



# **PROJECT MANUAL**

**Paving and Sidewalk Improvements  
900 SE Green Oaks Blvd.  
Arlington, TX 76018**

**CITY OF ARLINGTON  
PROJECT NO. PJ000106  
CONSULTANT PROJECT NO. 21-2171  
DATE ISSUED: 09.22.22**

**Prepared by  
City of Arlington  
Department of Asset Management  
Building Design and Construction Division**

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**Section 00 1010**  
**Invitation to Bid**

The City of Arlington, Texas (the Owner) will accept bids for a contract for Paving and Sidewalk Improvements at Southeast Branch Library, 900 SE Green Oaks Blvd., Arlington, Texas 76018.

The General Contractor is required to coordinate his activities with the Owner's activities. The existing facilities shall remain operational during the construction.

The Owner will receive sealed bids until **11:00 A.M., THURSDAY, OCTOBER 13, 2022**, at the **Public Works Conference Room 2, Second Floor City of Arlington Municipal Building (City Hall), 101 W. Abram Street, Arlington, Texas, 76010.**

Mailing address is Alf Bumgardner, AIA,  
P.O. Box 90231, MS 01-0140  
Arlington, TX 76004-3231.

Bids received after that time will not be accepted.

Bid Documents may be accessed and submitted at the following:  
City's Supplier Portal at <https://arlington-tx.ionwave.net/Login.aspx>.

Vendors must be registered in Ionwave to access the bid documents. Please register using the link above.

All questions concerning this RFQ must be directed to Lisa Dahr, using the Ionwave Supplier Portal event question tab or via email [Lisa.Dahr@arlingtontx.gov](mailto:Lisa.Dahr@arlingtontx.gov)

The questions must be received on or before Date: October 07, 2022 at 5:00 pm.

Bid Security in the amount of five percent (5%) of the greatest amount bid must accompany each bid in accordance with the Instructions to Bidders.

A Performance Bond, a Labor and Material Payment Bond, each in an amount of not less than one hundred percent (100%) of the contract price, conditioned upon faithful performance of the contract and payment of all persons supplying labor or furnishing materials, shall be executed by the successful bidder and accompany the signed contract.

Bid Proposal may be submitted for approval of alternative products as substitutions for materials which may appear to be specified as proprietary. Submittals will be received in the office of the Consultant in accordance with the Instructions to Bidders until 5:00 p.m., five calendar days prior to the date set for bid opening.

Bid Proposal must be submitted on a form identical to that bound within this Project Manual or as modified by authorized addendum. The right to accept any bid, or to reject any or all bids and to waive any irregularities, is hereby reserved by the Owner.

1 Bidder's Qualification and Minority/Women Business Enterprises (MWBE) utilization plans and  
2 relevant documents must be attached to the Bid Proposal. Failure to return these documents by  
3 the dates specified will make your proposal non-responsive.

4 All interested parties are encouraged to attend the Pre-bid Conference scheduled for this project  
5 at **10 A.M., WEDNESDAY, OCTOBER 05, 2022** at SE Branch Library, 900 SE Green Oaks Blvd.,  
6 Arlington, Texas 76018 , followed by visit to the project site.

7 Attendance at the Pre-Bid Conference is not mandatory but strongly encouraged. It will be  
8 considered in the evaluation of bids.

9 **END OF INVITATION TO BID**

**Section 00 1020**  
**Instructions to Bidders**

**1. SECURING THE DOCUMENTS**

Copies of the Contract Documents may be obtained for bidding purposes upon the conditions set forth in the Invitation to Bid and through the means and methods prescribed by the City of Arlington.

**2. DELIVERY OF PROPOSAL**

It shall be the Bidder's responsibility for the delivery of his/her proposal at the proper place by the time stated in the notice to Bidders. The mere fact that a proposal was dispatched will not be considered.

The bidder may submit in a sealed envelope plainly marked with the name or description of the project as shown on the front cover of the Contract Documents.

**3. BID FORM**

- A. Make bids on the Bid Form identical to that provided in this Project Manual, or as modified by authorized addendum, properly executed and with all items completed. Do not change the wording of the Bid Form and do not add to the wording of the Bid Form. Unauthorized conditions, limitations or provisions attached to the Proposal shall be cause for rejection of the Proposal. Alterations by erasure or interlineation must be explained or noted in the bid over the signature of the bidder.
- B. Bid amounts shall be shown in words and numbers. In case of ambiguity or conflict, the amount shown in words shall prevail.
- C. No bid or modification of a bid may be submitted by telephone, facsimile machine or telegram. No bids received after the time fixed for receiving bids will be considered.
- D. Each bid shall be addressed to the City of Arlington (the Owner). Hard copy bids will be accepted and each bid shall be enclosed in a sealed envelope bearing the title of the project (identified on the Bid Form), the name of the bidder and the date and hour of the opening. It is the sole responsibility of the bidder to see that the bid is received on time and at the designated location.

**4. BID SECURITY**

- A. A Bid Security must accompany each proposal. The Bid Security shall be a Bid Bond from an acceptable surety company. The Bid Bond shall be executed by a surety company acceptable to and approved by the Owner, listed in Treasury Department Circular 570, and authorized to do business in the State of Texas. The Bid Security shall be in the amount of at least five percent (5%) of the greatest amount bid.
- B. The amount of the Bid Security shall be considered liquidated damages for losses which the Owner will sustain by failure, neglect or refusal of the bidder to execute and deliver the Contract and required Surety Bonds to the Owner as required. These liquidated damages are not considered to be

a penalty, but shall be deemed, taken and treated as reasonable liquidated damages, since it is impractical and extremely difficult to fix actual damages resulting from the failure, neglect or refusal of the bidder to execute and deliver the Contract and required Surety Bonds.

- C. If the bidder defaults in executing the Contract or in furnishing required Surety Bonds after notification of the Owner's intent to award the Contract to him, then the Bid Security shall be forfeited to the Owner.
- D. Bids shall remain in effect for a period of sixty (60) days after the Bid Opening. During this time the Owner may accept or reject the Proposals as the Owner so elects. If the Proposal is not accepted within this period of 60 days, or if the successful Bidder properly executes and delivers the Contract and the Surety Bonds, the Bid Security will be returned at the request of the bidder.

## **5. PERFORMANCE, AND PAYMENT BONDS**

- A. A Performance Bond, a Labor and Material Payment Bond shall be required, on forms identical to that found in the Project Manual, each in the amount of 100% of the Contract Sum.
- B. Bonds shall be executed by a surety company listed in Treasury Department Circular 570, authorized to do business in the state of Texas and to which the Owner has no reasonable objection. The Owner shall require that the surety company be qualified as a surety on federal obligations in accordance with state law. The surety company must maintain an office or agency for contact in Tarrant County, Texas.
- C. Bonds shall be provided by the Contractor without additional cost to the Owner.

## **6. INSURANCE**

The Contractor shall, at his own expense, purchase, maintain and keep in force not less than the types and limits of insurance coverage specified in the Contract. The stated limits of insurance are MINIMUM ONLY, and it shall be the Contractor's responsibility to determine if additional limits or coverages are appropriate.

## **7. PROOF OF COMPETENCY OF BIDDER**

Any bidder may be required to furnish evidence satisfactory to the Owner that he and his proposed subcontractors have sufficient means and experience in the types of work called for to assure completion of the Contract in a satisfactory manner and in strict accordance with the project specifications. **All bidders are required to furnish a completed Bidder Qualifications Questionnaire form with their bid, using the form included in the Project Manual.**

## **8. EXAMINATION OF CONTRACT DOCUMENTS AND SITE OF WORK**

Before submitting a bid, each bidder shall carefully examine the Contract Documents. A Pre-Bid Conference will be conducted for the purpose of allowing bidders to become familiar with the requirements of the project. Each bidder will be given an opportunity through this Pre-Bid Conference to inform himself prior to bidding as to the existing conditions and limitations under which the Work is

1 to be performed, and he shall include in his bid a sum to cover all costs of all  
2 items necessary to perform the Work as set forth in the Contract Documents. No  
3 allowance will be made to any bidder because of lack of such examination or  
4 knowledge. The submission of a bid shall be construed as conclusive evidence  
5 that the bidder is sufficiently familiar with all relevant conditions.  
6

7 **9. INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING**

- 8 A. If any person contemplating submitting a bid for this project is in doubt as  
9 to the true meaning of any part of the Contract Documents, or finds  
10 discrepancies in or omissions from any part of the Contract Documents, he  
11 may submit to the Architect a written request for interpretation thereof not  
12 later than five calendar days prior to receipt of bids. The person  
13 submitting the request shall be responsible for its prompt delivery.  
14 B. Any interpretation or correction of the Contract Documents will be made  
15 only by addendum, which will be posted in the Ionwave system. The  
16 Owner will not be responsible for any other explanations or interpretations  
17 of the Contract Documents and it is the bidders responsibility to  
18 acknowledge the addendum or changes to the bid documents prior to  
19 submission.  
20

21 **10. WITHDRAWAL OF BIDS**

- 22 A. Any bidder may withdraw his bid, either personally or by written request,  
23 at any time prior to the scheduled time for opening bids.  
24 B. No bidder may withdraw his bid for a period of sixty (60) days after the  
25 date set for opening thereof, and any bid shall be subject to acceptance  
26 by the Owner during this period.  
27

