXPERIENCE: The Bidder will give below a list of similar projects which he/she has completed within the last five (5) years.

1. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

2. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

3. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

4. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

5. Owner: _____

Address: _____

Ph/Fx Number: _____ Email: _____

Scope of Work Description: _____

Date Completed: _____ Total Cost: _____

3. CONTRACTS ON HAND: The Bidder shall provide below a list of any contracts/projects he/she currently has on hand:

4. **SUBCONTRACTORS:** List any subcontractors you propose to use on the Hidalgo County's project that will comprise at least 20% of the total project cost. Use additional page if necessary. This information is considered preliminary and may be revised prior if bid is awarded and re-submitted during the pre-construction phase. However, it is expressly understood that the use of any subcontractor other than those listed with bid shall require written approval from Hidalgo County.

Failure to submit the information as required may result in a disqualification of your bid.

6. **PERFORMANCE OF WORK BY BIDDER:** Except as otherwise provided, the bidder shall perform no less than eighty percent (80%) of the work with his own organization, only twenty percent (20%) of the work may be subcontracted.

The organization of the specifications into divisions, sections, articles, etc., and the arrangement and titles of project drawings shall not control the Bidder in dividing the work among subcontractors or in establishing the extent of work to be performed by any trade.

Awarded bidder shall assign a project superintendent who is directly employed by the Bidder, that superintendent will be required to be on the job on a daily basis. No subcontractors will be allowed to act as project superintendents at any point during the construction of said project.

Bidder shall have a significant business presence with the Rio Grande Valley Area, the business must be headquartered in either Hidalgo, Cameron, or Starr County or a local office must be located in either of the three counties (Hidalgo, Cameron, Starr) with at least thirty percent (30%) of the total company workforce employed at the local office. County reserves the right to request payrolls and any necessary documentation to confirm that the local office meets these requirements.

Bidders shall carefully examine the plans, specifications and other documents, visit the site of the work, and fully inform themselves as to all conditions and matters which can affect the work or cost thereof. Should the bidder find discrepancies in, or omissions from the plans, specifications or other documents, or should he/she be in doubt as their meaning, he/she should at once notify the Engineer and obtain clarification by addendum prior to submitting any bid.

Bidder hereby certifies that said company carried liability coverage and workers compensation insurance coverage that meets the requirements set forth in this Request for Bids/Proposals when performing work on this project for Hidalgo County.

Furthermore, bidder certifies that any subcontractor on the project shall provide the said company with a certificate relating that all employees of the subcontractor also are provided with workers' compensation insurance coverage. Bidder will provide copies of all of these certificates to Hidalgo County during the course of the project for all subcontractors working on the project.

All subcontractors must comply with federally determined prevailing Davis-Bacon and Related Acts wage rate.

Hidalgo County encourages the hiring of minority women subcontractors and/or suppliers whenever and wherever feasible.

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the owner in verification of the recitals comprising this Statement of Credentials.

Executed this _____ day of _____, 20_____.

By _____

Title _____

Subscribed and sworn to me this _____ day of _____, 20____.

By: _____

Notary Public in and for _____ County, Texas

My commission expires _____



REQUEST FOR BIDS

HIDALGO COUNTY PRECINCT NO. 4
"Construction of Parking Lot at San Carlos CRC and Sunflower Park"

RFB PROJECT NO. 2016-115-03-30-MSS

RFB SUBMITTAL CHECK LIST

All forms listed below must be submitted in the RFB response. If forms are not submitted, your response may be considered as non responsive.

Indicate with a check mark (✓) the Forms completed and included in this response:

- Page 9 of Legal Notice
- Exhibit "C" - Acknowledgement forms (pages 3 and 4)
- Exhibit "D1 Revised CIQ Form -Copy of County Clerk File Recording fee receipt
- Exhibit "E" Proposers Affidavit
- Vendor Bidder Application and IRS form W-9
- Certification Regarding Debarment
- Statement of Credentials
- Submittal Check List
- One (1) Original, three (3) Copies of Response.

Signature

Printed Name

Date

PAYMENT BOND

A payment bond as described by Texas Government Code, Section 2253.021 (c) for the beneficiaries described by such sub section.

KNOW ALL MEN BY THESE PRESENTS, that _____
(hereinafter called the Principal(s)), as Principal(s), and _____
(hereafter called the Surety(s)), as Surety(s), are held and firmly bound unto
_____ (hereinafter called the Oblige), in the amount of
_____ Dollars (\$_____) for the payment whereof, the said Payment and
Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly
and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Oblige, dated
the ___ day of _____, 20___, for the _____ which contract is
hereby referred to and made a part hereof as fully and to the same extent as if copies at length
herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said
Principal shall pay all claimants supplying labor and material to him or a subcontractor in the
prosecution of the work provided for in said contract, then, this, obligation shall be void;
otherwise to remain in full force and effect.

PAYMENT BOND CONTINUED:

IN WITNESS WHEREOF, this instrument is executed in four counter parts, each one of which shall be deemed an original, this the _____ day of _____, A.D., 20__.

ATTEST:

PRINCIPAL

(Principal) Secretary
(Seal)

Signature

Witness as to Principal

Print/Type Name

Address

Address

ATTEST:

Surety

(Surety) Secretary
(Seal)

Attorney-in-Fact (Signature)

Witness as to Surety

Print/Type Name

Address

Address

Note: Date of Bond must be prior to date of Contract

(1)Correct Name of Contractor; (2) A Corporation, A Partnership or an individual, as case may be; (3) Correct Name of Surety; (4) Correct name of Owner; (5) County or Parish and State; (6) Owner; (7) if Contractor is Partnership, all partners should execute Bond.

PERFORMANCE BOND

A performance bond as described by Texas Government Code, Section 2253.021 (b) for the benefit of Hidalgo County-Urban County Program:

KNOW ALL MEN BY THESE PRESENTS, that _____
_____ (hereinafter called the Principal(s), as Principal (s),
and _____ hereinafter call the Surety(s), as
Surety(s), are held and firmly bound unto _____ (hereinafter
called the Oblige), in the amount of _____ Dollars (\$_____))
for the payment whereof, the said Principal and Surety bind themselves, and their heirs,
administrators, executors, successors and assigns, jointly and severally, firmly by these
presents.

WHEREAS, the Principal has entered into a certain written contract with the Oblige,
dated the ____ day of _____, 20__, for the _____
_____ which contract is hereby referred to and made a part hereof as
fully and to the same extent as if copies at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the
said Principal shall faithfully perform the work in accordance with the plans,
specifications and contract documents, then this obligation shall be void; otherwise to
remain in full force and effect.

IN WITNESS WHEREOF, this instrument is executed in four counter parts, each one of
which shall be deemed an original, this the _____ day of _____, A.D.,
20____.

PRINCIPAL

ATTEST:

(Principal) Secretary
(Seal)

Signature

PERFORMANCE BOND CONTINUED:

Witness as to Principal

Print/Type Name

Address

Address

ATTEST:

Surety

(Surety Secretary

Attorney-in-Fact (Signature)

Witness as to Surety

Print/Type Name

Address

Address

Note: Date of Bond must be prior to date of Contract

(1) Correct Name of Contractor; (2) A Corporation, A Partnership or an individual, as case may be; (3) Correct Name of Surety; (4) Correct name of Owner; (5) County or Parish and State; (6) Owner; (7) if Contractor is Partnership, all partners should execute Bond.

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**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
COMMUNITY DEVELOPMENT BLOCK
GRANT PROGRAM**

GENERAL CONDITIONS

1. Contract and Contract Documents

The project to be constructed pursuant to this contract will be financed with assistance from the Department of Housing and Urban Development and is subject to all applicable Federal laws and regulations.

The Plans, Specifications and Addenda, hereinafter enumerated in paragraph 1 of the Supplemental General Conditions shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

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2. **Definitions**

The following terms as used in this contract are respectively defined as follows:

- (a) "Contractor": A person, firm or corporation with whom the contract is made by the Owner.
- (b) "Subcontractor": A person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with, the Contractor.
- (c) "Work on (at) the project": Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any Subcontractor.

3. **Additional Instructions and Detail Drawings**

The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Architect/Engineer will prepare jointly (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Architect/Engineer in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work: each such schedule to be subject to change from time to time in accordance with the progress of the work.

4. **Shop or Setting Drawings**

The Contractor shall submit promptly to the Architect/Engineer two copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Architect/Engineer and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Architect/Engineer with two corrected copies. If requested by the Architect/Engineer the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Architect/Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications, unless he notifies the Architect/Engineer in writing of any deviations at the time he furnishes such drawings.

5. **Materials, Services, and Facilities**

- (a) It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary

construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete and deliver the work within the specified time.

- (b) Any work necessary to be performed after regular working hours, on Sunday or Legal Holidays, shall be performed without additional expense to the Owner.

6. Contractor's Title to Materials

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which any interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

7. Inspection and Testing of Materials

- (a) All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. The owner will pay for all laboratory inspection service direct, and not as a part of the contract.
- (b) Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to established conformance with specifications and suitability for uses intended.

8. "Or Equal" Clause

Whenever a materials, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and, any materials, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, is, in the opinion of the Architect/Engineer, of equal substance and function. It shall not be purchased or installed by the contractor without the Architect/Engineer's written approval.

9. Patents

- (a) The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.
- (b) License or Royalty Fees: License and/or Royalty Fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the Contractor.

(c) If the Contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, that, without exception, the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agrees to be performed under this contract, and shall indemnify the Owner for any cost, expense or damage which it may be obligated to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

10. Surveys, Permits, and Regulations

Unless otherwise expressly provided for in the Specifications, the Owner will furnish to the Contractor all surveys necessary for the execution of the work.

The Contractor shall procure and pay all permits, licenses and approvals necessary for the execution of the work.

The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

11. Contractor's Obligations

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract any and all supplemental plans and drawings, and in accordance with the directions of the Architect/Engineer as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required.

The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Architect/Engineer and the Owner.

12. Weather Conditions

In the event of temporary suspension of work, or during inclement weather, or whenever the Architect/Engineer shall direct, the Contractor will, and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Architect/Engineer, any work or materials shall have been damaged or injured by reason of failure on

the part of the Contractor or any of his Subcontractors so to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

13. Protection of Work and Property --Emergency

The Contractor shall at all times safely guard the owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the contract or by the Owner, or his duly authorized representatives.

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Architect/Engineer, in a diligent manner. He shall notify the Architect/Engineer immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Architect/Engineer for approval.

Where the Contractor has not taken action but has notified the Architect/Engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Architect/Engineer.

The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 17 of the General Conditions.

14. Inspection

The authorized representatives and agents of the Department of Housing and Urban Development shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.

15. Reports, Records, and Data

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract.

16. Superintendence by Contractor

At the site of the work the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Architect/Engineer and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on Contractor's payroll.

17. Changes in Work

No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

- (a) Unit bid prices previously approved.
- (b) An agreed lump sum,
- (c) The actual cost of:
 - 1. Labor, including foremen;
 - 2. Materials entering permanently into the work;
 - 3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
 - 4. Power and consumable supplies for the operation of power equipment;
 - 5. Insurance;
 - 6. Social Security and old age and unemployment contributions.

To the cost under (c) there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

18. Extras

Without invalidating the contract, the Owner may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner or its Architect/Engineer, acting officially for the Owner, and the price is stated in such order.

19. Time for Completion and Liquidated Damages

It is hereby understood and mutually agreed, by and between the Contractor and the Owner that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed."

The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the owner, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained for time to time by the Owner from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the contract an additional time is allowed for the completion of any work, the new limit fixed by such extension shall be of the essence of this contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; Provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

- (a) To any preference, priority or allocation order duly issued by the Government;
- (b) To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
- (c) To any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article;

Provided, further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

20. Correction of Work

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Architect/Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own

expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Architect/Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Architect/Engineer shall be equitable.

21. Subsurface Conditions Found Different

Should the Contractor encounter sub-surface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, he shall immediately give notice to the Architect/Engineer of such conditions before they are disturbed. The Architect/Engineer will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the Plans or indicated in the Specifications, he will at once make such changes in the plans and/or Specifications as he may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in paragraph 17 of the General Conditions.

22. Claims for Extra Cost

No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Architect/Engineer approved by the Owner, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of subparagraph 17(c) of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

23. Right of the Owner to Terminate Contract

In the event that any of provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said then (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor and the Surety shall have the right to take over and perform the contract; Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

24. Construction Schedule and Periodic Estimates

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Owner (a) a detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

25. Payments to Contractor

- (a) Not later than the 15th day of each calendar month the Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this contract, but to insure the proper performance of this contract, the Owner shall retain ten percent (10%) of the amount of each estimate until final completion and acceptance of all work covered by this contract: Provided, that the Contractor shall submit his estimate not later than the first day of the month; Provided, further, that the Owner at any time after fifty percent (50%) of the work has been completed, if it finds that satisfactory progress is being made, may make any of the remaining progress payments in full; Provided, further, that on completion and acceptance of each separate building, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made in full, including retained percentages thereon, less authorized deductions.
- (b) In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.
- (c) All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of material and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the contract.
- (d) Owner's Right to Withhold Certain Amounts and Make Application Thereof: The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnisher of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which

the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract, but in no event shall be provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

26. Acceptance of Final Payment Constitutes Release

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Performance and Payment bond.

27. Payments by Contractor

The Contractor shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered, (b) for all materials, tools, and other expendable equipment to the extent of ninety percent (90%) of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project, and the balance of the cost thereof, not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of each subcontractor's interest therein.

28. Insurance

The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

(a) Compensation Insurance: The Contractor shall procure and shall maintain during the life of the contract Workmen's Compensation Insurance as required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarity to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered

- by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.
- (b) Contractor's Public Liability and property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the amounts specified in the Supplemental General Conditions.
- (c) Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the amounts specified in the Supplemental General Conditions.
- (d) Scope of Insurance and Special Hazards: The insurance required under subparagraphs (b) and (c) hereof shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this contract as enumerated in the Supplemental General Conditions.
- (e) Builder's Risk Insurance (Fire and Extended Coverage): Until the project is completed and accepted by the Owner, the Owner, or Contractor (at the Owner's option as indicated in the Supplemental General Conditions, Form HUD-4238-N) (is) **(is not)** required to maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, subcontractors as their interests may appear. The Contractor shall not include any costs for Builder's Risk Insurance (fire and extended coverage) premiums during construction unless the Contractor is required to provide such insurance; however, this provision shall not release the Contractor from his obligation to complete, according to plans and specifications, the project covered by the contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor's undertaking.
- (f) Proof of Carriage of Insurance: The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be cancelled or materially altered, except after ten (10) days written notice has been received by the Owner."

29. **Contract Security**

The Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the contract prices as security for the faithful performance of this contract and also a payment bond in an amount not less than

one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by State, territorial or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law.

30. Additional or Substitute Bond

If at any time the Owner for justifiable cause shall be or become dissatisfied with any surety or sureties, then upon the Performance or Payment Bonds, the Contractor shall within five (5) days after notice from the Owner so to do, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such as acceptable bond to the Owner.

31. Assignments

The Contractor shall not assign the whole or any part of this contract or any moneys due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any moneys due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations or services rendered or materials supplied for the performance of the work called for in this contract.

32. Mutual Responsibility of Contractors

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration if such other Contractor or subcontractors will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

33. Separate Contract

The Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep informed of the progress and the detail work of other Contractors and shall notify the Architect/Engineer immediately of lack of progress or defective workmanship on the part of other Contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship on the part of other Contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by

others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

34. Subcontracting

- (a) The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.
- (b) The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.
- (c) The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.
- (e) Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

35. Architect/Engineer's Authority

The Architect/Engineer shall give all orders and directions contemplated under this contract and specifications, relative to the execution of the work. The Architect/Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Architect/Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Architect/Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.

The Architect/Engineer shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this contract and other Contractors performing work for the owner shall be adjusted and determined by the Architect/Engineer.

36. State Allowances

The Contractor shall include in his proposal the cash allowances stated in the Supplemental General Conditions. The Contractor shall purchase the "Allowed materials" as directed by the Owner on the basis of the lowest and best bid of at least three competitive bids. If the actual price for purchasing the "Allowed Materials" is more or less than the "Cash Allowance," the contract price shall be adjusted accordingly. The adjustment in contract price shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "Allowed materials" shall be included in the applicable section of the Contract Specifications covering this work.