28 **11. TIME OF COMPLETION**

29 Submission of a bid shall signify the bidder's agreement to commence work  
30 within ten (10) calendar days following receipt of a written "Notice to Proceed"  
31 from the Owner and to achieve Substantial Completion of the project within the  
32 time limit stipulated in the Contract. The time limit submitted on the bid form  
33 shall include all aspects of the construction time including anticipated weather  
34 delays; long lead items; mobilization; etc... to provide a complete finished  
35 project. Bidders must also take into account for time of completion the days in  
36 which work is not permitted due to scheduled, City governmental processes. The  
37 schedule and days of these governmental meetings will be provided for  
38 consideration.  
39

40 **12. AWARD OR REJECTION OF BIDS**

41 As provided by law, the Contract shall be awarded to the bidder whose bid  
42 represents the lowest responsible Bidder to the Owner as determined by the  
43 Owner. Determining factors in award or rejection of any bid will include the  
44 previous experience of the Contractor and his proposed subcontractors, and his  
45 ability to secure appropriate bonding and insurance. The owner reserves the  
46 right to waive any irregularities or reject any and all bids.  
47  
48



1 **13. EXECUTION OF AGREEMENT**

- 2 A. The form of Agreement to be executed by the successful bidder, as  
3 Contractor, is as incorporated in this Project Manual.  
4 B. The bidder to whom the Contract is awarded by the Owner shall, within ten  
5 (10) calendar days after notice of award and receipt of Agreement forms  
6 and Bond forms from the Owner, execute and deliver to the Owner all  
7 required copies.  
8 C. At or prior to delivery of the executed Agreement and Bonds, the  
9 Contractor shall deliver to the Owner the evidence of insurance coverage as  
10 required by the Contract Documents. All policies and certificates of  
11 insurance shall be approved by the Owner before the successful bidder may  
12 proceed with the Work.  
13 D. **FAILURE OR REFUSAL TO FURNISH INSURANCE POLICIES OR**  
14 **CERTIFICATES IN A FULLY SATISFACTORY FORM AND IN A TIMELY**  
15 **MANNER MAY BE CAUSE FOR DENIAL OR CANCELLATION OF THE**  
16 **CONTRACT, TOGETHER WITH FORFEITURE OF THE BID SECURITY**  
17 **TO THE OWNER**, and shall subject the bidder to loss of time from the  
18 allowable performance period equal to the time of delay in furnishing the  
19 required material.  
20

21 **14. CONTRACTOR STATUS INFORMATION FORM**

22 It shall be the successful bidder's responsibility to complete this form prior to  
23 execution of the contract by the City of Arlington. This form is necessary to  
24 ensure that the contract and bonds are in the correct form.  
25

26 **15. AFFIDAVIT AGAINST PROHIBITED ACTS**

27 It shall be the successful bidder's responsibility to complete this affidavit prior to  
28 execution of the contract by the City of Arlington. Failure to complete this form  
29 may prohibit the contractor's ability to secure the contract.  
30

31 **16. CONTRACTOR RESIDENCY STATEMENTS**

32 It shall be the successful bidder's responsibility to complete this form prior to  
33 execution of the contract by the City of Arlington. Failure to complete this form  
34 may prohibit the contractor's ability to secure the contract.  
35

36 **17. WAGE RATES AFFIDAVIT**

37 As provided in V.T.C.A., Government Code, Chapter 2258, the Contractor and any  
38 subcontractor under him are required to pay not less than the prevailing rates of  
39 per diem wages in the locality of the Work at the time of construction to all  
40 laborers, workmen and mechanics employed by them in the execution of the  
41 contract. Bidders should familiarize themselves with the entire provisions of this  
42 law and the penalties provided for its violation before submitting their bids. In  
43 accordance with this Article, the Owner has established a schedule of wage rates,  
44 published in the section of this Project Manual titled Prevailing Wage Rates, and  
45 not less than these established rates must be paid on the project. Any workers  
46 not included in the schedule shall be properly classified and paid not less than  
47 the rate of wages prevailing in the locality of the Work at the time of

1 construction. Before final payment shall be due, the Contractor shall submit the  
2 notarized Wage Rate Affidavit included in this Project Manual.  
3

4 **18. PROCUREMENT OF GOODS AND SERVICES FROM ARLINGTON BUSINESS**  
5 **AND/OR HISTORICALLY UNDERUTILIZED BUSINESS**

- 6 A. In performing this contract, Contractor agrees to use diligent efforts to  
7 purchase all goods and services from Arlington Business whenever such  
8 goods and services are comparable in availability, quality and price.  
9 B. As a matter of policy with respect to City of Arlington projects and  
10 procurements, City of Arlington also encourages the use, if applicable, of  
11 qualified contractors, subcontractors and suppliers where at least fifty-  
12 one percent (51%) of the ownership of such contractor, subcontractor or  
13 supplier is vested in racial or ethnic minorities or women. In the selection  
14 of subcontractors, suppliers or other persons in organizations proposed  
15 for work on this contract, the Contractor agrees to consider this policy  
16 and to use its reasonable and best efforts to select and employ such  
17 company and persons for work on this contract.  
18

19 **19. ADDENDUM**

- 20 A. The Owner/Architect reserves the right to issue addendum to the Plans.  
21 Proposal, Specifications, and Special Provisions. When possible, the  
22 Owner shall email or fax addendum to the bidders.  
23 B. It shall be the Bidder's responsibility to ensure that he/she is aware of  
24 any and all addendum issued by the Owner/Architect.  
25 C. The Bidder shall acknowledge the receipt of the addendum in the  
26 appropriate spaces provided in the proposal.  
27

28 **20. CONSTRUCTION CONTINGENCY ALLOWANCE**

29 A bid item for a Owner contingency allowance has been designated in the Bid  
30 Proposal. It shall be used only at the direction of the City. Any balance of funds  
31 remaining in the construction contingency allowance at the close of the project  
32 belongs to and shall remain with the City of Arlington.  
33

34 **21. MINORITY\WOMEN BUSINESS ENTERPRISE**

35 All bidders will be required to submit information related to their Minority and/or  
36 Woman Owned Business Enterprise (MWBE) participation as outlined and  
37 determined in the in the Scope of Work and MWBE Special Provisions.  
38

39 Reference Section 00 3080 Minority and/or Woman Owned Business Enterprise  
40 for more information about the City's MWBE policy and provisions.  
41

42 **22. SALES TAX EXEMPTION**

- 43 A. The Owner qualifies for exemption from state and local sales excise and  
44 use taxes, pursuant to Texas law. The Owner will provide tax-exemption  
45 information allowing the Contractor to purchase, without payment of  
46 these taxes, the following:  
47 1. all materials, supplies, equipment and other tangible personal  
48 property incorporated into the real property being improved; and

- 1                   2. all materials, supplies, equipment and other tangible personal  
2                   property completely used or consumed by the Contractor in  
3                   performing the contract with the Owner.  
4       B.       Materials and supplies "used in the performance of a contract" include  
5               only those materials actually incorporated into the property being  
6               improved and those supplies directly used to incorporate such materials  
7               into the property being improved. Overhead supplies and supplies used  
8               indirectly or only incidental to the performance of the contract with the  
9               Owner are not included in the exemption.  
10      C.       The Contractor is responsible for complying with directions and  
11               requirements of the State Comptroller regarding this tax exemption.  
12

13 **23. ASBESTOS CONTAINING BUILDING MATERIALS**

14 Building materials containing asbestos are not acceptable in this project. As a  
15 condition of final payment, the Contractor shall submit a notarized statement  
16 affirming that, in all conditions where the Contractor knows or by experience  
17 should know, he has installed no materials containing asbestos in any form,  
18 except where there has been prior written approval from the Owner.  
19

20 **24. CONFLICT OF INTEREST QUESTIONNAIRE**

21 Reference Section 00 3060 Form 1295.  
22

23 **25. PRE-BID CONFERENCE**

- 24       A.       A Pre-Bid Conference will be held for the purpose of considering questions  
25               posed by bidders followed by a tour of the project site. All interested  
26               parties are encouraged to attend the Pre-Bid Conference. Refer to Section  
27               00 1010 Invitation to Bid for Pre-Bid Conference schedule.  
28       B.       All relevant interpretations and corrections of the Contract Documents  
29               deriving from questions posed at the Pre-Bid Conference will be issued by  
30               Addendum.  
31

32 **26. PRE-CONSTRUCTION CONFERENCE**

- 33       A.       Prior to the start of the Work of this Contract, the successful Bidder, the  
34               Architect and the Owner's Representative will meet for the purpose of  
35               reviewing schedules and conditions of the site.  
36       B.       The location and date of the Pre-Construction Meeting will be scheduled  
37               after the Award of Contract to all effected parties.  
38       C.       Pre-Construction Conference Agenda:  
39               1. Introduction of Key Personnel.  
40               2. Dates will be selected for meetings.  
41               3. All required contract forms, bonds and insurance will be reviewed.  
42               4. Schedules and Submittal Process will be reviewed.  
43               5. Use of Site.  
44               6. Contractor questions.  
45

46 **27. TITLE VI:** The City of Arlington, in accordance with Title VI of the Civil Rights  
47 Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of  
48 Federal Regulations, Department of Transportation, Subtitle A, Office of the

Secretary, Part 21, Nondiscrimination in Federally-Assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all vendors that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. Vendor will abide and ensure compliance with all terms of Appendix A of the USDOT Standard Title VI Assurances as listed below.

A. Appendix A of the USDOT Standard Title VI Assurances

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

(1) Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-Assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

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

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

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the City of Arlington shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the Contractor under the contract until the Contractor complies, and/or

(b) cancellation, termination or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The Contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The Contractor shall take such action with respect to any subcontract or procurement as the City of Arlington or the Texas Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the City of Arlington to enter into such litigation to protect the interests of the City of Arlington, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**30. VERIFICATION RELATING TO BOYCOTTING ISRAEL:** New State legislation, Chapter 2270 of the Texas Government Code prevents the City of Arlington from entering a contract that boycotts Israel. The successful contractor must verify they do not and will not boycott Israel during term of this contract. It shall be the lowest responsible bidder's responsibility to complete this verification (Section 00 3090 of the Contract Documents) prior to execution of the contract by the City of Arlington. Failure to complete this form will prohibit the contractor's ability to secure the contract.

**31. VERIFICATION RELATING TO BOYCOTTING ENERGY COMPANIES:** The State of Texas has passed legislation, which is codified in Chapter 2274 of the Texas Government Code, that prevents any municipal government from entering into a contract for goods and services unless the contractor makes certain verifications. The Contractor, by signing below, verifies that Contractor does not boycott energy companies and will not boycott energy companies during the term of the Contract. This verification, when executed, will be attached to the contract and become a part of the contract for all purposes.

**32. VERIFICATION RELATING TO DISCRIMINATING AGAINST FIREARM OR AMMUNITION INDUSTRIES:**

The State of Texas has passed legislation, which is codified in Chapter 2274 of the Texas Government Code, that prevents any municipal government from entering into a contract for goods and services unless the contractor makes certain verifications. The Contractor, by signing below, verifies that Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, and that it will not discriminate against a firearm entity or firearm trade association during the term of this Contract. This verification, when executed, will be attached to the contract and become a part of the contract for all purposes.

**END OF INSTRUCTIONS TO BIDDERS**

**SECTION 00 1030**  
**Bid Form**

Date: \_\_\_\_\_ Bidder: \_\_\_\_\_  
\_\_\_\_\_

City of Arlington  
Municipal Office Building (City Hall)  
Public Works and Transportation Conference Room 2  
101 W. Abram Street  
Arlington, Texas, 76010

The undersigned, having examined the Bid Documents, comprising the Project Manual, Drawings and Specifications, being sufficiently familiar with the site of the proposed Work, and being familiar with the conditions of this Contract, hereby proposes to furnish all labor, materials, equipment and services, in accordance with all Contract Documents, necessary to complete the project:

**PAVING AND SIDEWALK IMPROVEMENTS**  
**SOUTHEAST BRANCH LIBRARY**  
**900 SE Green Oaks Blvd.**  
**Arlington, Texas 76018**

**A. BASE BID:** \_\_\_\_\_  
\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_).

NOTE: Bid amounts shall be shown in words and numbers. In case of ambiguity or conflict, the amount shown in words shall prevail.

**B. TIME:** The undersigned agrees, if awarded the Contract, to commence the Work within ten (10) days of receipt of the Notice to Proceed and to achieve Substantial Completion for the Work required in the Base Bid and any selected Alternates within \_\_\_\_\_ calendar days following receipt of the Notice to Proceed.

**C. ALLOWANCES:** The Base Bid shall include a lump sum cash allowance of 10% of Base Bid for items as described below:  
1. Owner's construction contingency amount \_\_\_\_\_

**G. ADDENDA:** Bidder acknowledges receipt of Addenda as follows:

No. \_\_\_\_\_ Date \_\_\_\_\_  
No. \_\_\_\_\_ Date \_\_\_\_\_  
No. \_\_\_\_\_ Date \_\_\_\_\_

**H. BID SECURITY:** Enclosed with this Bid Form is Bid Security, Bid Bond, in the amount of at least 5% of the greatest amount bid, payable to the Owner, as a guarantee that if awarded the Contract, the undersigned will, within ten (10) days after receiving notice of

acceptance of this bid, execute the Contract and required Surety Bonds on the forms provided, with Corporate Surety satisfactory to the Owner.

- I. EXTENDED PROPOSAL:** Bidder agrees that this bid shall be valid and may not be withdrawn for a period of sixty (60) calendar days after the closing time for receiving bids.
- I. LIQUIDATED DAMAGES FOR SUBSTANTIAL COMPLETION:** The Undersigned agrees that, from the compensation otherwise to be paid, the Owner may retain the sum of Five Hundred Dollars (\$500.00) for each calendar day after the agreed Date of Substantial Completion that the Work remains not substantially complete, which sum is agreed upon as the proper measure of liquidated damages which the Owner will sustain per diem by the failure of the Undersigned to complete the work at the time stipulated in the Contract. This sum is not to be construed in any sense a penalty.
- J. BUILDING PERMIT FEES:** The Owner will pay permit related fees in accordance with the fee schedule provided in Section 00 5010 of the Project Manual.
- K. ATTACHMENT TO THIS BID FORM:**
1. SECTION 00 1040 BIDDER'S QUALIFICATIONS
  2. SECTION 00 3080 MWBE FORM

SEAL: (If bid is by a corporation)

Submitted by:

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
By:

\_\_\_\_\_  
Title

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Telephone

**END OF BID FORM**

**Section 00 1040  
Bidder's Qualifications**

**BIDDERS QUALIFICATIONS QUESTIONNAIRE**

- A.** The general contractor organization must be able to demonstrate that they and all those performing work under the general contractor's direction are organized to perform the proposed construction. They must also demonstrate that they have consistently and satisfactorily completed public and private facility construction projects similar in scope, complexity, and size over the past five years (or the company's entire history if less than five years).
- B.** The general contractor organization is required to complete the attached *Company Project History* forms, providing a complete listing of all municipal projects completed over the past five years. Forms must be completed by each company.
- C.** The general contractor is required to complete and submit the following attached questionnaire.
- D.** A resume of the proposed project manager, estimator, and superintendent should be prepared and should include educational experience, work experience and a listing of all public and private facility projects completed within the last five years. Include a brief description of the project, its size, construction cost, location, and owner contact. Provide references for each individual.
- E.** If the project includes public water, sewer, or street construction, applicable contractor or subcontractor must be listed on the Arlington Approved Contractor list.
- F. All information must be completed and submitted with the bid proposal.**

The undersigned certifies that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED BY: \_\_\_\_\_  
(Signature)

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

PRINCIPAL OFFICE: \_\_\_\_\_

\_\_\_\_\_  
WITNESS: \_\_\_\_\_  
(Signature)



## **BIDDER QUALIFICATIONS QUESTIONNAIRE**

1. How many years has your organization been in business as a contractor?
2. How many years has your organization been in business under its present business name?
3. If any, under what other or former names has your business been operated? Explain.
4. Approximately what percentage of work performed by your company over the past five years was in public facility construction? Calculate in terms of construction cost.
5. List the categories of work that your organization normally performs with its own forces.
6. Claims, Suits, and Damages
  - A. Has your company ever failed to complete any work awarded to it? Explain.
  - B. Has your company ever been assessed liquidated damages for failure to comply with contractual obligations? Explain.
  - C. Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers? Explain.
  - D. Have there been any judgments, claims, arbitration proceedings or suits settled against your organization or its officers over the past five years? Explain.

## BIDDERS QUALIFICATIONS QUESTIONNAIRE

### COMPANY PROJECT HISTORY

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone/Fax: \_\_\_\_\_ Years in business: \_\_\_\_\_

Contact/Title: \_\_\_\_\_

Signature: \_\_\_\_\_

#### Project History

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

\_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

\_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

\_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

Project Name: \_\_\_\_\_

Description: \_\_\_\_\_

Company's Responsibilities: \_\_\_\_\_

\_\_\_\_\_

Completion Date: \_\_\_\_\_

Project Owner/Phone: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Superintendent: \_\_\_\_\_

**END OF BIDDERS QUALIFICATIONS QUESTIONNAIRE**

**Section 00 2010  
CONTRACT FORM**

**CONSTRUCTION CONTRACT**

THE STATE OF TEXAS                   §

COUNTY OF TARRANT               §

THIS CONTRACT is entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between the **CITY OF ARLINGTON, TEXAS**, a municipal corporation, located in Tarrant County, Texas, hereinafter referred to as "Owner" and \_\_\_\_\_, with offices located at \_\_\_\_\_, hereinafter referred to as "Contractor."

**I.**

**Description of Work**

For and in consideration of the payment, agreements and conditions hereinafter mentioned, Contractor hereby agrees to complete the project in the City of Arlington, Texas, described as:

**Paving and Sidewalk Improvements at Southeast Branch Library  
City of Arlington Project Number PJ000106**

Contractor agrees to complete this construction under the terms as stated in this contract, as published by the City of Arlington Construction Management Division; each publication incorporated herein as if written word for word, and available from the City of Arlington Construction Management Division for review upon request. The work is to be performed in a good and workmanlike manner and under the terms of the provisions of this contract. Contractor hereby agrees to furnish all superintendence, labor, insurance, equipment, tools accessories and services necessary to complete the work. Any alteration or deviation from this contract, including any attachments or other related documents, shall only be valid after written authorization from the Owner.

**II.**

**Commencement and Completion**

The Contractor hereby agrees to commence work with a Notice to Proceed, and complete work within \_\_\_\_\_ **calendar days**. Owner issued a Notice of Intent

\_\_\_\_\_

**Section 00 2010  
CONTRACT FORM**

**III.**

**Contract Sum and Payment**

The Owner will pay the Contractor an amount not to exceed \_\_\_\_\_ (\$ \_\_\_\_\_), with no exceptions unless modified by Change Order. Based upon progress of the work and Applications for Payment submitted by the Contractor, the Owner will make progress payments to the Contractor on account of the Contract Sum. The period covered by each Application for Payment will be one calendar month ending on the twenty-fifth (25<sup>th</sup>) day of the month. The Owner will make payment to the Contractor not later than thirty (30) calendar days following receipt of the Contractor's billing in a form acceptable to the Owner. Interest on any late payments will be paid in accordance with the Texas Prompt Payment Act. Applications for Payment will indicate the percentage of completion of each portion of the work as of the end of the period covered by the Application for Payment. Each progress payment will be reduced by retainage in the amount of five percent (5%) of the Contractor's Application for Payment. Final payment, constituting the entire unpaid balance of the Contract Sum including retainage, will be made to the Contractor when the Contract has been fully performed by the Contractor.