37 Use of Premises and Removal of Debris

The Contract expressly undertakes at his own expense:

- (a) to take every precaution against injuries to persons or damage to property;
- (b) to store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors;
- (c) to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;
- (d) to clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;
- (e) before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations;
- (f) to effect all cutting, fitting or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Architect/Engineer, not to cut or otherwise alter the work of any other Contractor.

38. Quantities of Estimate

Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is specially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

39. Lands and Rights-of-Way

Prior to the start of construction, the Owner shall obtain all lands and right-of-way necessary for the carrying out and completion of work to be performed under this contract.

40. General Guaranty

Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Owner, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The owner will give notice of observed defects with reasonable promptness.

41. Conflicting Conditions

Any Provisions in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

42. Notice and Service Thereof

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said Contractor at his last given address, or delivered in person to the said Contractor or his authorized representative on the work.

43. Provisions Required by Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

44. Protection of Lives and Health

"The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes, in addition to specific safety and health regulations described by Chapter XIII, Bureau of Labor Standards, Department of Labor, Part 1518, Safety and Health Regulations for Construction, as outlined in the Federal Register, Volume 36, No. 75, Saturday, April 17, 1971. Title 29 - LABOR, shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the Contracting Authority may determine to be reasonably necessary."

45. Subcontracts

"The Contractor will insert in any subcontracts the Federal labor Standards Provisions contained herein and such other clauses as the Department of Housing and Urban Development may, by instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier

subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made."

46. Equal Employment Opportunity

During the performance of this contract the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, sex, color or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include, but not be limited to, the following: 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. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provision of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, sex, color, or national origin".

(3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the labor union or worker's representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Department of Housing and Urban Development and the Secretary of labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or Federally-assisted construction contracts, in accordance with

procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Department of Housing and Urban Development may, direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department of Housing and Urban Development, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

47. Interest of Member of or Delegate to Congress

No member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

48. Other Prohibited Interests

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contractor in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

49. Use and Occupancy prior to Acceptance by Owner

The Contractor agrees to use and occupancy of a portion or unit of the project before formal acceptance by the Owner, provided the Owner:

(a) Secures written consent of the Contractor except in the event, in the opinion of the Architect/Engineer, the Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other contract requirements.

- (b) Secures endorsement from the insurance-carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction, or,
- (c) When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit to complete construction. Consent of the surety must also be obtained.

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not limited to, the following: 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. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

50. Photographs of the Project

If required by the Owner, the Contractor shall furnish photographs of the project, in the quantities and as described in the Supplemental General Conditions.

51. Suspension of Work

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

52. Minimum Wages

All laborers and mechanics employed upon the work covered by this Contract shall be paid unconditionally and not less often than once each week, and without subsequent deductions of rebate on any account (except such payroll deductions as are made mandatory by law and such other payroll deductions as are permitted by the applicable regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to the Anti-Kickback Act thereafter identified), the full amount due at time of payment computed at wage rates not less than those contained in the wage determination decision of said Secretary of Labor (a copy of which is attached and herein incorporated by

reference), regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics. All laborers and mechanics employed upon such work shall be paid in cash, except that payment may be by check if the employer provides or secures satisfactory facilities approved by the Local Public Agency or Public Body for the cashing of the same without cost or expense to the employee. For the purpose of this clause, contributions made or costs reasonably anticipated 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 Section 5.5 (a) (1) (iv) of Title 29, Code of Federal Regulations. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

53. Underpayment Of Wages Or Salaries

In case of underpayment of wages by the Contractor or by any subcontractor to laborers or mechanics employed by the Contractor or subcontractor upon the work covered by this Contract, the Local Public Agency or Public body in addition to such other rights as may be afforded it under this Contract shall withhold from the Contractor, out of any payments due the Contractor, so much thereof as the Local Public Agency or Public Body may consider necessary to pay each laborers or mechanics the full amount of wages required by this Contract. The amount so withheld may be disbursed by the Local Public Agency or Public Body, for and on account of the Contractor or his subcontractor (as may be appropriate), to the respective laborers or mechanics to whom the same is due or on their behalf to plan, funds, or programs for any type of fringe benefit prescribed in the applicable wage determination.

54. Anticipated Costs of Fringe Benefits

If the Contractor does not make payments to a trustee or other third person, he may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing fringe benefits under a plan or program of a type expressly listed in the wage determination decision of the Secretary of Labor which is a part of this Contract: Provided, however, 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 programs. A copy of any findings made by the Secretary of Labor in respect to fringe benefits being provided by the Contractor must be submitted to the Local Public Agency or Public Body with the first payroll filed by the Contractor subsequent to receipts of the findings.

55. Overtime Compensation Required by Contract Work Hours and Safety Standards Act (76 Stat. 357-360: Title 40 U.S.C., Section 327-332)

(a) 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, including watchmen and guards, shall require or

permit any laborer or mechanic in any workweek in which he is employed on such work to work in excess of 8 hours in any calendar day or in excess of 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of 8 hours in a calendar day or in excess of 40 hours in such work week, as the case may be.

- (b) Violation: liability for unpaid wages liquidated damages . In the event of any violation of the clause set forth in paragraph (a), the Contractor and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the clause set forth in paragraph (a), in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excessive of 8 hours or in excessive of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in paragraph (a).
- (c) Withholding for liquidated damages. The Local Public Agency or Public Body shall withhold or cause to be withheld, from any monies payable on account work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for liquidated damages as provided in the clause set forth in paragraph (b).
- (d) Subcontracts. The Contractor shall insert in any subcontracts the clauses in paragraph (a), (b), and (c) of this Section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontractors which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

56. Employment of Apprentices/Trainees

- (a) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship Agency recognized by the Bureau, or if a person is employed in his 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 Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor as to his entire work force under the registered program. Any employee listed on payroll at an apprentice wage rate, who is not a trainee as defined in subdivision (b) of this subparagraph or is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The contractor or subcontractor will be required to furnish to the contracting officer or representative of the Wage-Hour Division of the Labor written evidence of the registration of his program and apprentices as well the appropriate ratios and wage rates (expressed in percentages of the journeyman hourly rates), for the area of construction prior to using any apprentices on the contract work. The wage rate paid apprentices shall be not less than the appropriate percentage of the journeyman's rate contained in the applicable wage determination.
- (b) Trainees. Except as provided in 29 CFR 5.15 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, evidence by formal certification, by the U.S. Department of Labor, Manpower Administration, Bureau of Apprentice and Training. The ratio of trainees to journeymen shall not by greater than permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage determined by the Secretary of Labor for the classification of work he actually performed. The contractor or subcontractor will be required to furnish the contracting officer or a representative of the Wage-Hour Division of the U.S. Department of Labor Written evidence of the certification of his program, the registration of the trainees, and the ratios and wage prescribed in that program, In the event the Bureau of Apprenticeship and Training 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 Parts 30.

57. Employment of Certain Persons Prohibited

No person under the age of sixteen years and no person who, at the time, is serving sentence in a penal or correctional institute shall be employed on the work covered by this Contract.

58. Regulations Pursuant to So-Called "Anti-Kickback Act"

The Contractor shall comply with the applicable regulations (a copy of which is attached and herein incorporated by references) or the Secretary of Labor, United States Department of Labor, made pursuant to the so-called "Anti-Kickback Act" of June 13, 1934 (48 Stat. 948: 62 Stat. 862; Title U.S.C., Section 874: and Title 40 U.S.C., Section 276 (c), and any amendments or modifications thereof, shall cause appropriate provisions to be inserted in subcontracts to insure compliance therewith by all subcontracts subject thereto, and shall be responsible for the submission of affidavits required by subcontractors thereunder except as said Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions from the requirements thereof.

59. Employment of Laborers or Mechanics Not Listed in Aforesaid Wage Determination Decision

Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Contract will be classified or reclassified conformably to the wage determination by the Local Public Agency or Public Body, and a report of the action taken shall be submitted by the Local Public Agency or Public Body, through the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the Local Public Agency or Public Body shall be referred, through the Secretary of Housing and Urban Development, to the Secretary of Labor for final determination.

60. Fringe Benefits Not Expressed as Hourly Wage Rates

The Local Public Agency or Public Body shall require, 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 wage rate and the Contractor is obligated to pay cash equivalent of such a fringe benefit, and hourly cash equivalent thereof to be established. In the event the interested parties cannot agree upon a cash equivalent of the fringe benefit, the question, accompanied by the recommendation of the Local Public Agency or Public Body, shall be referred, through the Secretary of Housing and Urban Development, to the Secretary of Labor for determination.

61. Posting Wage Determination Decision and Authorized Wage Deductions

The applicable wage poster of the Secretary of Labor, United States Department of Labor, and the applicable wage determination decisions of said Secretary of Labor with respect to the various classification of laborers and mechanics employed and to be employed upon the work covered by this Contract, and a statement showing all deductions, if any, in accordance with the provisions of this Contract, to be made from wages actually earned by persons so employed or to be employed in such classifications, shall be posted at appropriate conspicuous points at the site of the work.

62. Complaints, Proceedings, or Testimony by Employees

No laborer or mechanic to whom the wage, salary, or other labor standards provision of this Contract are applicable shall be discharged or in any other manner discriminated against by Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify, in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

63. Claims and Disputes Pertaining to Wage Rates

Claims and disputes pertaining to wage rates or to classification of laborers and mechanics employed upon the work covered by this Contract shall be promptly reported by the Contractor in writing to the Local Public Agency or Public Body for referral by letter through the Secretary of Labor, United States Department of Labor, whose decision shall be final with respect thereto.

64. Questions Concerning Certain Federal Statutes and Regulations

All questions arising under this Contract which relate to the application of interpretation of (a) the aforesaid Anti-Kickback Act, (b) the Contract Work Hours and Safety Standards Act (c) the aforesaid Davis-Bacon Act, (d) the regulations of issued by the Secretary of Labor, United States Department of Labor, pursuant to said Acts, or (c) the labor standards provisions of any other pertinent Federal statute, shall be referred, through the Local Public Agency or Public Body and the Secretary of housing and Urban Development, to the said Secretary's appropriated ruling or interpretation which shall be authoritative and may be relied upon for the purposes of this Contract.

65. Payroll and Basic Payroll Records of Contractor and Subcontractors

The Contractor and each subcontractor shall prepare his payrolls on forms satisfactory to and in accordance with instructions to be furnished by the Local Public Agency or Public Body. The Contractor shall submit weekly to the Local Public Agency or Public Body two certified copies of all payrolls of the Contractor and of the subcontractors, it being understood that the Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. Each such payroll shall contain the "Weekly Statement of Compliance" set forth in Section 3.3 of Title 29, Code of Federal Regulations. The payrolls and basic payroll records of the Contractor and each subcontractor covering all laborers and mechanics employed upon the work covered by this Contract shall be maintained during the course of the work and preserved for a period of 3 years thereafter. Such payrolls and basic payroll records shall contain the name and address of each such employee, his correct classification, rate of pay (including rates of contribution or costs anticipated of the types described in Section 1(b) (2) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. In addition, whenever the Secretary of Labor has found under Section 5.5 (a) (1) (iv) of Title 29, Code of Federal Regulations, 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 or subcontractor 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. The Contractor and

each subcontractor shall make his employment records with respect to persons employed by him upon the work covered by this Contract available for inspection by authorized representatives of the Secretary of Housing and Urban Development, the Local Public Agency or Public Body, and the United States Department of Labor. Such representatives shall be permitted to interview employees of the Contractor or of any subcontractor during working hours on the job.

66. Specific Coverage Of Certain Types Of Work By Employees

The transportation of material and supplies to or from the site of the Project or Program to which this Contract pertains by the employees of the Contractor or of any subcontractor, and manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the Project or Programs to which this Contract pertains by person employed by the Contractor or any subcontractor, shall, for the purposes of this Contract, and without limiting the generality of the foregoing provisions of this Contract, be deemed to be work to which these Federal Labor Standards Provisions are applicable.

67. Ineligible Subcontractors

The Contractor shall not subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the Local Public Agency's or Public Body's prior written approval of the subcontractor. The Local Public Agency or Public Body will not approve any subcontractor for work covered by this Contract who is at the time ineligible under the provisions of any applicable regulations issued by the Secretary of Labor, United States Department of Labor or the Secretary of Housing and Urban Development, to receive an award of such subcontract.

68. Provisions to Be Included in Certain Subcontracts

The Contractor shall include or cause to be included in each subcontract covering any of the work covered by this Contract, provisions which are consistent with these Federal Labor Standards Provisions and also a clause requiring the subcontractors to include such provisions in any lower tier subcontracts which they may enter into, together with a clause requiring such insertion in any further subcontracts that may in turn be made.

69. Breach of Foregoing Federal Labor Standards Provisions

In addition to the cause for termination of this Contractor as herein elsewhere set forth, the Local Public Agency or Public Body reserves the right to terminate this Contract if the Contractor or any subcontractor whose subcontract covers any of the work covered by this Contract shall breach any of these Federal Labor Standards Provisions. A breach of these Federal Standards Provisions may also be grounds for debarment as provided by the applicable regulation issued by the Secretary of Labor, United States Department of Labor.

70. Employment Practices

The Contractor (1) shall, to the greatest extent practicable, follow hiring and employment practices for work on the project which will provide new job opportunities for the unemployed and underemployed, and (2) shall insert or cause to be inserted the same provision in each construction subcontract.

71. Contract Termination; Debarment

A breach of Section 45 and the Federal Labor Standards Provisions, may be grounds for termination of the contract, and for debarment as provided in 29 CFR 5.6.

General Decision Number: TX160008 01/08/2016 TX8

Superseded General Decision Number: TX20150008

State: Texas

Construction Types: Heavy and Highway

Counties: Cameron, Hidalgo and Webb Counties in Texas.

HEAVY & 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

* SUTX2011-003 08/02/2011

	Rates	Fringes
CEMENT MASON/CONCRETE		
FINISHER (Paving & Structures)...	\$ 12.46	
FORM BUILDER/FORM SETTER		
(Structures).....	\$ 12.30	
FORM SETTER (Paving & Curb).....	\$ 12.16	
LABORER		
Asphalt Raker.....	\$ 10.61	
Flagger.....	\$ 9.10	
Laborer, Common.....	\$ 9.86	
Laborer, Utility.....	\$ 11.53	
Pipelayer.....	\$ 11.87	
Work Zone Barricade		
Servicer.....	\$ 12.88	
POWER EQUIPMENT OPERATOR:		
Asphalt Distributor.....	\$ 13.48	
Asphalt Paving Machine.....	\$ 12.25	
Broom or Sweeper.....	\$ 10.33	
Crane, Lattice Boom 80		
Tons or Less.....	\$ 14.39	

Crawler Tractor.....	\$ 16.63
Excavator, 50,000 lbs or less.....	\$ 12.56
Excavator, over 50,000 lbs..	\$ 15.23
Foundation Drill, Truck Mounted.....	\$ 16.86
Front End Loader Operator, Over 3 CY.....	\$ 13.69
Front End Loader, 3 CY or less.....	\$ 13.49
Loader/Backhoe.....	\$ 12.77
Mechanic.....	\$ 15.47
Milling Machine.....	\$ 14.64
Motor Grader Operator, Rough.....	\$ 14.62
Motor Grader, Fine Grade....	\$ 16.52
Scraper.....	\$ 11.07
 Servicer.....	 \$ 12.34
 Steel Worker (Reinforcing).....	 \$ 14.07
 TRUCK DRIVER	
Lowboy-Float.....	\$ 13.63
Single Axle.....	\$ 10.82
Single or Tandem Axle Dump..	\$ 14.53
Tandem Axle Tractor with Semi Trailer.....	\$ 12.12

WELDER.....\$ 14.02

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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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.

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END OF GENERAL DECISION

Title 29 – LABOR

Subtitle A – Office of The Secretary of Labor

PART 3 - CONTRACTORS AND SUBCONTRACTORS ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

<u>Sect.</u>	<u>Name</u>
3.1	Purpose and scope.
3.2	Definitions.
3.3	Weekly statement with respect to payment of wages.
3.4	Submission of weekly statements and the preservation and inspection of weekly payroll records.
3.5	Payroll deductions permissible without application to or approval of the Secretary of Labor.
3.6	Payroll deductions permissible with the approval of the Secretary of Labor.
3.7	Applications for the approval of the Secretary of Labor.
3.8	Action by the Secretary of Labor upon applications.
3.9	Prohibited payroll deductions.
3.10	Methods of payment of wages.
3.11	Regulations part of contract.

Authority: R.S. 161, sec. 2, 48 Stat. 848; Reorg. Plan No. 14, of 1950, 64 Stat. 1267; 5 U.S.C. 301; 40 U.S.C. 276c.

Source: 29 FR 97, Jan. 4, 1964, unless otherwise noted.

29 CFR 3.1 - Purpose and scope.

This part prescribes "anti-kickback" regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

29 CFR 3.2 - Definitions.

As used in the regulations in this part:

(a) The terms building or work generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a building or work within the meaning of the regulations in this part.

(b) The terms construction, prosecution, completion, or repair mean all types of work done on a particular building or work at the site thereof, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

(c) The terms public building or public work include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal agency is a contracting party, regardless of whether title thereof is in a Federal agency.

(d) The term building or work financed in whole or in part by loans or grants from the United States includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term includes building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by loans or grants from the United States is employed and receiving wages, regardless of any contractual relationship alleged to exist between him and the real employer.

(f) The term any affiliated person includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary, or otherwise, and an officer or agent of such corporation.

(g) The term Federal agency means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and instrumentalities.

[29 FR 97, Jan. 4, 1964, as amended at 38 FR 32575, Nov. 27, 1973]

29 CFR 3.3 - Weekly statement with respect to payment of wages.

(a) As used in this section, the term employee shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.

(b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by this part 3 and part 5 of this chapter during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and shall be on form WH 348, "Statement of Compliance", or on an identical form on the back of WH 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Sample copies of WH 347 and WH 348 may be obtained from the Government contracting or sponsoring agency, and copies of these forms may be purchased at the Government Printing Office.

(c) The requirements of this section shall not apply to any contract of \$2,000 or less.

(d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

[29 FR 97, Jan. 4, 1964, as amended at 33 FR 10186, July 17, 1968; 47 FR 23679, May 28, 1982]

29 CFR 3.4 - Submission of weekly statements and the preservation and inspection of weekly payroll records.

(a) Each weekly statement required under Sec. 3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

(b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor. (Reporting and recordkeeping requirements in paragraph (b) have been approved by the Office of Management and Budget under control number 1215-0017)

[29 FR 97, Jan. 4, 1964, as amended at 47 FR 145, Jan. 5, 1982]

29 CFR 3.5 - Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

(a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.

(b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A bona fide prepayment of wages is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.

(c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.

(d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: Provided, however, That the following standards are met:

(1) The deduction is not otherwise prohibited by law;

(2) It is either:

(i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or

(ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees;

(3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and

(4) The deductions shall serve the convenience and interest of the employee.

(e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.

(f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.

(g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.

(h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.

(i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: Provided, however, That a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.

(j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and part 531 of this title. When such a deduction is made the additional records required under Sec. 516.25(a) of this title shall be kept.

(k) Any deduction for the cost of safety equipment of nominal value purchased by the employee as his own property for his personal protection in his work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either

(1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or

(2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9770, May 28, 1971]

29 CFR 3.6 - Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under Sec. 3.5. The Secretary may grant permission whenever he finds that:

(a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;

(b) The deduction is not otherwise prohibited by law;

(c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and

(d) The deduction serves the convenience and interest of the employee.

29 CFR 3.7 - Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under Sec. 3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

(a) The application shall be in writing and shall be addressed to the Secretary of Labor.

(b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of Sec. 3.6, and specifies any conditions which have changed in regard to the payroll deductions.

(c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of Sec. 3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.

(d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.

(e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9771, May 28, 1971]

29 CFR 3.8 - Action by the Secretary of Labor upon applications.

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of Sec. 3.6; and shall notify the applicant in writing of his decision.

29 CFR 3.9 - Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which are not found to be permissible under Sec. 3.6 are prohibited.

29 CFR 3.10 - Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

29 CFR 3.11 - Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see Sec. 5.5(a) of this subtitle.



U.S. Department of Housing
and Urban Development

Labor Relations Desk Guide
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DAVIS-BACON

LABOR STANDARDS

*A Contractor's Guide
to Prevailing Wage Requirements
for Federally-Assisted Construction Projects*

*January 2012
Previous versions obsolete*



INTRODUCTION

This Guide has been prepared for you as a contractor performing work on construction projects that are assisted by the Department of Housing and Urban Development and subject to Davis-Bacon prevailing wage requirements. This Guide does not address contractor requirements involved in direct Federal contracting where HUD or another Federal agency enters into a procurement contract. In this latter case, the Federal Acquisition Regulations (FAR) are applicable. While the guidance contained in this Guide is generally applicable to any Davis-Bacon covered project, specific questions pertaining to direct Federal contracts should be addressed to the Contracting Officer who signed the contract for the Federal agency .

Our objective here is to provide you with a guide which is simple and non-bureaucratic yet comprehensive and which will help you better understand and comply with Davis-Bacon labor standards. HUD's Office of Labor Relations worked closely with the Department of Labor's Wage and Hour Division to make sure that the labor standards provisions in your contract and the specifics of complying with them represent the latest information. It is the Department of Labor which has general administrative oversight of all Federal contracting agencies, such as HUD, which administer the day-to-day responsibilities of enforcing Davis-Bacon provisions in construction contracts they either fund or assist in funding.

There are three chapters in this Guide. The first chapter offers a brief description of the laws and regulations associated with Federal labor standards administration and enforcement and discusses both what's in your contract that requires Davis-Bacon compliance and your responsibilities. The second chapter deals with labor standards and payroll reporting requirements. The third chapter discusses what can happen in the event there is a dispute about the wage rates that should be (or have been) paid and any back wages that may be due.

Finally, not all HUD construction projects are covered by Davis-Bacon wage rates. For the purpose of this Guide, we are assuming that a determination has already been made that Davis-Bacon wage rates are applicable. Should you wish assistance in determining whether Davis-Bacon wage rates apply to a particular project or if you need other related technical assistance, please consult with the HUD Labor Relations Field staff for your area. If you don't know which staff to contact, a list of Labor Relations field offices and their geographic areas and telephone numbers can be found on HUD's Home Page at the address below.

Visit the Office of Labor Relations on-line:

<http://www.hud.gov/offices/olr>

Obtain additional copies of this Guide and other publications at our website or by telephone from HUD's Customer Service Center at (800)767-7468.

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CHAPTER 1 LAWS, REGULATIONS, CONTRACTS AND RESPONSIBILITIES

The following paragraphs describe what the labor standards laws and regulations actually say and what they mean to you on HUD projects:

1-1 DAVIS-BACON AND OTHER LABOR LAWS.

- a. **The Davis-Bacon Act (DBA).** The Davis-Bacon Act requires the payment of prevailing wage rates (which are determined by the U.S. Department of Labor) to all laborers and mechanics on Federal government and District of Columbia construction projects in excess of \$2,000. Construction includes alteration and/or repair, including painting and decorating, of public buildings or public works.

Most HUD construction work is not covered by the DBA itself since HUD seldom contracts directly for construction services. Most often, if Davis-Bacon wage rates apply to a HUD project it is because of a labor provision contained in one of HUD's "Related Acts" such as the U. S. Housing Act of 1937, the National Housing Act, the Housing and Community Development Act of 1974, the National Affordable Housing Act of 1990, and the Native American Housing Assistance and Self-Determination Act of 1996. The Related Acts are often referred to as the Davis-Bacon and Related Acts or DBRA.

- b. **The Contract Work Hours and Safety Standards Act (CWHSSA).** CWHSSA requires time and one-half pay for overtime (O/T) hours (over 40 in any workweek) worked on the covered project. The CWHSSA applies to both direct Federal contracts and to indirect Federally-assisted contracts **except** where the assistance is solely in the nature of a loan guarantee or insurance. CWHSSA violations carry a liquidated damages penalty (\$10/day per violation). Intentional violations of CWHSSA standards can be considered for Federal criminal prosecution.

CWHSSA does not apply to prime contracts of \$100,000 or less. In addition, some HUD projects are not covered by CWHSSA because some HUD programs only provide loan guarantees or insurance. CWHSSA also does not apply to construction or rehabilitation contracts that are not subject to Federal prevailing wage rates (e.g., Davis-Bacon wage rates, or HUD-determined rates for operation of public housing and Indian block grant-assisted housing). However, even though CWHSSA overtime pay is not required, Fair Labor Standards Act (FLSA) overtime pay is probably still applicable. (See also Labor Relations Letter SL-95-01, CWHSSA Coverage threshold for overtime and health and safety provision, available on-line at the HUD Labor Relations Library at: www.hud.gov/offices/olr/librar.cfm)

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- c. **The Copeland Act (Anti-Kickback Act).** The Copeland Act makes it a Federal crime for anyone to require any laborer or mechanic (employed on a Federal or Federally-assisted project) to kickback (i.e., give up or pay back) any part of their wages. The Copeland Act requires every employer (contractors and subcontractors) to submit weekly certified payroll reports (CPRs) and regulates permissible payroll deductions.
 - d. **The Fair Labor Standards Act (FLSA).** The FLSA contains Federal minimum wage rates, overtime (O/T), and child labor requirements. These requirements generally apply to any labor performed. The DOL has the authority to administer and enforce FLSA. HUD will refer to the DOL any possible FLSA violations that are found on HUD projects.

1-2 DAVIS-BACON REGULATIONS.

The Department of Labor (DOL) has published rules and instructions concerning Davis-Bacon and other labor laws in the Code of Federal Regulations (CFR). These regulations can be found in ***Title 29 CFR Parts 1, 3, 5, 6 and 7.*** Part 1 explains how the DOL establishes and publishes DBA wage determinations (aka wage decisions) and provides instructions on how to use the determinations. Part 3 describes Copeland Act requirements for payroll deductions and the submission of weekly certified payroll reports. Part 5 covers the labor standards provisions that are in your contract relating to Davis-Bacon Act wage rates and the responsibilities of contractors and contracting agencies to administer and enforce the provisions. Part 6 provides for administrative proceedings enforcing Federal labor standards on construction and service contracts. Last, Part 7 sets parameters for practice before the Administrative Review Board. These regulations are used as the basis for administering and enforcing the laws.

DOL Regulations are available on-line on the World Wide Web:
http://www.dol.gov/dol/allcfr/Title_29.htm

1-3 CONSTRUCTION CONTRACT PROVISIONS

Each contract subject to Davis-Bacon labor standards requirements must contain labor standards clauses and a Davis-Bacon wage decision. These documents are normally bound into the contract specifications

- a. The labor standards clauses. The labor standards clauses describe the responsibilities of the contractor concerning Davis-Bacon wages and obligate the contractor to comply with the labor requirements. The labor standards clauses also provide for remedies in the event of violations, including withholding from payments due to the contractor to ensure the payment of wages or liquidated damages which may be found due. These contract clauses enable the contract administrator to enforce the Federal labor standards applicable to the project. HUD has standard forms that contain contract clauses. For example, the HUD-2554, Supplementary Conditions to the Contract for Construction, which is issued primarily for FHA multifamily housing and other construction projects

administered by HUD; the HUD-4010, Federal Labor Standards Provisions, which is used for CDBG and HOME projects, and the HUD-5370, General Conditions of the Contract for Construction or the HUD-5370-EZ (construction contracts ≤\$100,000) which are used for Public and Indian Housing projects.

HUD program labor standards forms are available on-line at:
www.hud.gov/offices/adm/hudclips/index.cf

- b. Davis-Bacon Wage Decisions. The Davis-Bacon wage decision (or wage determination) is a listing of various construction work classifications, such as Carpenter, Electrician, Plumber and Laborer, and the minimum wage rates (and fringe benefits, where prevailing) that people performing work in those classifications must be paid

Davis-Bacon wage decisions are established by the DOL for various types of construction (e.g., residential, heavy, highway) and apply to specific geographic areas, usually a county or group of counties. Wage decisions are modified from time to time to keep them current. In most cases, when the contract is awarded or when construction begins, the wage decision is “locked-in” and no future modifications are applicable to the contract or project involved.

All current Davis-Bacon wage decisions can be accessed on-line at no cost at:
<http://www.wdol.gov>

1-4 RESPONSIBILITY OF THE PRINCIPAL CONTRACTOR

The principal contractor (also referred to as the ***prime*** or ***general contractor***) is responsible for the full compliance of all employers (the contractor, subcontractors and any lower-tier subcontractors) with the labor standards provisions applicable to the project. Because of the contractual relationship between a prime contractor and his/her subcontractors, subcontractors generally should communicate with the contract administrator only through the prime contractor. (See Contract Administrator, below.)

To make this Guide easier to understand, the term “prime contractor” will mean the principal contractor; “subcontractor” will mean all subcontractors including lower-tier subcontractors; and the term “employer” will mean all contractors as a group, including the prime contractor and any subcontractors and lower-tier subcontractors.

1-5 **RESPONSIBILITY OF THE CONTRACT ADMINISTRATOR.**

The ***contract administrator*** is responsible for the proper administration and enforcement of the Federal labor standards provisions on contracts covered by Davis-Bacon requirements. We use this term to represent the person (or persons) who will provide labor standards advice and support to you and other project principals (e.g., the owner, sponsor, architect), including providing the proper Davis-Bacon wage decision (see 2-1, ***The Wage Decision***) and ensuring that the wage decision and contract clauses are incorporated into the contract for construction. The contract administrator also monitors labor standards compliance (see 2-6, ***Compliance Reviews***) by conducting interviews with construction workers at the job site and reviewing payroll reports, and oversees any enforcement actions that may be required.

The contract administrator could be an employee or agent of HUD, or of a city or county or public housing agency. For HUD projects administered directly by HUD staff, usually FHA-insured multifamily projects, the contract administrator will be the HUD Labor Relations field staff. But many HUD-assisted projects are administered by local contracting agencies such as Public Housing Agencies (PHAs), Indian tribes and tribally-designated housing entities (TDHEs), and States, cities and counties under HUD's Community Development Block Grant (CDBG) and HOME programs. In these cases, the contract administrator will likely be local agency staff. In either case, the guidance for you remains essentially the same.

The DOL also has a role in monitoring Davis-Bacon administration and enforcement. In addition, DOL has independent authority to conduct investigations. A DOL investigator or other DOL representative may visit Davis-Bacon construction sites to interview construction workers or review payroll information.

CHAPTER 2 HOW TO COMPLY WITH LABOR STANDARDS AND PAYROLL REPORTING REQUIREMENTS

WHERE TO START? Now that you know you're on a Davis-Bacon project and you know some of the legal and practical implications, what's next?

SECTION I - THE BASICS

2-1 **THE WAGE DECISION.**

Davis-Bacon labor standards stipulate the wage payment requirements for Carpenters, Electricians, Plumbers, Roofers, Laborers, and other construction work classifications that may be needed for the project. The Davis-Bacon wage decision that applies to the project contains a schedule of work classifications and wage rates that must be followed. If you don't have it already (and by now you should), you'll want to get a copy of the applicable Davis-Bacon wage decision.

Remember, the wage decision is contained in the contract specifications along with the labor standards clauses. See 1-3, Construction Contract Provisions.

- a. **The work classifications and wage rates.** A Davis-Bacon wage decision is simply a listing of different work classifications and the minimum wage rates that must be paid to anyone performing work in those classifications. You'll want to make sure that the work classification(s) you need are contained in the wage decision and make certain you know exactly what wage rate(s) you will need to pay. Some wage decisions cover several counties and/or types of construction work (for example, residential and commercial work) and can be lengthy and difficult to read. Contact the contract administrator (HUD Labor Relations field staff or local agency staff) if you have any trouble reading the wage decision or finding the work classification(s) you need.

To make reading lengthy wage decisions easier for you, the contract administrator may prepare a Project Wage Rate Sheet (HUD-4720). This Sheet is a one-page transcript that will show only the classifications and wage rates for a particular project. A blank copy of a Project Wage Rate Sheet is provided for you in the appendix. Also, a fillable version of this form is available on-line at HUDClips (see web address in the Appendix). Contact the contract administrator monitoring your project for assistance with a Project Wage Rate Sheet.

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- b. **Posting the wage decision.** If you are the prime contractor, you will be responsible for posting a copy of the wage decision (or the Project Wage Rate Sheet) and a copy of the DOL Davis-Bacon poster titled Employee Rights under the Davis-Bacon Act (Form WH-1321) at the job site in a place that is easily accessible to all of the construction workers employed at the project and where the wage decision and poster won't be destroyed by wind or rain, etc. The Employee Rights under the Davis-Bacon Act poster is available in English and Spanish on-line at HUDClips (see address in the Appendix).