**IV.**

**Architect or Engineer**

Where the term "Architect" occurs, it shall refer to an individual who is licensed to practice architecture in the State of Texas, and who is authorized by the Owner to administer this contract. Unless otherwise stated, "Architect" refers to the City of Arlington Construction Manager or his authorized representative.

**V.**

**Priority and Clarification of Documents**

In case of conflict between this contract and other documents enumerated as forming a part of this contract, the provisions of this contract shall govern. Whenever additional clarification or interpretation is required, and upon receiving a written request, a written decision will be rendered by the Architect.

In resolving inconsistencies among two or more sections of the contract documents, priority of interpretation shall be in the following order:

1. Contract or signed agreement
2. Contractor's Bid or Proposal

Addenda and Change Orders shall take precedence over all sections referenced therein. Figure dimensions on Drawings shall take precedence over scale dimensions.

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**VI.  
Insurance**

Contractor shall, at his own expense, purchase, maintain and keep in force during the term of this contract such insurance as set forth below. Contractor shall not commence work under this contract until all the insurance required under the contract has been submitted to and approved by Owner, nor shall the Contractor allow any subcontractor to commence work on any subcontract until all similar insurance of the subcontractor has been obtained and approved.

- A. Commercial General Liability: \$1,000,000 per occurrence, \$2,000,000 annual aggregate policy limit. This policy shall have no standard coverage removed by exclusions. Policy shall be endorsed to provide full coverage per project (CG 2503)
- B. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage. Coverage should be provided as any auto, or hired and non-owned vehicles.
- C. Worker' Compensation and Employers' Liability: Statutory. Employers Liability policy limits of \$1,000,000 for each accident, \$1,000,000 disease, each employee, and 1,000,000 disease policy limit.
- D. Umbrella Liability Insurance: \$2,000,000 per occurrence excess of General and Auto Liability policy and follow form of under lying policies.

**Other Insurance Provisions:**

- E. The City shall be named as an additional insured on the General Liability, Automobile Liability, and Umbrella Liability Insurance policies. For General Liability, additional insured shall include premises/operations and products/completed operations. These insurance policies shall contain the appropriate additional insured endorsement signed by a person authorized by that insurer to bind coverage on its behalf.
- F. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits or materially changed except after thirty (30) days prior to written notice has been provided to the City. If a policy is canceled for non-payment of premium only 10 days notice is required.
- G. Insurance is to be placed with insurers with a Best rating of no less than A:VII. The company must also be duly authorized to transact business in the State of Texas.
- H. Workers' Compensation Coverage: Coverage shall be provided by the Contractor for any of its owners or officers, including any proprietors, partners, executive officers or similar representatives (regardless of whether or not the person has an equity ownership interest in the Contracting Firm), who will be present at the project site during any phase of the construction. The contractor shall also be responsible for any

**Section 00 2010**  
**CONTRACT FORM**

of the subcontractors' owners or officers who will be present at the project site during any phase of the construction.

- I. Insurer shall agree to waive subrogation rights on all policies for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against CITY.
- J. Subcontractors: Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates of insurance and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.
- K. The Contractor shall also comply with the following in its provisions of workers' compensation insurance.
  - 1. Workers' Compensation Insurance Coverage Definitions:
    - a. Certificate of coverage ("certificate") – A copy of a certificate of insurance, a certificate of authority, to self-insure, issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.
    - b. Duration of the project –includes the time from beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.
    - c. Persons providing services on the project ("subcontractor" in Section 406.096) – includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner –operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries and delivery of portable toilets.
  - 2. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.
  - 3. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

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4. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
5. The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:
  - a. A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
  - b. No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
6. The Contractor shall retain all required certificates of coverage for the duration of the project and for two (2) years thereafter.
7. The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within thirty (30) days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
8. The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to covered, and stating how a person may verify coverage and report lack of coverage.
9. The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:
  - a. provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
  - b. provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project.
  - c. Provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
  - d. Obtain from each person with whom it contracts, and provide to the Contractor:
    - i. A certificate of coverage, prior to the other person beginning work on the project; and
    - ii. A new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the



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coverage period shown on the current certificate of coverage ends during the duration of the project.

- e. Retain all required certificates of coverage on file for the duration of the project and for two (2) years thereafter.
  - f. Notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
  - g. Contractually require each person with whom it contracts, to perform as required by paragraphs a – g, with the certificates of coverage to be provided to the person for whom they are providing services.
10. By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties or other civil action.
11. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within thirty (30) days after receipt of notice of breach from the governmental entity.
12. Certificates of Insurance and endorsements affecting coverage required by this clause shall be forwarded to:
- City of Arlington  
Human Resources  
Mail Stop 63-0790  
P.O. Box 90231  
Arlington, Texas 76004-3231
13. All certificates must list the project in the description box. See attached example. All contracts require the City to be named as additional insured on general liability, auto liability and excess/umbrella liability coverage. All coverage should be primary and non-contributory. A waiver of subrogation in favor of the City must apply to all policies including workers compensation.

**VII.**

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**Indemnification**

- A. CONTRACTOR does hereby agree to waive all claims, release, indemnify, defend and hold harmless CITY and all of its officials, officers, agents and employees, in both their public and private capacities, from any and all liability, claims, suits, demands or causes of action which may arise by reason of injury to property or persons occasioned by error, omission, or negligent act of CONTRACTOR, its officers, agents, employees, invitees or other persons, arising out of or in connection with this Agreement or any and all activity or use pursuant to this Agreement, or on or about the Premises and CONTRACTOR will, at its own cost and expense, defend and protect CITY from any and all such claims and demands.**
- B. Also, CONTRACTOR agrees to and shall indemnify, defend and hold harmless CITY and all of its officials, officers, agents and employees, from and against any and all claims, losses, damages, causes of action, suits and liability of every kind, including all expenses of litigation, court costs and attorney fees for injury to or death of any person or for damage to any property arising out of or in connection with this Agreement or any and all activity or use pursuant to this Agreement on or about the Premises.**
- C. Such indemnity shall apply whether the claims, losses, damages, causes of action, suits or liability arise in whole or in part from the negligence of the CITY, its officers, officials, agents or employees. It is the express intention of the parties hereto that the indemnity provided for in this paragraph is indemnity by CONTRACTOR to indemnify and protect CITY from the consequences of CITY's own negligence, whether that negligence is a sole or concurring cause of the injury, death or damage.**

**VIII.  
Monies Withheld**

When the Owner has reasonable grounds for believing that:

- a. Contractor will be unable to perform this contract fully and satisfactorily within the time fixed for performance; or
- b. A meritorious claim exists or will exist against the Contractor or the Owner arising out of the negligence of the Contractor or the Contractor's breach of any provision of this contract; then

The Owner may withhold payment of any amount otherwise due and payable to the Contractor under this contract. Any amount so withheld may be retained by the Owner for that period as it may deem advisable to protect the Owner against any loss and may, after written notice to the Contractor, be applied in satisfaction of any claim described here. This provision is intended solely for the benefit of the Owner, and no other person or entity shall have any right or claim against the Owner by reason of the Owner's failure or refusal to withhold monies. No interest

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shall be payable by the Owner on any amounts withheld under this provision. This provision is not intended to limit or in any way prejudice any other right of the Owner.

**IX.**  
**Wage Rates**

Contractor shall adhere to applicable State and federal law regarding wage rates and shall pay the Prevailing Wage Rates for this project.

**X.**  
**Equal Opportunity**

- A. In performing under this agreement, Contractor shall not discriminate against any worker, employee or applicant for employment, on the basis of race, color, creed, religion, age, sex, national origin, disability, handicap status, nor otherwise commit an unfair employment practice.
- B. Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, religion, age, sex, national origin, disability or handicap status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, lay-off or termination, rates of pay or other forms of compensation, selection for training, as well as access to all facilities necessary for any of the above. Contractor will require posting in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of this nondiscrimination clause. This clause will be incorporated into all contracts entered into with suppliers of materials or services, contractors and subcontractors and all labor organizations furnishing skilled, unskilled and craft union skilled labor who may perform any such labor or services in connection with this agreement.

**XI.**  
**Local Businesses**

In performing this contract, Contractor agrees to use diligent efforts to purchase all goods and services from Arlington Businesses whenever such goods and services are comparable in availability, quality and price. As a matter of policy with respect to City of Arlington projects and procurements, City of Arlington also encourages the use, if applicable, of qualified contractors, subcontractors and suppliers where at least fifty-one percent (51%) of the ownership of such contractor, subcontractor or supplier is vested in racial or ethnic minorities or women. In the selection of subcontractors, suppliers or other persons in organizations proposed for work on this contract, the Contractor agrees to consider

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this policy and to use its reasonable and best efforts to select and employ such company and persons for work on this contract.