The Employee Rights under the Davis-Bacon Act poster (WH-1321) replaces the Notice to all Employees. The new poster is available in English and Spanish on-line at HUDClips (see address in the Appendix).

2-2 ADDITIONAL "TRADE" CLASSIFICATIONS AND WAGE RATES.

What if the work classification you need isn't on the wage decision? If the work classification(s) that you need doesn't appear on the wage decision, you will need to request an additional classification and wage rate. This process is usually very simple and you'll want to start the request right away. Basically, you identify the classification you need and recommend a wage rate for DOL to approve for the project. There are a few rules about additional classifications; you'll find these rules in the DOL regulations, Part 5, and in the labor clauses in your contract. The rules are summarized for you here:

- a. **Additional classification rules.** Additional classifications and wage rates can be approved if:
1. The requested classification is used by construction contractors in the area of the project. (The area is usually defined as the county where the project is located)
 2. The work that will be performed by the requested classification is not already performed by another classification that is already on the wage decision. (In other words, if there already is an Electrician classification and wage rate on the wage decision you can't request another Electrician classification and rate.)
 3. The proposed wage rate for the requested classification "fits" with the other wage rates already on the wage decision. (For example, the wage rate proposed for a trade classification such as Electrician must be at least as much as the lowest wage rate for other trade classifications already contained in the wage decision.)
And,
 4. The workers that will be employed in the added classification (if it is known who the workers are/will be), or the workers' representatives, must agree with the proposed wage rate.

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- b. **Making the request.** A request for additional classification and wage rate must be made in writing through the contract administrator. (If the contract administrator is a local agency, the agency will send the request to the HUD Labor Relations staff.) If you are a subcontractor, your request should also go through the prime contractor. All you need to do is identify the work classification that is missing and recommend a wage rate (usually the rate that employer is already paying to the employees performing the work) for that classification. You may also need to describe the work that the new classification will perform.
- c. **HUD review.** The HUD Labor Relations field staff will review the requested classification and wage rate to determine whether the request meets the DOL rules outlined in paragraph 2-2(a), above. If additional information or clarification is needed, the staff will contact the prime contractor (or contract administrator for local agency projects) for more information, etc. If the Labor Relations review finds that the request meets the rules, the staff will give preliminary approval on the request and refer it to the DOL for final approval. The staff will send to you a copy of the preliminary approval/referral letter to the DOL.

If the HUD Labor Relations staff doesn't think the request meets the rules and if agreement can't be reached on the proper classification or wage rate for the work described, the HUD Labor Relations staff will not approve the request. In this case, the staff will send your request to the DOL with an explanation why HUD believes that the request shouldn't be approved. The DOL still has final decision authority. You will receive a copy of the disapproval/referral letter to the DOL.

- d. **DOL decision.** The DOL will respond to HUD Labor Relations in writing about the additional classification and wage rate request. HUD Labor Relations will notify you of the DOL decision in writing. If the DOL approves the request, the prime contractor must post the approval notice on the job site with the wage decision.

If the DOL does not approve the request, you will be notified about what classification and wage rate should be used for the work in question. You will also receive instructions about how to ask for DOL reconsideration if you still want to try to get your recommendation approved.

It's always a good idea to talk to the contract administrator before submitting an additional classification and wage rate request. The contract administrator can offer suggestions and advice that may save you time and increase the likelihood that DOL will approve your request. Usually, the contract administrator can give you an idea about what the DOL will finally decide

2-3 **CERTIFIED PAYROLL REPORTS.**

You'll need to submit a weekly certified payroll report (CPR) beginning with the first week that your company works on the project and for every week afterward until your firm has completed its work. It's always a good idea to number the payroll reports beginning with #1 and to clearly mark your last payroll for the project "Final."

- a. **Payroll formats.** The easiest form to use is DOL's WH-347, Payroll. A sample copy of the WH-347 is included in the back of this Guide. You may access a fillable version of the WH-347 on-line at HUDClips (see web address in the Appendix). Also, the contract administrator can provide a few copies of the WH-347 that you can reproduce.

You are not required to use Payroll form WH-347. You are welcome to use any other type of payroll, such as computerized formats, as long as it contains all of the information that is required on the WH-347.

- b. **Payroll certifications.** The weekly payrolls are called certified because each payroll is signed and contains language certifying that the information is true and correct. The payroll certification language is on the reverse side of the WH-347. If you are using another type of payroll format you may attach the certification from the back of the WH-347, or any other format which contains the same certification language on the WH-347 (reverse).

DOL's website has Payroll Instructions and the Payroll form WH-347 in a "fillable" PDF format at this address:
www.dol.gov/whd/forms/wh347.pdf

- c. **"No work" payrolls.** "No work" payrolls may be submitted whenever there is a temporary break in your work on the project, for example, if your firm is not needed on the project right now but you will be returning to the job in a couple of weeks. (See tip box, for "no work" payroll exemption!) However, if you know that your firm will not be working on the project for an extended period of time, you may wish to send a short note to the contract administrator to let them know about the break in work and to give an approximate date when your firm will return to the project. If you number payrolls consecutively or if you send a note, you do not need to send "no work" payrolls.

If you number your payroll reports consecutively, you do not need to submit "no work" payrolls!

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- d. **Payroll review and submission.** The prime contractor should review each subcontractor’s payroll reports for compliance prior to submitting the reports to the contract administrator. Remember, the prime contractor is responsible for the full compliance of all subcontractors on the contract and will be held accountable for any wage restitution that may be found due to any laborer or mechanic that is underpaid and for any liquidated damages that may be assessed for overtime violations. All of the payroll reports for any project must be submitted to the contract administrator through the prime contractor.

An alert prime contractor that reviews subcontractor payroll submissions can detect any misunderstandings early, prevent costly underpayments and protect itself from financial loss should underpayments occur.

- e. **Payroll retention.** Every contractor (including every subcontractor) must keep a complete set of their own payrolls and other basic records such as employee addresses and full SSNs, time cards, tax records, evidence of fringe benefit payments, for a Davis-Bacon project for at least 3 years after the project is completed. The prime contractor must keep a complete set of all of the payrolls for every contractor (including subcontractors) for at least 3 years after completion of the project.
- f. **Payroll inspection.** In addition to submitting payrolls to the contract administrator, every contractor (including subcontractors) must make their own copy of the payrolls and other basic records available for review or copying to any authorized representative from HUD or from DOL.

2-4 **DAVIS-BACON DEFINITIONS.**

Before we discuss how to complete the weekly payroll forms, we need to review a couple of definitions. These definitions can help you understand what will be required of you

- a. **Laborer or mechanic.** “Laborers” and “mechanics” mean anyone who is performing construction work on the project, including trade journeymen (carpenters, plumbers, sheet metal workers, etc.), apprentices, and trainees and, for CWHSSA purposes, watchmen and guards. “Laborers” and “mechanics” are the two groups of workers that must be paid not less than Davis-Bacon wage rates.
1. **Working foremen.** Foremen or supervisors that regularly spend more than 20% of their time performing construction work and do not meet the exclusions in paragraph 2 below are covered “laborers” and “mechanics” for labor standards purposes for the time spent performing construction work.
 2. **Exclusions.** People whose duties are primarily administrative, executive or clerical are not laborers or mechanics. Examples include superintendents, office staff, timekeepers, messengers, etc. (Contact the contract administrator if you have any questions about whether a particular employee is excluded.)

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- b. **Employee.** Every person who performs the work of a laborer or mechanic is “employed” regardless of any contractual relationship which may be alleged to exist between a contractor or subcontractor and such person. This means that even if there is a contract between a contractor and a worker, the contractor must make sure that the worker is paid at least as much as the wage rate on the wage decision for the classification of work they perform. Note that there are no exceptions to the prevailing wage requirements for relatives or for self-employed laborers and mechanics.

For more information about working subcontractors, ask the contract administrator or your HUD Labor Relations Field Staff for a copy of Labor Relations Letter LR-96-01, Labor standards compliance requirements for self-employed laborers and mechanics. Labor Relations Letters and other helpful Labor Relations publications are available at HUD’s Labor Relations web site (see the list of web site addresses in the Appendix).

- c. **Apprentices and trainees.** The only workers who can be paid less than the wage rate on the wage decision for their work classification are “apprentices” and “trainees” registered in approved apprenticeship or training programs. Approved programs are those which have been registered with the DOL or a DOL-recognized State Apprenticeship Council (SAC). Apprentices and trainees are paid wage rates in accordance with the wage schedule in the approved program.

Most often, the apprentice/trainee wage rate is expressed as a series of percentages tied to the amount of time spent in the program. For example, 0-6 months: 65%; 6 months - 1 year: 70%; etc. The percentage is applied to the journeyman’s wage rate. On Davis-Bacon projects, the percentage must be applied to the journeyman’s wage rate on the applicable wage decision for that craft.

1. **Probationary apprentice.** A “probationary apprentice” can be paid as an apprentice (less than the rate on the wage decision) if the DOL or SAC has certified that the person is eligible for probationary employment as an apprentice.
2. **Pre-apprentice.** A “pre-apprentice”, that is, someone who is not registered in a program and who hasn’t been DOL- or SAC-certified for probationary apprenticeship is not considered to be an “apprentice” and must be paid the full journeyman’s rate on the wage decision for the classification of work they perform
3. **Ratio of apprentices and trainees to journeymen.** The maximum number of apprentices or trainees that you can use on the job site cannot exceed the ratio of apprentices or trainees to journeymen allowed in the approved program.

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- d. **Prevailing wages or wage rates.** Prevailing wage rates are the wage rates listed on the wage decision for the project. The wage decision will list a minimum basic hourly rate of pay for each work classification. Some wage decisions include fringe benefits which are usually listed as an hourly fringe rate. If the wage decision includes a fringe benefit rate for a classification, you will need to add the fringe benefit rate to the basic hourly rate unless you provide bona fide fringe benefits for your employee
1. **Piece-work.** Some employees are hired on a piece-work basis, that is, the employee's earnings are determined by a factor of work produced. For example, a Drywall Hanger's earnings may be calculated based upon the square feet of sheetrock actually hung, a Painter's earnings may be based upon the number of units painted. Employers may calculate weekly earnings based upon piece rates provided the weekly earnings are sufficient to satisfy the wage rate requirement based upon actual hours, including any overtime, worked. Accurate time records must be maintained for any piece-work employees. If the weekly piece rate earnings are not sufficient, the employer must recompute weekly earnings based upon the actual hours worked and the rate on the wage decision for the work classification(s) involved.
- e. **Fringe benefits** Fringe benefits can include health insurance premiums, retirement contributions, life insurance, vacation and other paid leave as well as some contributions to training funds. Fringe benefits do not include employer payments or contributions required by other Federal, State or local laws, such as the employer's contribution to Social Security or some disability insurance payments.

Note that the total hourly wage rate paid to any laborer or mechanic (basic wage or basic wage plus fringe benefits) may be no less than the total wage rate (basic wage or basic wage plus fringe benefits) on the wage decision for their craft. If the value of the fringe benefit(s) you provide is less than the fringe benefit rate on the wage decision, you will need to add the balance of the wage decision fringe benefit rate to the basic rate paid to the employee. For example, if the wage decision requires \$10/hour basic rate plus \$5/hour fringe benefits, you must pay no less than that total (\$15/hour) in the basic rate or basic rate plus whatever fringe benefit you may provide. You can meet this obligation in several ways: you could pay the base wage and fringe benefits as stated in the wage decision, or you could pay \$15 in base wage with no fringe benefits, or you could pay \$12 basic plus \$3 fringe benefits. You can also off-set the amount of the base wage if you pay more in fringe benefits such as by paying or \$9 basic plus \$6 fringe benefits; as long as you meet the total amount. The amount of the base wage that you may off-set with fringe benefits is limited by certain IRS and FLS requirements.

- f. **Overtime.** Overtime hours are defined as all hours worked on the contract in excess of 40 hours in any work week. Overtime hours must be paid at no less than one and one-half times the regular rate of basic pay plus the straight-time rate of any required fringe benefits

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- g. **Deductions.** You may make payroll deductions as permitted by DOL Regulations 29 CFR Part 3. These regulations prohibit the employer from requiring employees to “kick-back” (i.e., give up) any of their earnings. Allowable deductions which do not require prior DOL permission include employee obligations for income taxes, Social Security payments, insurance premiums, retirement, savings accounts, and any other legally-permissible deduction authorized by the employee. Deductions may also be made for payments on judgments and other financial obligations legally imposed against the employee

Referring, again, to our example above where the wage decision requiring a \$15 total wage obligation (\$10 basic wage plus \$5 fringe benefits) was met by paying \$9 base wage plus \$6 fringe benefits: Note that overtime rates must be based on one and one-half times the basic rate as stated on the wage decision. In the above example, the employer must pay for overtime: \$15/hr (\$9 basic + \$6 fringe) plus \$5 (one-half of \$10, the wage decision basic rate) for a total of \$20 per hour.

- h. **Proper designation of trade.** You must select a work classification on the wage decision for each worker based on the actual type of work he/she performed and you must pay each worker no less than the wage rate on the wage decision for that classification regardless of their level of skill. In other words, if someone is performing carpentry work on the project, they must be paid no less than the wage rate on the wage decision for Carpenters even if they aren’t considered by you to be fully trained as a Carpenter. Remember, the only people who can be paid less than the rate for their craft are apprentices and trainees registered in approved programs.
1. **Split-classification.** If you have employees that perform work in more than one trade during a work week, you can pay the wage rates specified for each classification in which work was performed only if you maintain accurate time records showing the amount of time spent in each classification of work. If you do not maintain accurate time records, you must pay these employees the highest wage rate of all of the classifications of work performed
- i. **Site of work.** The “site of work” is where the Davis-Bacon wage rates apply. Usually, this means the boundaries of the project. “Site of work” can also include other adjacent or virtually adjacent property used by a contractor or subcontractor in the construction of the project, like a fabrication site that is dedicated exclusively, or nearly so, to the project.

SECTION II - REPORTING REQUIREMENTS

2-5 COMPLETING A PAYROLL REPORT.

What information has to be reported on the payroll form? The weekly payroll form doesn't ask for any information that you don't already need to keep for wage payment and tax purposes. For example, you need to know each employee's name; his or her work classification (who is working for you and what do they do?), the hours worked during the week, his or her rate of pay, the gross amount earned (how much did they earn?), the amounts of any deductions for taxes, etc., and the net amount paid (how much should the paycheck be made out for?). No more information than you need to know in order to manage your work crew and make certain they are paid properly. And, certainly, no more information than you need to keep for IRS, Social Security and other tax and employment purposes.

For many contractors, the Weekly Certified Payroll is the only Davis-Bacon paperwork you need to submit!

You are required to submit certified payrolls to illustrate and document that you have complied with the prevailing wage requirements. The purpose of the contract administrator's review of your payrolls is to verify your compliance. Clearer and complete payroll reports will permit the contract administrator to complete reviews of your payroll reports quickly.

- a. **Project and contractor/subcontractor information.** Each payroll must identify the contractor or subcontractor's name and address, the project name and number, and the week ending date. Indicate the week dates in the spaces provided. Numbering payrolls is optional but strongly recommended.
- b. **Employee information.** Effective January 18, 2009, payrolls shall not report employee addresses or full Social Security Numbers (SSNs). Instead, the first payroll on which each employee appears shall include the employee's name and an individually identifying number, usually the last 4 digits of the employee's SSN. Afterward, the identifying number does not need to be reported unless it is necessary to distinguish between employees, e.g., if two employees have the same name.

Employers (prime contractors and subcontractors) must maintain the current address and full SSN for each employee and must provide this information upon request to the contracting agency or other authorized representative responsible for federal labor standards compliance monitoring. Prime contractors may require a subcontractor(s) to provide this information for the prime contractor's records. DOL has modified form WH-347, Payroll, to accommodate these reporting requirements.

- c. **Work classification.** Each employee must be classified in accordance with the wage decision based on the type of work they actually perform.

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1. **Apprentices or trainees.** The first payroll on which any apprentice or trainee appears must be accompanied by a copy of that apprentice's or trainee's registration in a registered or approved program. A copy of the portions of the registered or approved program pertaining to the wage rates and ratios shall also accompany the first payroll on which the first apprentice or trainee appear
 2. **Split classifications.** For an employee that worked in a split classification, make a separate entry for each classification of work performed distributing the hours of work to each classification, accordingly, and reflecting the rate of pay and gross earnings for each classification. Deductions and net pay may be based upon the total gross amount earned for all classifications
- d. **Hours worked.** The payroll should show ONLY the regular and overtime hours worked on this project. Show both the daily and total weekly hours for each employee. If an employee performs work at job sites other than the project for which the payroll is prepared, those "other job" hours should not be reported on the payroll. In these cases, you should list the employee's name, classification, hours for this project only, the rate of pay and gross earnings for this project, and the gross earned for all projects. Deductions and net pay may be based upon the employee's total earnings (for all projects) for the week.
- e. **Rate of pay.** Show the basic hourly rate of pay for each employee for this project. If the wage decision includes a fringe benefit and you do not participate in approved fringe benefit programs, add the fringe benefit rate to the basic hourly rate of pay. Also list the overtime rate if overtime hours were worked.
1. **Piece-work.** For any piece-work employees, the employer must compute an effective hourly rate for each employee each week based upon the employee's piece-work earnings for that week. To compute the effective hourly rate, divide the piece-work earnings by the total number of hours worked, including consideration for any overtime hours.

The effective hourly rate must be reflected on the certified payroll and this hourly rate may be no less than the wage rate (including fringe benefits, if any) on the wage decision for the classification of work performed. It does not matter that the effective hourly rate changes from week-to-week, only that the rate is no less than the rate on the wage decision for the classification of work performed

Remember, the overtime rate is computed at one and one-half times the basic rate of pay plus any fringe benefits. For example, if the wage decision requires \$10/hour basic plus \$5/hour fringe benefits, the overtime rate would be: $(\$10 \times 1 \frac{1}{2}) + \$5 = \$20/\text{hou}$.

- f. **Gross wages earned.** Show the gross amount of wages earned for work performed on this project. Note: For employees with work hours and earnings on other projects, you may show gross wages for this project over gross earnings all projects (for example, \$425.40/\$764.85) and base deductions and net pay on the "all projects" earnings.

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- g. **Deductions.** Show the amounts of any deductions from the gross earnings. “Other” deductions should be identified (for example, Savings Account or Loan Repayment). Any voluntary deduction (that is, not required by law or by an order of a proper authority) must be authorized in writing by the employee or provided for in a collective bargaining (union) agreement. A short note signed by the employee is all that is needed and should accompany the first payroll on which the other deduction appears

Only one employee authorization is needed for recurring (e.g., weekly) other deductions. Written employee authorization is not required for income tax and Social Security deductions.

- h. **Net pay.** Show the net amount of wages paid.
- i. **Statement of compliance.** The Statement of Compliance is the certification. It is located on the reverse side of a standard payroll form (WH-347). Be sure to complete the identifying information at the top, particularly if you are attaching the Statement of Compliance to an alternate payroll form such as a computer payroll. Also, you must check either 4(a) or 4(b) if the wage decision contains a fringe benefit. Checking 4(a) indicates that you are paying required fringe benefits to approved plans or programs; and 4(b) indicates that you are paying any required fringe benefit amounts directly to the employee by adding the fringe benefit rate to the basic hourly rate of pay. If you are paying a portion of the required fringe benefit to programs and the balance directly to the employee, explain those differences in box 4(c).

Only one Statement of Compliance is required for each employer’s weekly payroll no matter how many pages are needed to report the employee data.

- j. **Signature.** Make sure the payroll is signed with an original signature in ink. The payroll must be signed by a principal of the firm (owner or officer such as the president, treasurer or payroll administrator) or by an authorized agent (a person authorized by a principal in writing to sign the payroll reports). Signature authorization (for persons other than a principal) should be submitted with the first payroll signed by such an agent. Signatures in pencil; signature stamps; xerox, pdf and other facsimiles are not acceptable.

SECTION III - PAYROLL REVIEWS AND CORRECTIONS

2-6 COMPLIANCE REVIEWS.

The contract administrator or other inspector may visit the project site and interview some of the workers concerning their employment on the project. The DOL may also independently conduct its own reviews (see 1-5). In addition, the contract administrator will periodically review payrolls and related submissions, comparing the interview information to the payrolls, to ensure that the labor standards requirements have been met. You will be notified by the contract administrator if these reviews find any discrepancies or errors. You will be given instructions about what steps must be taken to correct any problems.

- a. **On-site interviews.** Every employer (contractor, subcontractor, etc.) must make their employees available for interview at the job site with the contract administrator or other agency representative, or HUD or DOL representative. The interviews are confidential and the employee will be asked about the kind of work they perform and their rate of pay. Every effort will be made to ensure that these interviews cause as little disruption as possible to the on-going work. The interviewer will record the interview information, usually on a form HUD-11, Record of Employee Interview, and forward the interviews to the contract administrator.
- b. **Project payroll reviews.** The contract administrator will compare the information on the interview forms to the corresponding payrolls to ensure that the workers are properly listed on the payrolls for the days and hours worked on the job site, work classification and rate of pay. The contract administrator will also review the payroll submissions to make certain that the payrolls are complete and signed; that employees are paid no less than the wage rate for the work classification shown; apprentice and trainee certifications are submitted (where needed); employee or other authorizations for other deductions are submitted (where needed); etc.

2-7 TYPICAL PAYROLL ERRORS AND REQUIRED CORRECTIONS.

The following paragraphs describe common payroll errors and the corrective steps you must take.

- a. **Inadequate payroll information.** If an alternate payroll format used by an employer (such as some computer payrolls) is inadequate, e.g., does not contain all of the necessary information that would be on the optional form WH-347, the employer will be asked to resubmit the payrolls on an acceptable form.
- b. **Missing identification numbers.** If the first payroll on which an employee appears does not contain the employee's individually identifying number, the employer will be asked to supply the missing information. This information can be reported on the next payroll submitted by the employer if the employer is still working on the project. Otherwise, the employer will be asked to submit a correction certified payroll

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- c. **Incomplete payrolls.** If the information on the payroll is not complete, for example, if work classifications or rates of pay are missing, the employer will be asked to send a correction certified payroll
- d. **Classifications.** If the payrolls show work classifications that do not appear on the wage decision, the employer will be asked to reclassify the employees in accordance with the wage decision or the employer may request an additional classification and wage rate (see 2-2). If reclassification results in underpayment (i.e., the wage rate reported on the payroll is less than the rate required for the new classification), the employer will be asked to pay wage restitution to all affected reclassified employees. (see 2-8 for instructions about wage restitution.)
- e. **Wage rates.** If the wage rates on the payroll are less than the wage rates on the wage decision for the work classifications reported, the employer will be asked to pay wage restitution to all affected employees.
- f. **Apprentices and trainees.** If a copy of the employee's registration or the approved program ratio and wage schedule are not submitted with the first payroll on which an apprentice or trainee appears, the employer will be asked to submit a copy of each apprentice's or trainee's registration and/or the approved program ratio and wage schedule. If the ratio of apprentices or trainees to journeymen on the payroll is greater than the ratio in the approved program, the employer will be asked to pay wage restitution to any excess apprentices or trainees. Also, any apprentice or trainee that is not registered in an approved program must receive the journeyman's wage rate for the classification of work they performed.
- g. **Overtime.** If the employees did not receive at least time and one-half for any overtime hours worked on the project, the following will occur:
1. If the project is subject to CWHSSA overtime requirements, the employer will be asked to pay wage restitution for all overtime hours worked on the project. The employer may also be liable to the United States for liquidated damages computed at \$10 per day per violation. Or,
 2. If the project is not subject to CWHSSA, the employer will be notified of the possible FLSA overtime violations. Also, the contract administrator may refer the matter to the DOL for further review.
- h. **Computations.** If the payroll computations (hours worked times rate of pay) or extensions (deductions, net pay) show frequent errors, the employer will be asked to take greater care. Wage restitution may be required if underpayments resulted from the errors.
- i. **Deductions.** If there are any "Other" deductions that are not identified, or if employee authorization isn't provided, or if there is any unusual (very high, or large number) deduction activity, the employer will be asked to identify the deductions, provide employee authorization or explain unusual deductions, as necessary.

HUD does not enforce or attempt to provide advice on employer obligations to make deductions from employee earnings for taxes or Social Security. However, HUD may refer to the IRS or other responsible agency copies of certified payroll reports that show wages paid in gross amounts (i.e., without tax deduction) for its review and appropriate action.

- j. **Fringe benefits.** If the wage decision contains fringe benefits but the payroll does not indicate how fringe benefits were paid [neither 4(a) nor 4(b) is marked on the Statement of Compliance], the employer may be asked to submit correction certified payrolls and will be required to pay wage restitution if underpayments occurred. However, if the basic hourly rates for the employees are at least as much as the total wage rate on the wage decision (basic hourly rate plus the fringe benefit rate), no correction is necessary.
- k. **Signature.** If the payroll Statement of Compliance is not signed or is missing, the employer will be asked to submit a signed Statement of Compliance for each payroll affected. If the Statement of Compliance is signed by a person who is not a principle of the firm and that person has not been authorized by principle to sign, the employer will be asked to provide an authorization or to resubmit the Statement(s) of Compliance bearing the signature of a principle or other authorized signatory.
- l. **On-site interview comparisons.** If the comparison of on-site interviews to the payrolls indicates any discrepancies (for example, the employee does not appear on the payroll for the date of the interview), the employer will be asked to submit a correction certified payroll report.
- m. **Correction certified payroll.** Any and all changes to data on a submitted payroll report must be reported on a certified correction payroll. In no case will a payroll report be returned to the prime contractor or employer for revision.

2-8 **RESTITUTION FOR UNDERPAYMENT OF WAGES.**

Where underpayments of wages have occurred, the employer will be required to pay wage restitution to the affected employees. Wage restitution must be paid promptly in the full amounts due, less permissible and authorized deductions. All wages paid to laborers and mechanics for work performed on the project, including wage restitution, must be reported on a certified payroll report.

- a. **Notification** to the Employer/Prime contractor. The contract administrator will notify the employer and/or prime contractor in writing of any underpayments that are found during payroll or other reviews. The contract administrator will describe the underpayments and provide instructions for computing and documenting the restitution to be paid. The employer/prime contractor is allowed 30 days to correct the underpayments. Note that the prime contractor is responsible to the contract administrator for ensuring that restitution is paid. If the employer is a subcontractor, the subcontractor will usually make the computations and restitution payments and furnish the required documentation through the prime contractor.

The contract administrator may communicate directly with a subcontractor when the underpayments are plainly evident and the subcontractor is cooperative. It is best to work through the prime contractor when the issues are complex, when there are significant underpayments and/or the subcontractor is not cooperative. In all cases, the subcontractor must ensure that the prime contractor receives a copy of the required corrective documentation.

- b. **Computing wage restitution.** Wage restitution is simply the difference between the wage rate paid to each affected employee and the wage rate required on the wage decision for all hours worked where underpayments occurred. The difference in the wage rates is called the adjustment rate. The adjustment rate times the number of hours involved equals the gross amount of restitution due. You may also compute wage restitution by calculating the total amount of Davis-Bacon wages earned and subtracting the total amount of wages paid. The difference is the amount of back wages due.
- c. **Correction certified payrolls.** The employer will be required to report the restitution paid on a correction certified payroll. The correction payroll will reflect the period of time for which restitution is due (for example, Payrolls #1 through #6; or a beginning date and ending date). The correction payroll will list each employee to whom restitution is due and their work classification; the total number of work hours involved (daily hours are usually not applicable for wage restitution); the adjustment wage rate (the difference between the required wage rate and the wage rate paid); the gross amount of restitution due; deductions and the net amount actually paid. A properly signed Statement of Compliance must accompany the correction payroll.

HUD no longer requires the signature of the employee on the correction payroll to evidence employee receipt of restitution payment. In addition, except in the most extraordinary cases, HUD no longer requires employers to submit copies of restitution checks (certified, cashiers, canceled or other), or employee-signed receipts or waivers.

- d. **Review of correction CPR.** The contract administrator will review the correction certified payroll to ensure that full restitution was paid. The prime contractor shall be notified in writing of any discrepancies and will be required to make additional payments, if needed, documented on a correction certified payroll within 30 days
- e. **Unfound workers.** Sometimes, wage restitution cannot be paid to an affected employee because, for example, the employee has moved and can't be located. After wage restitution has been paid to all of the workers who could be located, the employer must submit a list of any workers who could not be found and paid (i.e., unfound workers) providing their names, Social Security Numbers, last known addresses and the gross amount due. In such cases, at the end of the project the prime contractor will be required

to place in a deposit or escrow account an amount equal to the total gross amount of restitution that could not be paid because the employee(s) could not be located. The contract administrator will continue attempts to locate the unfound workers for 3 years after the completion of the project. After 3 years, any amount remaining in the account for unfound workers will be credited and/or forwarded by the contract administrator to HUD.

CHAPTER 3 LABOR STANDARDS DISPUTES, ADMINISTRATIVE REVIEWS, WITHHOLDING, DEPOSITS AND ESCROW ACCOUNTS, AND SANCTIONS

WHAT HAPPENS WHEN THINGS GO WRONG?

3-1 INTRODUCTION.

Even in the best of circumstances, things can go wrong. In a Davis-Bacon context, “things going wrong” usually means there’s a difference of opinion or a dispute about whether and to what extent underpayments have occurred. These disputes are usually between the contract administrator and one or more employers (the prime contractor and/or a subcontractor). The dispute may involve something simple such as an additional classification request that is pending before the DOL; or something as significant as investigative findings following a complaint of underpayment. This chapter discusses some of what you may expect and what you can do to make your views known and to lessen any delays in resolving the problem or issue.

3-2 ADMINISTRATIVE REVIEW ON LABOR STANDARDS DISPUTES.

As mentioned in the Introduction above, a dispute about labor standards and compliance can arise for a number of reasons. The labor standards clauses in your contract and DOL regulations provide for administrative review of issues where there is a difference of views between the contract administrator and any employer. The most common circumstances include:

- a. **Additional classifications and wage rates.** Additional classification and wage rate requests are sometimes denied by the DOL. An employer that is dissatisfied with the denial can request reconsideration by the DOL Wage and Hour Administrator. The employer may continue to pay the wage rate, as requested, until a final decision is rendered on the matter. When the final decision is known, the employer will be required to pay any additional wages that may be necessary to satisfy the wage rate that is established.
 1. **Reconsideration.** The DOL normally identifies the reasons for denial in its response to the request. Any interested person (for example, the contract administrator, employer, representatives of the employees) may request reconsideration of the decision on the additional classification request. The request for reconsideration must be made in writing and must thoroughly address the denial reasons identified by the DOL. Employer requests for reconsideration should be made through the contract administrator but may be made directly to the DOL. (See 2-2(d), and also DOL Regulations 29 CFR 1.8.) All requests initiated by or made through the contract administrator or HUD must be submitted through the HUD Headquarters Office of Labor Relations.

2. **Administrative Review Board.** Any interested party may request a review of the Administrator's decision on reconsideration by the DOL's Administrative Review Board. DOL regulations 29 CFR Part 7 explain the procedures for such reviews. (See also 29 CFR 1.9.)

b. **Findings of underpayment.** Compliance reviews and other follow-up enforcement actions may result in findings of underpayment. The primary goal in every case and at every step in this process is to reach agreements about who may have been underpaid and how much wage restitution may be due and, of course, to promptly deliver restitution to any underpaid workers. The contract administrator will usually work informally with you to reach such agreements. You will have an opportunity to provide additional information to the contract administrator that may explain apparent inconsistencies and/or resolve the discrepancies.

If informal exchanges do not result in agreement, the final determination and schedule of back wages due will be presented to you in writing and you will be permitted 30 days in which to correct the underpayment(s) or to request a hearing on the matter before the DOL. The request for hearing must be made in writing through the contract administrator and must explain what findings are in dispute and the reasons. In such cases, HUD is required to submit a report to DOL for review and further consideration. All requests for DOL hearing must be submitted through the HUD Headquarters Office of Labor Relations.

1. **DOL review.** The DOL will review the contract administrator's report and the arguments against the findings presented in the hearing request. The DOL may affirm or modify the findings based upon the materials presented. You will be notified in writing by the DOL of the results of its review. If DOL concludes that violations have occurred, you will be given an opportunity to correct any underpayments or to request a hearing before a DOL Administrative Law Judge (ALJ). (See DOL Regulations 29 CFR 5.11 (b) and 29 CFR Part 6, Rules of Practice for Administrative Proceedings.)