**XII.  
Warranty Service Clause**

Under the terms of the warranties which arise from these contract documents and/or by the terms of any applicable special warranties required by the contract documents, if any of the work in accordance with this contract is found to not be in accordance with the requirements of the contract documents, the contractor shall correct such work promptly after receipt of written notice from the City of Arlington or the architect, engineer or other entity as the contract documents may provide. This obligation shall survive acceptance of the work under the contract and termination of the contract. In order to facilitate a prompt response, contractor agrees to provide for warranty service to the extent practical from local businesses, including goods and services, when such goods and services are comparable in availability, quality and price. If contractor fails within a reasonable time after written notice to correct defective work or to remove and replace rejected work, or if contractor fails to perform the work in accordance with the contract documents, or if contractor fails to comply with any provision in the contract document, either the City of Arlington or its designee may, after seven (7) days' written notice to contractor, correct and remedy any such deficiency at the expense of the contractor.

**XIII.  
Independent Contractor**

Contractor's status shall be that of an independent contractor and not an agent, servant, employee or representative of Owner in the performance of this contract. No term or provision of this contract, or act of Contractor or Owner under this contract, shall be construed as changing this status.

**XIV.  
Successors and Assignments**

Owner and Contractor each bind themselves, their successors, executors, administrators and assigns to the other party to this contract. Neither Owner nor Contractor will assign, sublet, subcontract or transfer any interest in this contract without the written consent of the other party. No assignment, delegation of duties or subcontract under this contract will be effective without the written consent of Owner.

**XV.**

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**Disclosure**

By signature of this contract, the Contractor acknowledges to the Owner that Contractor has made full disclosure in writing of any existing conflicts of interest or potential conflicts of interest, including personal financial interests, direct or indirect, in property abutting the proposed project and business relationships with abutting property owners. The Contractor further agrees that Contractor will make disclosure in writing of any conflicts of interest which develop subsequent to the signing of this contract and prior to final payment under the contract.

**XVI.**  
**Termination**

Owner reserves the right to terminate this agreement immediately upon breach of any term or provision of this contract by Contractor. If Contractor should fail to complete the work in accordance with the provisions of this contract, and if Contractor shall not cure the default after seven (7) days' written notice, Owner may terminate this contract and complete the work in any manner it deems necessary. Any such act by Owner shall not be deemed a waiver of any other right or remedy of Owner. If after exercising any such remedy, the cost to Owner of the performance of the balance of the work is in excess of that part of the contract sum which has not been paid to Contractor, then Contractor shall be liable for and shall reimburse Owner.

**XVII.**  
**Headings**

The headings of this contract are for the convenience of reference only and shall not affect in any manner any of the terms and conditions hereof.

**XVIII.**  
**Remedy**

No right or remedy granted herein or reserved to the parties is exclusive of any other right or remedy herein by law or equity provided or permitted, but each shall be cumulative of every other right or remedy given hereunder. No covenant or condition of this contract may be waived without consent of the parties. Forbearance or indulgence by either party shall not constitute a waiver of any covenant or condition to be performed pursuant to this contract.

**XIX.**

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CONTRACT FORM**

**Severability**

If any of the terms, sections, subsections, sentences, clauses, phrases, provisions, covenants, or conditions of this contract are held for any reason to be invalid, void or unenforceable, the remainder of the terms, sections, subsections, sentences, clauses, phrases, provisions, covenants, or conditions of this contract shall remain in full force and effect and shall in no way be affected, impaired, or invalidated.

**XX.**

**Applicable Law**

This contract is entered into subject to the Charter and ordinances of the City of Arlington, as amended, and is to be construed, governed, and enforced under all applicable State of Texas and Federal laws. Situs of this contract is agreed to be Tarrant County, Texas, for all purposes including performance, execution and any litigation.

**XXI.**

**Other Documents**

Other documents forming a part of this contract are as follows:

1. Copy of Contractor's Bid or Proposal.
2. Section 00 2020 Performance Bond.
3. Section 00 2030 Payment Bond.
4. Section 00 3010 Contractor Status Information Form.
5. Section 00 3020 Affidavit Against Prohibited Acts.
6. Section 00 3030 Contractor Residency Statement.
7. Section 00 3040 Prevailing Wages.
8. Section 00 3060 Form 1295.
9. Section 00 3080 Minority/Women Business Enterprise.
10. Section 00 3090 Verification Relating to Boycotting Israel.
11. Section 00 3091 Verification Relating to Boycotting Energy Companies
12. Section 00 3092 Verification Relating to Discriminating Against Firearm  
or Ammunition Industries.
13. Surety Data Sheet.
14. Plans and Specifications.

**XXII.**

**Complete Agreement**

This contract, referred to as "contract" or "agreement," and including any stated attachments and publications included by reference, embodies the complete agreement of the parties hereto, superseding all oral or written previous and contemporary agreements between the parties relating to matters herein; and

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except as otherwise provided herein, shall only be modified with the written agreement of the Owner and the Contractor.

### XXIII. Title VI

The City of Arlington, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all vendors that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. Vendor will abide and ensure compliance with all terms of Appendix A of the USDOT Standard Title VI Assurances as listed below.

#### Appendix A of the USDOT Standard Title VI Assurances

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

(1) Compliance with Regulations: The **Contractor** shall comply with the Regulations relative to nondiscrimination in Federally-Assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The **Contractor**, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The **Contractor** shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

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

(4) Information and Reports: The **Contractor** shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the City of Arlington or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where

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any information required of a **Contractor** is in the exclusive possession of another who fails or refuses to furnish this information the **Contractor** shall so certify to the City of Arlington, or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the **Contractor's** noncompliance with the nondiscrimination provisions of this contract, the City of Arlington shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the **Contractor** under the contract until the **Contractor** complies, and/or

(b) cancellation, termination or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The **Contractor** shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The **Contractor** shall take such action with respect to any subcontract or procurement as the City of Arlington or the Texas Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a **Contractor** becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the **Contractor** may request the City of Arlington to enter into such litigation to protect the interests of the City of Arlington, and, in addition, the **Contractor** may request the United States to enter into such litigation to protect the interests of the United States.



**Section 00 2010  
CONTRACT FORM**

THIS CONTRACT is executed and effective as of the day and year first written above.

CONTRACTOR:

OWNER:

CONTRACTOR'S NAME

CITY OF ARLINGTON, TEXAS

BY \_\_\_\_\_  
Printed or Typed Name  
Title

BY \_\_\_\_\_  
LEMUEL RANDOLPH  
Deputy City Manager

ATTEST:  
ALEX BUSKEN  
CITY SECRETARY

APPROVED AS TO FORM:  
MOLLY SHORTALL  
CITY ATTORNEY

\_\_\_\_\_

\_\_\_\_\_

**Section 00 2010  
CONTRACT FORM**

THE STATE OF TEXAS     §

**Contractor Acknowledgment**

COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared \_\_\_\_\_, ☐ who is known to me or ☐ who was proved to me on the oath of \_\_\_\_\_ (name of person identifying the acknowledging person) who is known to me or ☐ who was proved to me through \_\_\_\_\_ (description of identity card or other document issued by the federal or state government containing the picture and signature of the acknowledging person) to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed same for and as the act of \_\_\_\_\_, a \_\_\_\_\_ of \_\_\_\_\_ County, Texas, and as \_\_\_\_\_ thereof, and for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public In and For The State of Texas

\_\_\_\_\_  
Notary's Printed Name

My Commission Expires: \_\_\_\_\_

THE STATE OF TEXAS     §

**City Acknowledgement**

COUNTY OF TARRANT §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared **Lemuel Randolph**, known to me to be a person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed same for and as the act of the City of Arlington, Texas, a Texas municipal corporation, and as **Deputy City Manager** thereof, and for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public In and For The State of Texas

\_\_\_\_\_  
Notary's Printed Name

My Commission Expires: \_\_\_\_\_

Bond Number \_\_\_\_\_

**Section 00 2020  
Performance Bond**

STATE OF TEXAS §

**PERFORMANCE BOND**

COUNTY OF §

**KNOW ALL MEN BY THESE PRESENTS:**

**THAT WE,** \_\_\_\_\_,

of the City of \_\_\_\_\_, County of \_\_\_\_\_, State of \_\_\_\_\_, hereinafter

called Principal, and \_\_\_\_\_,  
a corporate surety/sureties, duly authorized to do business in the State of Texas, hereinafter called  
Surety (whether one or more), are held and firmly bound unto the City of Arlington, a municipal  
corporation, in the amount of

\_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), for the payment whereof we do hereby bind ourselves, our 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 City of Arlington, dated the  
\_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, to furnish all materials, equipment, labor, supervision and other  
accessories necessary for the construction of certain improvements, to wit:

\_\_\_\_\_  
in the City of Arlington, Texas and as more particularly described and designated in said contract which is  
hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein:

**NOW THEREFORE**, the condition of this obligation is such that if the said Principal shall faithfully perform  
said contract and shall in all respects duly and faithfully observe and perform all and singular the covenants,  
conditions, and agreements in and by said contract, agreed and covenanted by the Principal to be observed and  
performed, and according to the true intent and meaning of said contract and the plans and specifications  
therein referred to, and as well during any period of extension of said contract that may be granted on the part  
of the City of Arlington, Texas, as during the original terms of same, then this obligation shall be and become  
null and void, otherwise to remain in full force and effect.

**PROVIDED FURTHER**, that if any legal action be filed on this Bond, venue shall lie in Tarrant County,  
Texas.

**AND**, that said Surety, for value received, hereby stipulates and agrees that no change, extension of time,  
alteration or addition to the terms of the contract or to the work performed thereunder, or the plans,  
specifications, drawings, etc. accompanying same shall in any way affect its obligation on this Bond; and it  
does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the  
contract or to the work to be performed thereunder.

This bond is executed in compliance with the provisions of Chapter 2253 of the Texas Government Code as amended by Acts of the 73rd Legislature, 1993.