2. **Administrative Review Board.** Contractors and/or subcontractors may request a review by the Administrative Review Board of the decision(s) rendered by the DOL ALJ in the administrative hearing process. See DOL regulations 29 CFR Part 7 for more information about this proceeding.

3-3 WITHHOLDING.

The contract administrator shall cause withholding from payments due to the prime contractor to ensure the payment of wages which are believed to be due and unpaid, for example, if wage underpayments or other violations are not corrected within 30 days after written notification to the prime contractor. DOL may also direct the withholding of contract payments for alleged wage underpayments. Withholding is considered to be serious and is not taken unless warranted. If withholding is deemed necessary, you will be notified in writing. Only the amounts needed to meet the contractor's (and/or subcontractors') liability shall be withheld.

3-4 DEPOSITS AND ESCROWS.

In every case, we attempt to complete compliance actions and resolve any disputes before the project is completed and final payments are made. Sometimes, corrective actions or disputes continue after completion and provisions must be made to ensure that funds are available to pay any wage restitution that is ultimately found due. In these cases, we allow projects to proceed to final closing and final payments provided the prime contractor deposits an amount equal to the potential liability for wage restitution and liquidated damages, if necessary, in a special account. The deposit or escrow account is controlled by the contract administrator. When a final decision is rendered, the contract administrator makes disbursements from the account in accordance with the decision. Deposit/escrow accounts are established for one or more of the following reasons:

Remember, the prime contractor is responsible and will be held liable for any wage restitution that is due to any worker employed in the construction of the project, including workers employed by subcontractors and any lower-tier subcontractors. See 1-4, Responsibility of the Principal Contractor, and 2-8, Restitution for Underpayment of Wages.

- a. **Where the parties have agreed to amounts of wage restitution that are due** but the employer hasn't furnished evidence yet that all of the underpaid workers have received their back wages, e.g., some of the workers have moved and could not be located. The amount of the deposit is equal to the total gross amount of restitution due to workers lacking payment evidence. As these workers are paid and proper documentation is provided to the contract administrator, amounts corresponding to the documented payments are returned to the depositor. Amounts for any workers who cannot be located are held in the deposit/escrow account for three years and disposed as described in 2-8(f) of this Guide.
- b. **Where underpayments are suspected or alleged and an investigation has not yet been completed.** The deposit is equal to the amount of wage restitution and any liquidated damages, if applicable, that are estimated to be due. If the final determination of wages due is less than the amount estimated and placed in the escrow account, the escrow will be reduced to the final amount and the difference will be returned to the depositor.

If the parties agree to the investigative findings, the amounts due to the workers will be paid by the employer. As these workers are paid and proper documentation is provided to the contract administrator, the gross amounts corresponding to the documented payments are returned to the depositor.

1. If the employer is unable to make the payments to the workers, e.g., lacks the funds necessary, the contract administrator may make disbursements directly to the workers in the net amounts calculated by the employer. The amounts withheld from the workers for tax deduction will be returned to the employer as payments to workers are made. The employer shall be responsible for reporting and transmitting withholdings to the appropriate agencies.

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2. If the employer is not cooperating in the resolution, the contract administrator shall make disbursements to the workers in accordance with the schedule of wages due. Amounts for unfound workers will be retained as described above (See 2-8(f) and 3-4(a)).

If the parties do not agree and an administrative hearing is requested, the escrow will be maintained as explained in 3-4(c), below.

Remember, if you have any questions or need assistance concerning labor standards requirements help is always available. Contact the contract administrator for the project you're working on or the HUD Field Labor Relations staff in your area.

- c. **Where the parties are waiting for the outcome of an administrative hearing** that has been or will be requested contesting a final determination of wages due. The deposit shall be equal to the amount of wage restitution and liquidated damages, if applicable, that have been determined due. Once a final decision is rendered, disbursements from the escrow account are made in accordance with the decision.

3-5 ADMINISTRATIVE SANCTIONS.

Contractors and/or subcontractors that violate the labor standards provisions may face administrative sanctions imposed by HUD and/or DOL.

- a. **DOL debarment.** Contractors and/or subcontractors that are found by the Secretary of Labor to be in aggravated or willful violation of the labor standards provisions of the Davis-Bacon and Related Acts (DBRA) will be ineligible (debarred) to participate in any DBRA or Davis-Bacon Act contracts for up to 3 years. Debarment includes the contractor or subcontractor and any firm, corporation, partnership or association in which the contractor or subcontractor has a substantial interest. Debarment proceedings can be recommended by the contract administrator or can be initiated by the DOL. Debarment proceedings are described in DOL regulations 29 CFR 5.12.
- b. **HUD sanctions.** HUD sanctions may include Limited Denials of Participation (LDPs), debarments and suspensions.
 1. **Limited Denial of Participation.** HUD may issue to the employer a limited denial of participation (LDP) which prohibits the employer from further participation in HUD programs for a period up to one year. The LDP is usually effective for the HUD program in which the violation occurred and for the geographic jurisdiction of the issuing HUD Office. HUD regulations concerning LDP's are found at 24 CFR 24.700-24.714.

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2. **Debarment and suspensions.** In certain circumstances, HUD may initiate its own debarment or suspension proceedings against a contractor and/or subcontractor in connection with improper actions regarding Davis-Bacon obligations. For example, HUD may initiate debarment where a contractor has been convicted for making false statements (such as false statements on certified payrolls or other prevailing wage certifications) or may initiate suspension where a contractor has been indicted for making false statements. HUD regulations concerning debarment and suspension are found at 24 CFR Part 24.

3-6 FALSIFICATION OF CERTIFIED PAYROLL REPORTS.

Contractors and/or subcontractors that are found to have willfully falsified payroll reports (Statements of Compliance), including correction certified payroll reports, may be subject to civil or criminal prosecution. Penalties may be imposed of \$1,000 and/or one year in prison for each false statement (see Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code).

Remember, if you have any questions or need assistance concerning labor standards requirements help is always available. Contact the contract administrator for the project you're working on or the HUD Field Labor Relations staff in your area.

ACRONYMS AND SYMBOLS

CDBG -	Community Development Block Grant
CFR -	Code of Federal Regulations
CPR -	Certified Payroll Repor
CWHSSA -	Contract Work Hours and Safety Standards Act
DBA -	Davis-Bacon Act
DBRA -	Davis-Bacon and Related Acts
DOL -	Department of Labor
FHA -	Federal Housing Administration
FLSA -	Fair Labor Standards Act
HUD -	Housing and Urban Development (Department of)
IHA -	Indian Housing Authority
LCA -	Local Contracting Agency
LDP -	Limited Denial of Participation
O/T -	Overtime
PHA -	Public Housing Agency
S/T -	Straight-time
SAC -	State Apprenticeship Council/Agency
TDHE -	Tribally-Designated Housing Entity
§ -	Section
¶ -	Paragraph

DAVIS-BACON - RELATED WEB SITES*

HUD Office of Labor Relations
www.hud.gov/offices/ol

HUD Regulations:
<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

HUDClips (HUD Forms and Publications):
www.hud.gov/offices/adm/hudclips/index.cf

DOL Davis-Bacon and Related Acts Homepage:
<http://www.dol.gov/whd/contracts/dbra.htm>

DOL Regulations:
<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>

Davis-Bacon Wage Decisions:
www.wdol.gov

DOL Forms:
www.dol.gov/whd/programs/dbra/forms.htm

***Web addresses active as of January 2012**

Project Wage Rate Sheet	U.S. Department of Housing and Urban Development Office of Labor Relations	
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Project Name:	Wage Decision Number/Modification Number:
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Project Number:	Project County:
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Work Classification	Basic Hourly Rate (BHR)	Fringe Benefits	Total Hourly Wage Rate	Laborers Fringe Benefits		\$
				Group #	BHR	
Bricklayers			\$			\$
Carpenters			\$			\$
Cement Masons			\$			\$
Drywall Hangers			\$			\$
Electricians			\$			\$
Iron Workers			\$			\$
Painters			\$	Operators Fringe Benefits:		\$
Plumbers			\$	Group #	BHR	Total Wage
Roofers			\$			\$
Sheet Metal Workers			\$			\$
Soft Floor Workers			\$			\$
Tapers			\$			\$
Tile Setters			\$	Truck Drivers Fringe Benefits:		\$
Other Classifications				Group #	BHR	Total Wage
			\$			
			\$			
			\$			

Additional Classifications (HUD Form 4230-A)

Work Classification	Basic Hourly Rate (BHR)	Fringe Benefits	Total Hourly Wage Rate	Date of HUD Submission to DOL	Date of DOL Approval
			\$		
			\$		
			\$		

Date _____

I, _____ (Name of Signatory Party) _____ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by _____ (Contractor or Subcontractor) _____ on the _____ (Building or Work) _____; that during the payroll period commencing on the _____ day of _____, and ending the _____ day of _____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ (Contractor or Subcontractor) _____ from the full

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:
 (a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE

U.S. Department of Housing and Urban Development
Office of Departmental Operations and Coordination
Washington, DC 20410

Email: www.OfficeofLaborRelations@hud.gov

Labor Relations Desk Guide
LR01.DG



MONTHLY EMPLOYMENT UTILIZATION REPORT

TO: _____
Name of City/County

FROM: _____
Name of Construction Contractor

NAME OF PROJECT: _____

Address of Contractor

PROJECT NUMBER: _____

Phone No. of Contractor

REPORTING PERIOD: _____

PERCENTAGE OF PROJECT COMPLETION: _____

CLASSIFICATION	WORK HOURS OF EMPLOYMENT									
	TOTAL	BLACK	HISPANIC	ASIAN/ PACIFIC	FEMALE	HANDICAPPED	VIETNAM VETERAN	LOW INCOME SEC. 3 RESIDENT	TEMP	FULL- TIME
CRAFTWORKER Permanent										
CRAFTWORKER New Employee										
LABORER Permanent										
LABORER New Employee										
APPRENTICE Permanent										
APPRENTICE New Employee										
TOTALS										

Number of Minority Employees on Project _____

Number of Female Employees on Project _____

Number of Low Income/Section 3 Residents on Project _____

Number of Handicapped Employees on Project _____

Number of Vietnam Veterans on Project _____

Signature and Title of Company Official Completing Report

Date Signed

PAYROLL DEDUCTION AUTHORIZATION

This is authorization to _____ to deduct from my paycheck

\$_____. This for item number:

Repayment of:

- | | |
|--------------------|--------------------------|
| 1. Loan | 7. Credit Union |
| 2. Retirement | 8. Profit Sharing |
| 3. Advance on Wage | 9. Donations to Agencies |
| 4. Savings | 10. Insurance Premiums |
| 5. Savings Bonds | 11. Union Dues |
| 6. Uniforms | 12. Other |

***This deduction is to be made:**

Check Appropriate Box	
	One time only
	Weekly
	Bi-Weekly
	For _____ weeks

Employee's Signature & Date: _____

Printed or Typed Name: _____

Project Name and No.: _____

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. 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 29 CFR 5.5(a)(1)(iv); 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 29 CFR 5.5(a)(1)(ii) 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.

(ii) (a) Any class of laborers or mechanics 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. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

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

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

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

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee 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 HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, 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.

(iii) 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.

(iv) 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee 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, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, 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. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work 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 I(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 I(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. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. 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). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) 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:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5 (a)(3)(i) and that such information is correct and complete;

(2) 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 29 CFR Part 3;

(3) 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.

(c) 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 subparagraph A.3.(ii)(b).

(d) 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.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee 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, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, 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.

(i) Apprentices. 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.

(ii) Trainees. 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 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.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

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 will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 of this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses 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 this paragraph.

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 HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. 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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) 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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable only where the amount of the prime contract exceeds \$100,000. 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 40 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 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subpara-

graph (1) of this paragraph, 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 subparagraph (1) of this paragraph, 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 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee 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 contract, 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 subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph 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 subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable only where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.

(3) The Contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

**CONSTRUCTION IDENTIFICATION
SIGN:**

SIZE, 4' - 0" X 8' -0"

Letters to be brown with beige background

Construction Identification Signs To Be Erected Prior To Beginning of Actual Construction

Wood for Signs Shall Be 3/4" Waterproofing Resin Bonded Exterior Grade Plywood (Douglas Fir Plywood Association or Equal)

Payment for Furnishing, Erecting, Maintaining and Removing Construction Identification Signs Will Not Be made Directly. Such Costs Shall be Included in the Overall Bid Submitted.

To Be Erected As Indicated on Title Sheet.



CITY OF ANY TOWN

IN PARTNERSHIP WITH THE

COUNTY OF HIDALGO

URBAN COUNTY PROGRAM

ANY PROJECT
PROJECT NUMBER

CITY OFFICIALS

CONTRACTOR

ENGINEER/ARCHITECT

HUD-42385(R) Previous Edition is obsolete
** Attachment to Federal Labor Standards Provisions

EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



For additional information:

1-866-4-USWAGE
(1-866-487-9243) TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

DERECHOS DEL EMPLEADO BAJO LA LEY DAVIS-BACON

PARA OBREROS Y MECÁNICOS EMPLEADOS EN PROYECTOS DE CONSTRUCCIÓN FEDERAL O CON ASISTENCIA FEDERAL

LA SECCIÓN DE HORAS Y SUELDOS DEL DEPARTAMENTO DE TRABAJO DE EEUU

SALARIOS PREVALECIENTES

No se le puede pagar menos de la tasa de pago indicada en la Decisión de Salarios Davis-Bacon fijada con este Aviso para el trabajo que Ud. desempeña.

SOBRETIEMPO

Se le ha de pagar no menos de tiempo y medio de su tasa básica de pago por todas las horas trabajadas en exceso de 40 en una semana laboral. Existen pocas excepciones.

CUMPLIMIENTO

Se pueden retener pagos por contratos para asegurarse que los obreros reciban los salarios y el pago de sobretiempo debidos, y se podría aplicar daños y perjuicios si no se cumple con las exigencias del pago de sobretiempo. Las cláusulas contractuales de Davis-Bacon permiten la terminación y exclusión de contratistas para efectuar futuros contratos federales hasta tres años. El contratista que falsifique los registros certificados de las nóminas de pago o induzca devoluciones de salarios puede ser sujeto a procesamiento civil o criminal, multas y/o encarcelamiento.

APRENDICES

Las tasas de aprendices sólo se aplican a aprendices correctamente inscritos bajo programas federales o estatales aprobados.

PAGO APROPIADO

Si Ud. no recibe el pago apropiado, o precisa de información adicional sobre los salarios aplicables, póngase en contacto con el Contratista Oficial que aparece abajo:

o póngase en contacto con la Sección de Horas y Sueldos del Departamento de Trabajo de EEUU.



Para obtener información adicional:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

Equal Employment Opportunity is **THE LAW**

Private Employers, State and Local Governments, Educational Institutions, Employment Agencies and Labor Organizations

Applicants to and employees of most private employers, state and local governments, educational institutions, employment agencies and labor organizations are protected under Federal law from discrimination on the following bases:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Title VII of the Civil Rights Act of 1964, as amended, protects applicants and employees from discrimination in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, on the basis of race, color, religion, sex (including pregnancy), or national origin. Religious discrimination includes failing to reasonably accommodate an employee's religious practices where the accommodation does not impose undue hardship.

DISABILITY

Title I and Title V of the Americans with Disabilities Act of 1990, as amended, protect qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee, barring undue hardship.

AGE

The Age Discrimination in Employment Act of 1967, as amended, protects applicants and employees 40 years of age or older from discrimination based on age in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment.

SEX (WAGES)

In addition to sex discrimination prohibited by Title VII of the Civil Rights Act, as amended, the Equal Pay Act of 1963, as amended, prohibits sex discrimination in the payment of wages to women and men performing substantially equal work, in jobs that require equal skill, effort, and responsibility, under similar working conditions, in the same establishment.

GENETICS

Title II of the Genetic Information Nondiscrimination Act of 2008 protects applicants and employees from discrimination based on genetic information in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. GINA also restricts employers' acquisition of genetic information and strictly limits disclosure of genetic information. Genetic information includes information about genetic tests of applicants, employees, or their family members; the manifestation of diseases or disorders in family members (family medical history); and requests for or receipt of genetic services by applicants, employees, or their family members.

RETALIATION

All of these Federal laws prohibit covered entities from retaliating against a person who files a charge of discrimination, participates in a discrimination proceeding, or otherwise opposes an unlawful employment practice.

WHAT TO DO IF YOU BELIEVE DISCRIMINATION HAS OCCURRED

There are strict time limits for filing charges of employment discrimination. To preserve the ability of EEOC to act on your behalf and to protect your right to file a private lawsuit, should you ultimately need to, you should contact EEOC promptly when discrimination is suspected:

The U.S. Equal Employment Opportunity Commission (EEOC), 1-800-669-4000 (toll-free) or 1-800-669-6820 (toll-free TTY number for individuals with hearing impairments). EEOC field office information is available at www.eeoc.gov or in most telephone directories in the U.S. Government or Federal Government section. Additional information about EEOC, including information about charge filing, is available at www.eeoc.gov.

Employers Holding Federal Contracts or Subcontracts

Applicants to and employees of companies with a Federal government contract or subcontract are protected under Federal law from discrimination on the following bases:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Executive Order 11246, as amended, prohibits job discrimination on the basis of race, color, religion, sex or national origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment.

INDIVIDUALS WITH DISABILITIES

Section 503 of the Rehabilitation Act of 1973, as amended, protects qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee, barring undue hardship. Section 503 also requires that Federal contractors take affirmative action to employ and advance in employment qualified individuals with disabilities at all levels of employment, including the executive level.

DISABLED, RECENTLY SEPARATED, OTHER PROTECTED, AND ARMED FORCES SERVICE MEDAL VETERANS

The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. 4212, prohibits job discrimination and requires affirmative action to employ and advance in employment disabled veterans, recently separated veterans (within

three years of discharge or release from active duty), other protected veterans (veterans who served during a war or in a campaign or expedition for which a campaign badge has been authorized), and Armed Forces service medal veterans (veterans who, while on active duty, participated in a U.S. military operation for which an Armed Forces service medal was awarded).

RETALIATION

Retaliation is prohibited against a person who files a complaint of discrimination, participates in an OFCCP proceeding, or otherwise opposes discrimination under these Federal laws.

Any person who believes a contractor has violated its nondiscrimination or affirmative action obligations under the authorities above should contact immediately:

The Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210, 1-800-397-6251 (toll-free) or (202) 693-1337 (TTY). OFCCP may also be contacted by e-mail at OFCCP-Public@dol.gov, or by calling an OFCCP regional or district office, listed in most telephone directories under U.S. Government, Department of Labor.

Programs or Activities Receiving Federal Financial Assistance

RACE, COLOR, NATIONAL ORIGIN, SEX

In addition to the protections of Title VII of the Civil Rights Act of 1964, as amended, Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination on the basis of race, color or national origin in programs or activities receiving Federal financial assistance. Employment discrimination is covered by Title VI if the primary objective of the financial assistance is provision of employment, or where employment discrimination causes or may cause discrimination in providing services under such programs. Title IX of the Education Amendments of 1972 prohibits employment discrimination on the basis of sex in educational programs or activities which receive Federal financial assistance.

INDIVIDUALS WITH DISABILITIES

Section 504 of the Rehabilitation Act of 1973, as amended, prohibits employment discrimination on the basis of disability in any program or activity which receives Federal financial assistance. Discrimination is prohibited in all aspects of employment against persons with disabilities who, with or without reasonable accommodation, can perform the essential functions of the job.

If you believe you have been discriminated against in a program of any institution which receives Federal financial assistance, you should immediately contact the Federal agency providing such assistance.

La igualdad de oportunidades de empleo es

LA LEY

Empleadores privados, gobiernos locales y estatales, instituciones educativas, agencias de empleo y organizaciones de trabajo

Los postulantes y empleados de la mayoría de los empleadores privados, los gobiernos locales y estatales, las instituciones educativas, las agencias de empleo y las organizaciones de trabajo están protegidos por la ley federal contra la discriminación en función de:

RAZA, COLOR, RELIGIÓN, SEXO, PROCEDENCIA

El Título VII de la Ley de Derechos Civiles (Civil Rights Act) de 1964, con sus modificaciones, protege a los postulantes y a los empleados contra la discriminación en lo que respecta a la contratación, los ascensos, los despidos, los pagos, las compensaciones adicionales, la capacitación laboral, la clasificación, las referencias y los demás aspectos del empleo, en función de raza, color, religión, sexo (incluidas las embarazadas) o procedencia. La discriminación religiosa se refiere a la falta de adaptación razonable a las prácticas religiosas de un empleado, siempre y cuando dicha adaptación no provoque una dificultad económica desmedida para la compañía.

DISCAPACIDAD

Los Títulos I y V de la Ley de Estadounidenses con Discapacidades (Americans with Disabilities Act) de 1990, con sus modificaciones, protege a las personas idóneas contra la discriminación por discapacidad en lo que respecta a la contratación, los ascensos, los despidos, los pagos, las compensaciones adicionales, la capacitación laboral, la clasificación, las referencias y los demás aspectos del empleo. La discriminación por discapacidad se refiere a la falta de adaptaciones razonables para las limitaciones físicas o mentales de una persona idónea que tiene una discapacidad y que es un postulante o un empleado, salvo que dichas adaptaciones provoquen una dificultad económica desmedida para la compañía.

EDAD

La Ley contra la Discriminación Laboral por Edad (Age Discrimination in Employment Act) de 1967, con sus modificaciones, protege a los postulantes y empleados de 40 años o más contra la discriminación por cuestiones de edad en lo que respecta a la contratación, los ascensos, los despidos, los pagos, las compensaciones adicionales, la capacitación laboral, la clasificación, las referencias y los demás aspectos del empleo.

SEXO (SALARIOS)

Además de lo establecido en el Título VII de la Ley de Derechos Civiles, con sus modificaciones, la Ley de Igualdad en las Remuneraciones (Equal Pay Act) de 1963, con sus modificaciones, también prohíbe la discriminación sexual en el pago de los salarios a las mujeres y los hombres que realicen básicamente el mismo trabajo, en empleos que requieran las mismas habilidades, esfuerzo y responsabilidad, en condiciones laborales similares, en el mismo establecimiento.

GENÉTICA

El Título II de la Ley de No Discriminación por Información Genética (Genetic Information Nondiscrimination Act, GINA) de 2008 protege a los postulantes y empleados contra la discriminación basada en la información genética en lo que respecta a la contratación, los ascensos, los despidos, los pagos, las compensaciones adicionales, la capacitación laboral, la clasificación, las referencias y los demás aspectos del empleo. La GINA también limita la adquisición de información genética por parte de los empleadores y condiciona de manera estricta su divulgación. La información genética incluye las pruebas genéticas de los postulantes, empleados o integrantes de sus familias, la manifestación de enfermedades o trastornos de los miembros de la familia (historia médica familiar) y las solicitudes o la recepción de servicios genéticos por parte de los postulantes, empleados o integrantes de sus familias.

REPRESALIAS

Todas estas leyes federales prohíben a las entidades cubiertas que tomen represalias en contra de una persona que presenta un cargo por discriminación, participa en un procedimiento por discriminación o que, de algún otro modo, se opone a una práctica laboral ilícita.

QUÉ DEBE HACER SI CONSIDERA QUE ES VÍCTIMA DE LA DISCRIMINACIÓN

Existen plazos estrictos para presentar cargos por discriminación laboral. A fin de preservar la capacidad de la Comisión para la Igualdad de Oportunidades en el Empleo (Equal Employment Opportunity Commission, EEOC) de actuar en representación suya y proteger su derecho a iniciar una demanda privada si fuese necesario en última instancia, debe comunicarse con la EEOC apenas sospeche que se produjo un hecho de discriminación: Comisión para la Igualdad de Oportunidades en el Empleo de los Estados Unidos, 1-800-669-4000 (línea gratuita) o 1-800-669-6820 (línea gratuita TTY para las personas con problemas auditivos). Puede encontrar información sobre las sucursales de la EEOC en www.eeoc.gov o en la mayoría de las guías telefónicas en la sección Gobierno Federal o Gobierno de los Estados Unidos. También puede obtener información adicional sobre la EEOC, incluso cómo presentar un cargo, en www.eeoc.gov.

Empleadores que tengan contratos o subcontratos con el gobierno federal

Los postulantes y empleados de las compañías que tengan un contrato o subcontrato con el gobierno federal están protegidos por la ley federal contra la discriminación en función de:

RAZA, COLOR, RELIGIÓN, SEXO, PROCEDENCIA

El Decreto Ejecutivo 11246, con sus modificaciones, prohíbe la discriminación en el trabajo en función de raza, color, religión, sexo o procedencia y exige que se implementen acciones afirmativas para garantizar la igualdad de oportunidades en todos los aspectos laborales.

PERSONAS CON DISCAPACIDADES

La Sección 503 de la Ley de Rehabilitación (*Rehabilitation Act*) de 1973, con sus modificaciones, protege a las personas idóneas contra la discriminación por discapacidad en lo que respecta a la contratación, los ascensos, los despidos, los pagos, las compensaciones adicionales, la capacitación laboral, la clasificación, las referencias y los demás aspectos del empleo. La discriminación por discapacidad se refiere a la falta de adaptaciones razonables para las limitaciones físicas o mentales de una persona idónea que tiene una discapacidad y que es un postulante o un empleado, salvo que dichas adaptaciones provoquen una dificultad económica desmedida para la compañía. La Sección 503 también exige que los contratistas federales implementen acciones afirmativas para emplear y avanzar en el empleo de personas idóneas con discapacidades en todos los niveles laborales, incluido el nivel ejecutivo.

VETERANOS DISCAPACITADOS, RECIÉN RETIRADOS, BAJO PROTECCIÓN Y CON MEDALLA POR SERVICIO A LAS FUERZAS ARMADAS

La Ley de Asistencia a la Readaptación de Veteranos de Vietnam (*Vietnam Era Veterans' Readjustment Assistance Act*) de 1974, con sus modificaciones, 38 U.S.C. 4212, prohíbe la discriminación laboral y exige que se implementen acciones afirmativas para emplear y avanzar en el empleo de los veteranos discapacitados, recién retirados

(en el plazo de los tres años posteriores a la baja o al cese del servicio activo), otros veteranos bajo protección (los veteranos que prestaron servicio durante una guerra o en una campaña o expedición para la cual se les autorizó una insignia de campaña) y los veteranos con medalla por servicio a las Fuerzas Armadas (aquellos que durante el servicio activo, participaron en una operación militar de los Estados Unidos por la cual se los reconoció con una medalla por servicio a las Fuerzas Armadas).

REPRESALIAS

Quedan prohibidas las represalias contra una persona que presenta una demanda por discriminación, participa en un procedimiento de la Oficina de Programas de Cumplimiento de Contratos Federales (*Office of Federal Contract Compliance Programs*, OFCCP) o que se oponga, de algún otro modo, a la discriminación según estas leyes federales.

Toda persona que considere que un contratista violó sus obligaciones de acción afirmativa o no discriminación según las autoridades mencionadas anteriormente debe comunicarse de inmediato con:

La Oficina de Programas de Cumplimiento de Contratos Federales (OFCCP), Departamento de Trabajo de los Estados Unidos, 200 Constitution Avenue, N.W., Washington, D.C. 20210, teléfono 1-800-397-6251 (línea gratuita) o (202) 693-1337 (línea TTY). También puede enviar un mensaje de correo electrónico a la OFCCP (OFCCP-Public@dol.gov) o bien, llamar a una de sus oficinas regionales o del distrito, las cuales aparecen en la mayoría de las guías telefónicas en la sección Gobierno de los Estados Unidos, Departamento de Trabajo.

Programas o actividades que reciben asistencia financiera federal

RAZA, COLOR, PROCEDENCIA, SEXO

Además de las protecciones establecidas en el Título VII de la Ley de Derechos Civiles de 1964 y sus modificaciones, el Título VI de dicha ley, con sus modificaciones, prohíbe la discriminación por raza, color o procedencia en los programas o las actividades que reciben asistencia financiera federal. La discriminación laboral está cubierta por el Título VI si el objetivo principal de la asistencia financiera es brindar empleo, o si la discriminación laboral provoca o puede provocar discriminación cuando se proporcionan los servicios de dichos programas. El Título IX de las Reformas Educativas de 1972 prohíbe la discriminación laboral según el sexo en los programas o las actividades educativas que reciben asistencia financiera federal.

PERSONAS CON DISCAPACIDADES

La Sección 504 de la Ley de Rehabilitación de 1973, con sus modificaciones, prohíbe la discriminación laboral por discapacidad en cualquier programa o actividad que reciba asistencia financiera federal. Queda prohibida la discriminación en todos los aspectos laborales contra las personas discapacitadas que, con o sin adaptaciones razonables, pueden desempeñar las funciones esenciales del trabajo.

Si cree que ha sido víctima de discriminación en algún programa de una institución que reciba asistencia financiera federal, debe comunicarse de inmediato con la agencia federal que brinda dicha asistencia.

EMPLOYEE RIGHTS AND RESPONSIBILITIES UNDER THE FAMILY AND MEDICAL LEAVE ACT

Basic Leave Entitlement

FMLA requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to eligible employees for the following reasons:

- For incapacity due to pregnancy, prenatal medical care or child birth;
- To care for the employee's child after birth, or placement for adoption or foster care;
- To care for the employee's spouse, son or daughter, or parent, who has a serious health condition; or
- For a serious health condition that makes the employee unable to perform the employee's job.

Military Family Leave Entitlements

Eligible employees with a spouse, son, daughter, or parent on active duty or call to active duty status in the National Guard or Reserves in support of a contingency operation may use their 12-week leave entitlement to address certain qualifying exigencies. Qualifying exigencies may include attending certain military events, arranging for alternative childcare, addressing certain financial and legal arrangements, attending certain counseling sessions, and attending post-deployment reintegration briefings.

FMLA also includes a special leave entitlement that permits eligible employees to take up to 26 weeks of leave to care for a covered servicemember during a single 12-month period. A covered servicemember is a current member of the Armed Forces, including a member of the National Guard or Reserves, who has a serious injury or illness incurred in the line of duty on active duty that may render the servicemember medically unfit to perform his or her duties for which the servicemember is undergoing medical treatment, recuperation, or therapy; or is in outpatient status; or is on the temporary disability retired list.

Benefits and Protections

During FMLA leave, the employer must maintain the employee's health coverage under any "group health plan" on the same terms as if the employee had continued to work. Upon return from FMLA leave, most employees must be restored to their original or equivalent positions with equivalent pay, benefits, and other employment terms.

Use of FMLA leave cannot result in the loss of any employment benefit that accrued prior to the start of an employee's leave.

Eligibility Requirements

Employees are eligible if they have worked for a covered employer for at least one year, for 1,250 hours over the previous 12 months, and if at least 50 employees are employed by the employer within 75 miles.

Definition of Serious Health Condition

A serious health condition is an illness, injury, impairment, or physical or mental condition that involves either an overnight stay in a medical care facility, or continuing treatment by a health care provider for a condition that either prevents the employee from performing the functions of the employee's job, or prevents the qualified family member from participating in school or other daily activities.

Subject to certain conditions, the continuing treatment requirement may be met by a period of incapacity of more than 3 consecutive calendar days combined with at least two visits to a health care provider or one visit and a regimen of continuing treatment, or incapacity due to pregnancy, or incapacity due to a chronic condition. Other conditions may meet the definition of continuing treatment.

Use of Leave

An employee does not need to use this leave entitlement in one block. Leave can be taken intermittently or on a reduced leave schedule when medically necessary. Employees must make reasonable efforts to schedule leave for planned medical treatment so as not to unduly disrupt the employer's operations. Leave due to qualifying exigencies may also be taken on an intermittent basis.

Substitution of Paid Leave for Unpaid Leave

Employees may choose or employers may require use of accrued paid leave while taking FMLA leave. In order to use paid leave for FMLA leave, employees must comply with the employer's normal paid leave policies.

Employee Responsibilities

Employees must provide 30 days advance notice of the need to take FMLA leave when the need is foreseeable. When 30 days notice is not possible, the employee must provide notice as soon as practicable and generally must comply with an employer's normal call-in procedures.

Employees must provide sufficient information for the employer to determine if the leave may qualify for FMLA protection and the anticipated timing and duration of the leave. Sufficient information may include that the employee is unable to perform job functions, the family member is unable to perform daily activities, the need for hospitalization or continuing treatment by a health care provider, or circumstances supporting the need for military family leave. Employees also must inform the employer if the requested leave is for a reason for which FMLA leave was previously taken or certified. Employees also may be required to provide a certification and periodic recertification supporting the need for leave.