**IN WITNESS WHEREOF** the Principal and the surety have signed this instrument by duly authorized agents and officers and affixed corporate seals hereto at the

City of \_\_\_\_\_, County of \_\_\_\_\_, State of \_\_\_\_\_, on this the \_\_\_\_\_ day  
of \_\_\_\_\_, \_\_\_\_\_.

**\*\*\*\*\* DATE OF BOND MUST NOT BE EARLIER THAN DATE OF CONTRACT \*\*\*\*\***

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
By

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Witness

\_\_\_\_\_  
By

Bond Number \_\_\_\_\_

**Section 00 2030  
Payment Bond**

**STATE OF** §

**COUNTY OF** §

**PAYMENT BOND**

**KNOW ALL MEN BY THESE PRESENTS:**

**THAT WE,** \_\_\_\_\_,

of the City of \_\_\_\_\_, County of \_\_\_\_\_, State of \_\_\_\_\_, hereinafter

called Principal, and \_\_\_\_\_,

a corporate surety/sureties, duly authorized to do business in the State of Texas, hereinafter called surety (whether one or more), are held and firmly bound unto the City of Arlington, a municipal corporation, workmen, laborers, mechanics, furnishers of materials, and claimants supplying labor and materials as defined in Chapter 2253 of the Texas Government Code as amended by Acts of the 73rd Legislature, 1993, as their interests may appear, all of whom shall have the right to sue upon this bond, in the penal sum of

\_\_\_\_\_ dollars  
(\$\_\_\_\_\_), for the payment whereof we do hereby bind ourselves, our heirs, administrators, executors, successors, assigns, jointly and severally, firmly by these presents.

**WHEREAS,** the Principal has entered into a certain written contract with the City of Arlington, dated the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, to furnish all materials, equipment, labor, supervision and other accessories necessary for the construction of certain improvements, to wit:

\_\_\_\_\_  
in the City of Arlington, Texas and as more particularly described and designated in said contract which is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein:

**NOW THEREFORE,** the condition of this obligation is such that if the said Principal shall pay all sub-contractors, workmen, laborers, mechanics, furnishers of materials and claimants (as defined in Chapter 2253 of the Texas Government Code as amended by Acts of the 73rd Legislature, 1993) supplying labor and material to him or sub-contractor in the prosecution of the work provided for in said contract, all monies to them owing by Principal for sub-contracts, work, labor, and materials done and furnished for the construction of such improvements for the City of Arlington, then this obligation shall be and become null and void, otherwise to remain in full force and effect.

**PROVIDED FURTHER,** that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

**AND,** that said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work performed thereunder, or the

plans, specifications, drawings, etc. accompanying same shall in any way affect its obligation on this Bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder.

This bond is executed in compliance with the provisions of Chapter 2253 of the Texas Government Code as amended by Acts of the 73rd Legislature, 1993.

**IN WITNESS WHEREOF** the Principal and the surety have signed this instrument by duly authorized agents and officers and affixed corporate seals hereto at the

City of \_\_\_\_\_, County of \_\_\_\_\_, State of \_\_\_\_\_, on this the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**\*\*\*\*\* DATE OF BOND MUST NOT BE EARLIER THAN DATE OF CONTRACT \*\*\*\*\***

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
By

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Witness

\_\_\_\_\_  
By

**SECTION 00 2050  
INSURANCE REQUIREMENT**

**Contractor shall provide not less than the following amounts and types of insurance coverage:**

- A. Commercial General Liability:** \$1,000,000 per occurrence, \$2,000,000 annual aggregate policy limit. This policy shall have no standard coverage removed by exclusions. Policy shall be endorsed to provide full coverage per project (CG 2503)
- B. Automobile Liability:** \$1,000,000 combined single limit per accident for bodily injury and property damage. Coverage should be provided as any auto, or hired and non-owned vehicles.
- C. Worker' Compensation and Employers' Liability:** Statutory. Employers Liability policy limits of \$1,000,000 for each accident, \$1,000,000 disease, each employee, and 1,000,000 disease policy limit.
- D. Umbrella Liability Insurance:** \$2,000,000 per occurrence excess of General and Auto Liability policy and follow form of under lying policies.

**Other Insurance Provisions:**

- E.** The City shall be named as an additional insured on the General Liability, Automobile Liability, and Umbrella Liability Insurance policies. For General Liability, additional insured shall include premises/operations and products/completed operations. These insurance policies shall contain the appropriate additional insured endorsement signed by a person authorized by that insurer to bind coverage on its behalf.
- F.** Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits or materially changed except after thirty (30) days prior to written notice has been provided to the City. If a policy is canceled for non-payment of premium only 10 days notice is required.
- G.** Insurance is to be placed with insurers with a Best rating of no less than A:VII. The company must also be duly authorized to transact business in the State of Texas.
- H.** Workers' Compensation Coverage: Coverage shall be provided by the Contractor for any of its owners or officers, including any proprietors, partners, executive officers or similar representatives (regardless of whether or not the person has an equity ownership interest in the Contracting Firm), who will be present at the project site during any phase of the construction. The contractor shall also be responsible for any of the subcontractors' owners or officers who will be present at the project site during any phase of the construction.
- I.** Insurer shall agree to waive subrogation rights on all policies for loss or damage to the extent same are covered by insurance. Insurers shall have no right of recovery or subrogation against CITY.
- J.** Subcontractors: Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates of insurance and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.
- K.** The Contractor shall also comply with the following in its provisions of workers' compensation insurance.
  - 1. Workers' Compensation Insurance Coverage Definitions:
    - a. Certificate of coverage ("certificate")** – A copy of a certificate of insurance, a certificate of authority, to self-insure, issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

- 1           b. **Duration of the project** –includes the time from beginning of the work on the  
2 project until the contractor's/person's work on the project has been completed and  
3 accepted by the governmental entity.
- 4           c. **Persons providing services on the project ("subcontractor" in Section**  
5 **406.096)** – includes all persons or entities performing all or part of the services the  
6 Contractor has undertaken to perform on the project, regardless of whether that  
7 person contracted directly with the Contractor and regardless of whether that person  
8 has employees. This includes, without limitation, independent contractors,  
9 subcontractors, leasing companies, motor carriers, owner –operators, employees of  
10 any such entity, or employees of any entity which furnishes persons to provide services  
11 on the project. "Services" include, without limitation, providing, hauling, or delivering  
12 equipment or materials, or providing labor, transportation or other service related to a  
13 project. "Services" does not include activities unrelated to the project, such as  
14 food/beverage vendors, office supply deliveries and delivery of portable toilets.
- 15       2. The Contractor shall provide coverage, based on proper reporting of classification codes and  
16 payroll amounts and filing of any coverage agreements, which meets the statutory  
17 requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor  
18 providing services on the project, for the duration of the project.
- 19       3. The Contractor must provide a certificate of coverage to the governmental entity prior to  
20 being awarded the contract.
- 21       4. If the coverage period shown on the Contractor's current certificate of coverage ends during  
22 the duration of the project, the Contractor must, prior to the end of the coverage period, file a  
23 new certificate of coverage with the governmental entity showing that coverage has been  
24 extended.
- 25       5. The Contractor shall obtain from each person providing services on a project, and provide to  
26 the governmental entity:
- 27           a. A certificate of coverage, prior to that person beginning work on the project, so the  
28 governmental entity will have on file certificates of coverage showing coverage for all  
29 persons providing services on the project; and
- 30           b. No later than seven (7) days after receipt by the Contractor, a new certificate of  
31 coverage showing extension of coverage, if the coverage period shown on the current  
32 certificate of coverage ends during the duration of the project.
- 33       6. The Contractor shall retain all required certificates of coverage for the duration of the project  
34 and for two (2) years thereafter.
- 35       7. The Contractor shall notify the governmental entity in writing by certified mail or personal  
36 delivery, within thirty (30) days after the Contractor knew or should have known, of any  
37 change that materially affects the provision of coverage of any person providing services on  
38 the project.
- 39       8. The Contractor shall post on each project site a notice, in the text, form and manner  
40 prescribed by the Texas Workers' Compensation Commission, informing all persons providing  
41 services on the project that they are required to covered, and stating how a person may verify  
42 coverage and report lack of coverage.
- 43       9. The Contractor shall contractually require each person with whom it contracts to provide  
44 services on a project, to:
- 45           a. provide coverage, based on proper reporting of classification codes and payroll  
46 amounts and filing of any coverage agreements, which meets the statutory  
47 requirements of Texas Labor Code, Section 401.011(44) for all of its employees  
48 providing services on the project, for the duration of the project;