Employer Responsibilities

Covered employers must inform employees requesting leave whether they are eligible under FMLA. If they are, the notice must specify any additional information required as well as the employees' rights and responsibilities. If they are not eligible, the employer must provide a reason for the ineligibility.

Covered employers must inform employees if leave will be designated as FMLA-protected and the amount of leave counted against the employee's leave entitlement. If the employer determines that the leave is not FMLA-protected, the employer must notify the employee.

Unlawful Acts by Employers

FMLA makes it unlawful for any employer to:

- Interfere with, restrain, or deny the exercise of any right provided under FMLA;
- Discharge or discriminate against any person for opposing any practice made unlawful by FMLA or for involvement in any proceeding under or relating to FMLA.

Enforcement

An employee may file a complaint with the U.S. Department of Labor or may bring a private lawsuit against an employer.

FMLA does not affect any Federal or State law prohibiting discrimination, or supersede any State or local law or collective bargaining agreement which provides greater family or medical leave rights.

FMLA section 109 (29 U.S.C. § 2619) requires FMLA covered employers to post the text of this notice. Regulations 29 C.F.R. § 825.300(a) may require additional disclosures.



For additional information:
1-866-4US-WAGE (1-866-487-9243) TTY: 1-877-889-5627
WWW.WAGEHOUR.DOL.GOV



EMPLOYEE RIGHTS

UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE

\$7.25

 PER HOUR

BEGINNING JULY 24, 2009

OVERTIME PAY At least 1½ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR An employee must be at least **16** years old to work in most non-farm jobs and at least **18** to work in non-farm jobs declared hazardous by the Secretary of Labor.

Youths **14** and **15** years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

No more than

- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

Also, work may not begin before **7 a.m.** or end after **7 p.m.**, except from June 1 through Labor Day, when evening hours are extended to **9 p.m.** Different rules apply in agricultural employment.

TIP CREDIT Employers of “tipped employees” must pay a cash wage of at least \$2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least \$2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

ENFORCEMENT The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Employers may be assessed civil money penalties of up to \$1,100 for each willful or repeated violation of the minimum wage or overtime pay provisions of the law and up to \$11,000 for each employee who is the subject of a violation of the Act's child labor provisions. In addition, a civil money penalty of up to \$50,000 may be assessed for each child labor violation that causes the death or serious injury of any minor employee, and such assessments may be doubled, up to \$100,000, when the violations are determined to be willful or repeated. The law also prohibits discriminating against or discharging workers who file a complaint or participate in any proceeding under the Act.

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- Some state laws provide greater employee protections; employers must comply with both.
- The law requires employers to display this poster where employees can readily see it.
- Employees under 20 years of age may be paid \$4.25 per hour during their first 90 consecutive calendar days of employment with an employer.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.

For additional information:



1-866-4-USWAGE

(1-866-487-9243)

TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

DERECHOS DEL EMPLEADO

BAJO LA LEY DE NORMAS JUSTAS DE TRABAJO

SECCIÓN DE HORAS Y SUELDOS DEL DEPARTAMENTO DE TRABAJO DE EEUU

SALARIO MÍNIMO FEDERAL

\$7.25 POR HORA

A PARTIR DEL 24 DE JULIO DE 2009

PAGO DE SOBRETUENDU

Por lo menos tiempo y medio (1½) de su tasa regular de pago por todas las horas trabajadas en exceso de 40 en una semana laboral.

EMPLEO DE MENORES DE EDAD

El empleado ha de tener por lo menos **16** años de edad para trabajar en la mayoría de los trabajos no agrícolas y por lo menos tener **18** años para trabajar en trabajos no agrícolas declarados arriesgados por el/la Secretario(a) de Trabajo.

Jóvenes de **14** y **15** años de edad pueden trabajar fuera de horas escolares en varios trabajos que no sean en fabricación, minería, o arriesgados, bajo las siguientes condiciones:

No más de

- **3** horas en un día escolar o **18** horas en una semana escolar;
- **8** horas en un día no escolar o **40** horas en una semana no escolar.

Además, el trabajo no puede empezar antes de las **7 de la mañana** o terminar después de las **7 de la tarde** salvo del primero de junio hasta el Día de Labor, cuando las horas de la tarde se extienden hasta las **9 de la noche**. Se aplican reglas distintas al empleo agrícola.

CRÉDITO POR PROPINAS

Empresarios de empleados que reciben propinas han de pagar un salario en efectivo de por lo menos \$2.13 por hora si declaran un crédito por propina contra sus obligaciones hacia el salario mínimo. Si las propinas del empleado combinadas con el salario en efectivo que paga el empresario de por lo menos \$2.13 por hora no equivalen al salario mínimo por hora, el empresario ha de suplir la diferencia. También se tiene que cumplir con otras condiciones.

CUMPLIMIENTO

El Departamento de Trabajo puede recuperar salarios atrasados administrativamente o mediante acción legal en los tribunales, para empleados a los cuales se les haya pagado por debajo y en violación de la ley.

A los empresarios se les puede imponer penas pecuniarias civiles de hasta \$1,100 por cada infracción intencional o repetida de las provisiones de la ley del pago del salario mínimo y del pago de sobretuendo y hasta \$11,000 por cada empleado que sea empleado en violación de las provisiones de la ley sobre el empleo de menores. Adicionalmente, se puede imponer una pena pecuniaria civil de hasta \$50,000 por cada infracción de las provisiones sobre el empleo de menores si causa la muerte o una lesión seria de un empleado menor de edad, y se pueden doblar dichas evaluaciones, hasta \$100,000, cuando se determinan que las infracciones son intencionales o repetidas. La ley también prohíbe la discriminación o el despido del trabajador por haber presentado una denuncia o por participar en cualquier procedimiento bajo la Ley.

INFORMACIÓN ADICIONAL

- Ciertas ocupaciones y ciertos establecimientos están exentos de las provisiones de pago de salario mínimo y de sobretuendo.
- Se aplican provisiones especiales a trabajadores de Samoa Americana y de la Comunidad de las Islas Marianas del Norte.
- Algunas leyes estatales proveen más protecciones al empleado; el empresario ha de cumplir con ambas.
- La ley exige que los empresarios pongan este cartel donde los empleados lo puedan ver fácilmente.
- A los empleados menores de 20 años de edad se les puede pagar menos de \$4.25 por hora durante los primeros 90 días civiles consecutivos de empleo con un empresario.
- Se les puede pagar menos del salario mínimo bajo ciertos certificados especiales emitidos por el Departamento de Trabajo a ciertos estudiantes de tiempo completo, estudiantes aprendices y a trabajadores con impedimentos.



Para información adicional:

1-866-4-USWAGE

(1-866-487-9243)

TTY: 1-877-889-5627



U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

CERTIFICATE OF CONSTRUCTION COMPLETION

This is to certify that on the ____ day of _____, 20____, a FINAL INSPECTION was made of the project herein described as:

CONTRACT

DATE: _____

OWNER: Precinct No. 1

CONSTRUCTION CONTRACTOR: _____ of the City of _____ State of Texas.

PROJECT DESCRIPTION

CONSTRUCTION OF: Street Improvements to: Old La Blanca Rd. (Mile 10-12) Phase 2

UCP CONTRACT NO.: 5013/14/15-91-0311-5000-9100-UCP-ML

located in or near the City/Pct. of: Hidalgo County Precinct 1, Texas

THIS IS TO CERTIFY:

1. That the work has been completed in accordance with the plans and specifications and all addendum(s), change order(s), supplemental agreement(s) thereto, and with the following exceptions: None
2. That the sum of 0.00 zero (\$ 0.00), deducted from the final payment of the Contractor is a fair and equitable settlement for the foregoing except work.
3. That the contractor has presented a "Certificate of Release" stating under oath, that all claims arising out of the performance of work have been fulfilled, and the OWNER is released from all claims arising under or by virtue of said contract.
4. That the CONTRACTOR has presented in behalf of itself and its sureties, satisfactory evidence that it is bound to repair, replace, and make good any faulty workmanship and/or materials discovered in the work within a period of one year from this date, as provided in said contract.
5. Amount of Original Contract: \$ _____
Present Amount of Contract: \$ _____
Total Amount of earned to date: \$ _____
Less: previous payments: \$ _____
Balance: \$ _____
Authorized deductions: \$ _____
AMOUNT OF FINAL PAYMENT: \$ _____

6. That the final payment in the amount _____
_____ is now due and payable.

Architect/Engineer Signature

BY: _____
(Print Name)

TITLE: _____

CONCURRED BY:

Contractor's Name

BY: _____

TITLE: _____

CONCURRED BY:

Urban County Program

BY: Diana R. Serna

TITLE: UCP Director

CONTRACTOR'S FINAL RELEASE WAIVER OF LIENS, AND AUTHORIZATION TO DISBURSE FUNDS
--

THE STATE OF TEXAS {
 {
 COUNTY OF HIDALGO {

_____ ,doing business as _____, hereinafter "Contractor," for good and valuable consideration, the receipt of which is hereby acknowledged, **hereby unconditionally waives and releases: (i) any claim he now has or hereafter may have against Owner (herein defined) and the County of Hidalgo, State of Texas; and (ii) any and all liens and claims or rights of lien which he now has or hereafter may have upon the real property described on Exhibit "A" attached hereto and made a part hereof for all purposes, and on any personal property located on the real property collectively referred to as the "Property;"** on account of labor, materials, supplies, equipment, or otherwise, furnished by Contractor to, or on account of, or for the Property, pursuant to a contract, hereinafter "Contract," dated _____, among Contractor, Owner, and the County of Hidalgo, State of Texas. City of _____ hereinafter "Owner," is the owner of the Property on which Contractor furnished labor, materials, supplies and/or equipment pursuant to the Contract.

Contractor represents and warrants to Owner and the County of Hidalgo that the parties listed on Exhibit "B" hereto are all of the laborers, subcontractors and suppliers used by Contractor on the Property covered by the Contract. Contractor further represents and warrants to Owner that following Owner's payment of \$_____ through the County of Hidalgo to or on behalf of Contractor, Contractor has been paid the full amount due to Contractor under the Contract, and that Contractor: (i) has likewise paid all its laborers, subcontractors and suppliers who provided labor and materials or supplies or equipment, or any of them, or otherwise, in connection with the Contract; and/or (ii) hereby instructs the County of Hidalgo to pay directly to the parties listed on Exhibit "C" hereto, simultaneously with the execution and delivery of this release, the amount shown by such parties' names, said parties representing all the unpaid laborers, subcontractors and suppliers who provided labor or materials or supplies or equipment, or any of them or otherwise, in connection with the Contract. Contractor hereby authorizes Owner and the County of Hidalgo, as well as any escrow agents, construction agents, or title insurance companies, and their respective successors and assigns, to plead this release and waiver, to the extent it is applicable, in any suit or suits brought by Contractor, its successors, heirs, or assigns, or anyone claiming by, through or under the Contractor, to establish a claim against Owner and/or the County of Hidalgo, and/or to establish a lien upon the Property

(or to charge the same with any lien) for labor or materials or supplies or equipment, or any of them or otherwise, done, performed, furnished or delivered under the Contract.

Contractor understands and acknowledges that Owner and the County of Hidalgo are relying on the agreements, release, waivers and representations stated herein, and such agreements, release, waivers and representations are material inducements for the County of Hidalgo to release the funds it now holds related to the construction of improvements on the Property to the Contractor and/or directly to the laborers, subcontractors and suppliers listed on Exhibit "C" hereto.

Contractor understands and agrees that this release in no way discharges Contractor from his obligations of warranty of material and/or workmanship under the Contract. Without limiting the foregoing, Contractor represents and warrants to Owner that all work performed by him or under his direction on the Property has been completed in accordance with plans and specifications and the terms of the Contract.

The person signing this document represents that he or she is duly authorized to do so on behalf of the Contractor.

All of the provisions of this document shall be binding on the Contractor and his successors and assigns and shall inure to the benefit of Owner and the County of Hidalgo and their respective successors and assigns.

Executed effective as of the _____ day of _____,

Signature

Name and Title

THE STATE OF TEXAS {
 {
COUNTY OF HIDALGO {

This instrument was acknowledged before me on this the _____ day of

_____, _____, by _____, _____
(title)

of and on behalf of _____
(a corporation) (a partnership) (an individual)

Notary Public, State of Texas

EXHIBIT "A"

EXHIBIT "B"

EXHIBIT "C"

SUB- CONTRACTOR'S FINAL RELEASE WAIVER OF LIENS, AND AUTHORIZATION TO DISBURSE FUNDS

THE STATE OF TEXAS {
 {
 COUNTY OF HIDALGO {

_____, doing business as _____, hereinafter " Sub-Contractor," for good and valuable consideration, the receipt of which is hereby acknowledged, **hereby unconditionally waives and releases: (i) any claim he now has or hereafter may have against Owner (herein defined) and the County of Hidalgo, State of Texas; and (ii) any and all liens and claims or rights of lien which he now has or hereafter may have upon the real property described on Exhibit "A" attached hereto and made a part hereof for all purposes, and on any personal property located on the real property collectively referred to as the "Property;"** on account of labor, materials, supplies, equipment, or otherwise, furnished by Sub-Contractor to, or on account of, or for the Property, pursuant to a contract, hereinafter "Contract," dated _____, among Contractor, Owner, and the County of Hidalgo, State of Texas. City of _____ hereinafter "Owner," is the owner of the Property on which Sub-Contractor furnished labor, materials, supplies and/or equipment pursuant to the Contract.

Sub-Contractor represents and warrants to Owner and the County of Hidalgo that the parties listed on Exhibit "B" hereto are all of the laborers, subcontractors and suppliers used by Contractor on the Property covered by the Contract. Sub- Contractor further represents and warrants to Owner that following Owner's payment of \$ _____ through the County of Hidalgo to or on behalf of Sub-Contractor, Sub-Contractor has been paid the full amount due to Sub-Contractor under the Contract, and that Sub-Contractor: (i) has likewise paid all its laborers, subcontractors and suppliers who provided labor and materials or supplies or equipment, or any of them, or otherwise, in connection with the Contract; and/or (ii) hereby instructs the County of Hidalgo to pay directly to the parties listed on Exhibit "C" hereto, simultaneously with the execution and delivery of this release, the amount shown by such parties' names, said parties representing all the unpaid laborers, subcontractors and suppliers who provided labor or materials or supplies or equipment, or any of them or otherwise, in connection with the Contract. Sub-Contractor hereby authorizes Owner and the County of Hidalgo, as well as any escrow agents, construction agents, or title insurance companies, and their respective successors and assigns, to plead this release and waiver, to the extent it is applicable, in any suit or suits brought by Sub-Contractor, its successors, heirs, or assigns, or anyone claiming by, through or under the Sub-Contractor, to establish a claim against

Owner and/or the County of Hidalgo, and/or to establish a lien upon the Property (or to charge the same with any lien) for labor or materials or supplies or equipment, or any of them or otherwise, done, performed, furnished or delivered under the Contract.

Sub-Contractor understands and acknowledges that Owner and the County of Hidalgo are relying on the agreements, release, waivers and representations stated herein, and such agreements, release, waivers and representations are material inducements for the County of Hidalgo to release the funds it now holds related to the construction of improvements on the Property to the Sub-Contractor and/or directly to the laborers, subcontractors and suppliers listed on Exhibit "C" hereto.

Sub-Contractor understands and agrees that this release in no way discharges Sub-Contractor from his obligations of warranty of material and/or workmanship under the Contract. Without limiting the foregoing, Sub-Contractor represents and warrants to Owner that all work performed by him or under his direction on the Property has been completed in accordance with plans and specifications and the terms of the Contract.

The person signing this document represents that he or she is duly authorized to do so on behalf of the Sub-Contractor.

All of the provisions of this document shall be binding on the Sub-Contractor and his successors and assigns and shall inure to the benefit of Owner and the County of Hidalgo and their respective successors and assigns.

Executed effective as of the _____ day of _____,

Signature

Name and Title

THE STATE OF TEXAS {
 {
COUNTY OF HIDALGO {

This instrument was acknowledged before me on this the _____ day of

_____, _____, by _____, _____
(title)

of and on behalf of _____
(a corporation) (a partnership) (an individual)

Notary Public, State of Texas

EXHIBIT "A"

EXHIBIT "B"