- 1 b. provide to the Contractor, prior to that person beginning work on the project, a  
2 certificate of coverage showing that coverage is being provided for all employees of  
3 the person providing services on the project, for the duration of the project.  
4 c. Provide the Contractor, prior to the end of the coverage period, a new certificate of  
5 coverage showing extension of coverage, if the coverage period shown on the current  
6 certificate of coverage ends during the duration of the project.  
7 d. Obtain from each person with whom it contracts, and provide to the Contractor:  
8 i. A certificate of coverage, prior to the other person beginning work on the  
9 project; and  
10 ii. A new certificate of coverage showing extension of coverage, prior to the end  
11 of the coverage period, if the coverage period shown on the current certificate  
12 of coverage ends during the duration of the project.  
13 e. Retain all required certificates of coverage on file for the duration of the project and  
14 for two (2) years thereafter.  
15 f. Notify the governmental entity in writing by certified mail or personal delivery, within  
16 ten (10) days after the person knew or should have known, of any change that  
17 materially affects the provision of coverage of any person providing services on the  
18 project; and  
19 g. Contractually require each person with whom it contracts, to perform as required by  
20 paragraphs a – g, with the certificates of coverage to be provided to the person for  
21 whom they are providing services.  
22 10. By signing this contract or providing or causing to be provided a certificate of coverage, the  
23 Contractor is representing to the governmental entity that all employees of the Contractor who  
24 will provide services on the project will be covered by workers' compensation coverage for the  
25 duration of the project, that the coverage will be based on proper reporting of classification  
26 codes and payroll amounts, and that all coverage agreements will be filed with the appropriate  
27 insurance carrier or, in the case of a self-insured, with the commission's Division of Self  
28 Insurance Regulation. Providing false or misleading information may subject the Contractor to  
29 administrative penalties, criminal penalties, civil penalties or other civil action.  
30 11. The Contractor's failure to comply with any of these provisions is a breach of contract by the  
31 Contractor which entitles the governmental entity to declare the contract void if the Contractor  
32 does not remedy the breach within thirty (30) days after receipt of notice of breach from the  
33 governmental entity.  
34 12. Certificates of Insurance and endorsements affecting coverage required by this clause shall be  
35 forwarded to:  
36 City of Arlington  
37 Human Resources  
38 Mail Stop 63-0790  
39 P.O. Box 90231  
40 Arlington, Texas 76004-3231  
41  
42 13. All certificates must list the project in the description box. See attached example. All contracts  
43 require the City to be named as additional insured on general liability, auto liability and  
44 excess/umbrella liability coverage. All coverage should be primary and non-contributory. A  
45 waiver of subrogation in favor of the City must apply to all policies including workers  
46 compensation.

47 **END OF SECTION**

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER  ABC Insurance Agency 1234 Insurance Street Tampa, FL 33602	Contact Name:		
	Phone (A/C No. Ext.):	FAX (A/C) No.:	
INSURED  ABC Contractor 9873 Contractor Street Tampa, FL. 33606	E-Mail Address:		
	INSURER(S) AFFORDING COVERAGE		NAIC#
	COMPANY A	A.M. Best A VII or Better Insurance Carrier	
	COMPANY B	A.M. Best A VII or Better Insurance Carrier	
	COMPANY C	A.M. Best A VII or Better Insurance Carrier	
	COMPANY D	A.M. Best A VII or Better Insurance Carrier	
	COMPANY E	A.M. Best A VII or Better Insurance Carrier	
	COMPANY F	A.M. Best A VII or Better Insurance Carrier	

## COVERAGES

## CERTIFICATE NUMBER:

## REVISION NUMBER:

THIS ID TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOT WITHSTANDING ANY REQUIREMENTS, 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 THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	Addl Insr	Subr Wvr	POLICY NUMBER	POLICY EFEE. (MM/DD/YY)	POLICY EXP. (MM/DD/YY)	LIMITS	
A	<b>GENERAL LIABILITY</b>			123456789	01/01/11	01/01/12	GENERAL AGGREGATE	\$ 2,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						PRODUCTS-COMP/OP AGG	\$ 1,000,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR						PERSONAL & ADV INJURY	\$ 1,000,000
	<input type="checkbox"/> Per Project Agg.						EACH OCCURRENCE	\$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						FIRE DAMAGE (Any one Fire)	\$ 100,000
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						MED EXP (Any one person)	\$ 5,000
B	<b>AUTOMOBILE LIABILITY</b>			123456789	01/01/11	01/01/12	COMBINED SINGLE LIMIT	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per Person)	
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per Accident)	
	<input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS						PROPERTY DAMAGE	
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR			123456789	01/01/11	10/01/12	EACH OCCURRENCE	\$ 2,000,000
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE	\$ 2,000,000
	<input type="checkbox"/> DED <input type="checkbox"/> RETENTIONS							\$
D	<b>WORKERS COMPENSATION AND EMPLOYERS LIABILITY</b>			123456789	01/01/11	01/01/12	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
	Y/N ANY PROPRIETOR/PARTNERSHIP/EXECUTIVE OFFICERS/MEMBER EXCLUDED? (Mandatory in NH)						EL EACH ACCIDENT	\$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						EL DISEASE-POLICY LIMIT	\$ 1,000,000
							EL DISEASE-EA EMPLOYEE	\$ 1,000,000
E	<b>OTHER</b>			Professional Liability or Builders Risk	01/01/11	01/01/12	Limits Required by Contract	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLE (Attach ACORD 101, Additional Remarks Schedule, If more space ns required)

30-day Notice of Cancellation to the City of Arlington on all required policies.  
GL coverage is to be primary and non-contributory.  
Project Name or Number

## CERTIFICATE HOLDER

## CANCELLATION

City of Arlington  
Address – may be sent to Department

SHOULD ANY OF THE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

## Section 00 3010

### Contractor Status Information Form

**Instructions:** Please fill in the appropriate section below, completing all blanks within the section. This information is necessary to ensure that the contract and bonds are in the correct form.

**SECTION 1:** If the contractor is a sole proprietor, fill in this section only:

Name: \_\_\_\_\_

First Middle Last

Name under which you are engaged in business (if operating under an assumed name):

Residence: \_\_\_\_\_  
 Street City County State Zip

Business: \_\_\_\_\_

Street	City	County	State	Zip
--------	------	--------	-------	-----

Principal place of business: \_\_\_\_\_  
County State

**SECTION 2:** If the contractor is a partnership, fill in this section only:

Name of Partner: \_\_\_\_\_

First Middle Last

Residence: \_\_\_\_\_  
 Street City County State Zip

Name of Partner: \_\_\_\_\_  

First
Middle
Last

Residence: \_\_\_\_\_  
 Street City County State Zip

Name under which contractor conducts business (if operating under an assumed name):

\_\_\_\_\_  
Business Address: \_\_\_\_\_  
Street City County State Zip

Principal place of business: \_\_\_\_\_  
County State

SECTION 3: If the contractor is a corporation, fill in this section only:

Registered name of Corporation: \_\_\_\_\_

Doing business as: \_\_\_\_\_

Date charter expires: \_\_\_\_\_

State of corporation: \_\_\_\_\_

Date of corporation filing: \_\_\_\_\_  
(If non-Texas corporation, date of Certificate of Authority Issuance.)

Registered Agent: \_\_\_\_\_  
First Middle Last

Address: \_\_\_\_\_  
Street/Box City County State Zip

Location of Corporation principal office:

\_\_\_\_\_  
Street City County State Zip

Person executing contract on behalf of corporation: (Please print)

Name: \_\_\_\_\_  
First Middle Last

Title: \_\_\_\_\_

Address: \_\_\_\_\_  
Street City County State Zip

**Section 00 3020**  
**Affidavit Against Prohibited Acts**

AFFIDAVIT AGAINST PROHIBITED ACTS

I hereby affirm that I am aware of the provisions of Texas Penal Code Title 8, Sections 36.02, 36.08, 36.09, and 36.10 (a copy of which follows), dealing with Bribery and Gifts to Public Servants. I further affirm that I will adhere to such rules and instruct and require all agents, employees, and subcontractors to do the same. I am further aware that any violation of these rules subjects this agreement to revocation, my removal from bid lists, prohibiting future contract/subcontract work, revocation of permits, and prosecution.

\_\_\_\_\_  
SIGNATURE/ TITLE OF INDIVIDUAL SUBMITTING BID

\_\_\_\_\_  
DATE

ATTEST IF CORPORATION

\_\_\_\_\_  
SIGNATURE/TITLE OF OFFICER OF CORPORATION

\_\_\_\_\_  
DATE

## TEXAS PENAL CODE

### TITLE 8: OFFENSES AGAINST PUBLIC ADMINISTRATION

#### CHAPTER 36. Bribery and Corrupt Influence

##### **36.02 Bribery**

- (a) A person commits an offense if he intentionally or knowingly offers, confers or agrees to confer on another, or solicits, accepts or agrees to accept from another:
  - (1) any benefit as consideration for the recipient's decision, opinion, recommendation, vote or other exercise of discretion as a public servant, party official or voter;
  - (2) any benefit as consideration for the recipient's decision, vote, recommendation or other exercise of official discretion in a judicial or administrative proceeding;
  - (3) any benefit as consideration for a violation of a duty imposed by law on a public servant or party official; or
  - (4) any benefit that is a political contribution, as defined by Title 15, Election Code, if the benefit was offered, conferred, solicited, accepted or agreed to, pursuant to an express agreement, to take or withhold a specific exercise of official discretion if such exercise of official discretion would not have been taken or withheld but for the benefit; notwithstanding any rule of evidence or jury instruction allowing factual inferences in the absence of certain evidence, direct evidence of the express agreement shall be required in any prosecution under this subdivision.
- (b) It is no defense to prosecution under this section that a person whom the actor sought to influence was not qualified to act in the desired way whether because he had not yet assumed office, or he lacked jurisdiction or for any other reason.
- (c) It is no defense to prosecution under this section that the benefit is not offered or conferred or that the benefit is not solicited or accepted until after:
  - (1) the decision, opinion, recommendation, vote or other exercise of discretion has occurred; or
  - (2) the public servant ceases to be a public servant.

- (d) It is an exception to the application of Subdivisions (1), (2) and (3) of Subsection (a) of this section that the benefit is a political contribution accepted as defined by Title 15, Election Code.
- (e) An offense under this section is a felony of the second degree.

### **36.08 Gift to Public Servant by Person Subject to His Jurisdiction**

- (a) A public servant in an agency performing regulatory functions or conducting inspections or investigations commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows to be subject to regulation, inspection or investigation by the public servant or his agency.
- (b) A public servant in an agency having custody of prisoners commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows to be in his custody or the custody of his agency.
- (c) A public servant in an agency carrying on civil or criminal litigation on behalf of government commits an offense if he solicits, accepts or agrees to accept any benefit from a person against whom the public servant knows litigation is pending or contemplated by the public servant or his agency.
- (d) A public servant who exercises discretion in connection with contracts, purchases, payments, claims or other pecuniary transactions of government commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows is interested in or likely to become interested in any contract, purchase, payment, claim or transaction involving the exercise of his discretion.
- (e) A public servant who has judicial or administrative authority, who is employed by or in a tribunal having judicial or administrative authority, or who participates in the enforcement of the tribunal's decisions, commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows is interested in or likely to become interested in any matter before the public servant or tribunal.
- (f) A member of the legislature, the governor, the lieutenant governor or a person employed by a member of the legislature, the governor, the lieutenant governor or an agency of the legislature commits an offense if he solicits, accepts or agrees to accept any benefit from any person.
- (g) A public servant who is a hearing examiner employed by an agency performing regulatory functions and who conducts hearings in contested cases commits an offense if the public servant solicits, accepts or agrees

to accept any benefit from any person who is appearing before the agency in a contested case, who is doing business with the agency, or who the public servant knows is interested in any matter before the public servant. The exception provided by Section 36.10(b) of this code does not apply to a benefit under this subsection.

- (h) An offense under this section is a Class A misdemeanor.

### **36.09 Offering Gift to Public Servant**

- (a) A person commits an offense if he offers, confers or agrees to confer any benefit on a public servant that he knows the public servant is prohibited by law from accepting.
- (b) An offense under this section is a Class A misdemeanor.

### **36.10 Non-Applicable**

- (a) Sections 36.08 (Gift to Public Servant) and 36.09 (Offering Gift to Public Servant) of this code do not apply to:
  - (1) a fee prescribed by law to be received by a public servant or any other benefit to which the public servant is lawfully entitled or for which he gives legitimate consideration in a capacity other than as a public servant;
  - (2) a gift or other benefit conferred on account of kinship or a personal, professional or business relationship independent of the official status of the recipient; or
  - (3) a benefit to a public servant required to file a statement under Chapter 421, Acts of the 63rd Legislature, Regular Session, 1973 (Article 6252-9b, Vernon's Texas Civil Statutes), or a report under Title 15, Election Code, that is derived from a function in honor or appreciation of the recipient if:
    - (A) the benefit and the source of any benefit in excess of \$50 is reported in the statement; and
    - (B) the benefit is used solely to defray the expenses that accrue in the performance of duties or activities in connection with the office which are nonreimbursable by the state or political subdivision;
  - (4) a political contribution as defined by Title 15, Election Code; or



- (5) a gift, award or memento to a member of the legislative or executive branch that is required to be reported under Chapter 305, Government Code.
- (b) Section 36.08 (Gift to Public Servant) of this code does not apply to food, lodging, transportation or entertainment accepted as a guest and, if the donee is required by law to report those items, reported by the donee in accordance with that law.
- (c) Section 36.09 (Offering Gift to Public Servant) of this code does not apply to food, lodging, transportation or entertainment accepted as a guest and, if the donor is required by law to report those items, reported by the donor in accordance with that law.

**SECTION 00 3030  
CONTRACTOR RESIDENCY STATEMENT**

The Texas Government Code section 2252.002 governs the awarding of contracts to non-resident bidders. This law provides that, in order to be awarded a contract as low bidder, a non-resident bidder (out-of-state contractor whose corporate office or principal place of business is outside the State of Texas) bid projects in Texas at an amount lower than the lowest Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a non-resident bidder in order to obtain a comparable contract in the state in which the non-resident's principal place of business is located. The appropriate blanks in the following statement **must** be filled out by all out-of-state or non-resident bidders in order for those bids to meet specifications. The failure of out-of-state or non-resident contractors to do so will automatically disqualify that bidder. This does not apply to contracts involving Federal Funds.

☐ Initial here if you are **Texas Residential Bidder**.

☐ Initial here if you are a **Non-resident contractor** in \_\_\_\_\_ (give state), our principal place of business, is required to be \_\_\_\_\_ percent lower than resident bidders by State Law.

**BIDDER**

\_\_\_\_\_  
Company

By \_\_\_\_\_  
(Please Print)

\_\_\_\_\_  
Address

\_\_\_\_\_  
Signature

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
Zip

\_\_\_\_\_  
Title (Please Print)

\*The **State Purchasing and General Services Commission** defines Principal Place of Business as follows: Principal Place of Business in Texas means, for any type of business entity recognized in the **State of Texas**, that the business entity:

- has at least one permanent office located in the **State of Texas**, from which business activities other than submitting bids to governmental agencies are conducted and from which the bid is submitted, and
- has at least one employee who works in the Texas office

\*The **Texas Comptroller** annually publishes a list showing how each state regulates the award if governmental contracts whose principal place of business is not located in that state.

<http://comptroller.texas.gov/>

**END OF SECTION**

THE STATE OF TEXAS                   §

**SECTION 00 3040**  
**WAGE RATE AFFIDAVIT**

COUNTY OF                               §

BEFORE ME, the undersigned authority, on this day personally appeared \_\_\_\_\_, known to be the person

(typed or printed name)

whose name is subscribed to this affidavit; and being by me first duly sworn, upon oath stated as follows:

"My name is \_\_\_\_\_. I am

(typed or printed name)

\_\_\_\_\_ of \_\_\_\_\_,

(title or position)

(name of company)

a Contractor with the City of Arlington for the project identified as \_\_\_\_\_

\_\_\_\_\_,

(name of project)

in the City of Arlington, Texas. Being duly authorized as a representative of this company, I do hereby swear and affirm that all wages for labor on the above-referenced project are in strict compliance with the established prevailing wage rates as described in the contract documents for the referenced project, and all wages have been and will be paid and satisfied as the prevailing rates may change from time to time. Upon request by the City of Arlington, I shall at any time allow a complete examination of the financial records relative to this project, including, but not limited to, cancelled checks, invoices and statements; and allow the City of Arlington to interview any and all employees of this company, and any and all employees of any subcontractor for this project. Also, I hereby agree on behalf of this company to be accountable for any and all penalties and fines provided in accordance with the contract documents and relevant law."

\_\_\_\_\_  
Signature

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public in and for the State of Texas, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public Signature

\_\_\_\_\_  
Notary's Printed Name

My Commission Expires: \_\_\_\_\_

## WAGE RATES

- A. Attention is called to V.T.C.A, Government Code, Chapter 2258. This Chapter requires the Contractor and any subcontractor under him to pay not less than the prevailing rates of per diem wages in the locality of the work at the time of construction to all laborers, workmen and mechanics employed by them in the execution of the Contract. Bidders should familiarize themselves with the entire provisions of this law and the penalties provided for its violation before submitting their bids.
- B. In accordance with this Chapter, the Owner has established a schedule of prevailing wage rates which is published in the following pages, and not less than these established rates must be paid on the project. Any workers not included in the schedule shall be properly classified and paid not less than the rate of wages prevailing in the locality of the work at the time of construction.
- C. For overtime work and legal holidays, the hourly rate shall be one and one-half times the Basic Hourly Rate.
- D. The Contractor shall forfeit as a penalty to the Owner the amount of sixty dollars (\$60.00) for each laborer, workman or mechanic employed by him or by any subcontractor under him, for each calendar day or portion thereof such laborer, workman or mechanic is paid less than the stipulated rates for any work done under this Contract.
- E. No portion of this provision shall be construed to prohibit the payment to any laborer, workman, or mechanic employed on the Work of more than the stated wage rate. It shall be the responsibility of the Contractor to maintain an adequate work force whether higher wages are required or not.
- F. The hourly wage rates on the following pages represent the minimum that may be paid for each classification listed. (See Attached Wage Rates)

NOTE: Overtime work and legal holidays shall be paid at a rate equal to one and one-half times the basic hourly rate shown above.

# 2020 NORTH TEXAS CONSTRUCTION INDUSTRY WAGE SURVEY



Classification	Employees Represented	Avg. Basic Hourly Rate	Avg. Health & Welfare	Avg. Pension	Avg. Vacation	Avg. Total Package
AC Mechanic	84	\$30.41	\$5.50	\$1.54	\$1.21	\$38.66
AC Mechanic Helper	16	\$19.58	\$4.67	\$0.26	\$0.69	\$25.21
Bricklayer/Stone Mason	37	\$25.59	\$1.93	-	-	\$27.52
Bricklayer/Stone Mason Trainee	7	\$19.96	\$1.93	-	-	\$21.89
Bricklayer/Stone Mason Helper	17	\$16.38	\$1.93	-	-	\$18.31
Carpenter	83	\$23.98	\$3.33	\$1.74	\$0.77	\$29.82
Carpenter Helper	26	\$18.11	\$3.31	-	-	\$21.42
Concrete Cutter/Sawer	1	\$23.50	\$0.23	\$0.24	-	\$23.97
Concrete Finisher	49	\$20.18	\$1.19	\$0.38	\$0.78	\$22.53
Concrete Form Builder	43	\$20.82	\$0.55	\$0.25	\$0.88	\$22.50
Drywall Mechanic	1	25.00	-	-	-	\$25.00
Electrician (Journeyman)	1026	\$30.61	\$5.91	\$1.27	\$2.27	\$40.06
Electrician Apprentice (Helper)	2241	\$19.65	\$4.87	\$0.77	\$1.77	\$27.06
Electronic Technician	16	\$24.80	\$2.88	\$0.98	\$0.77	\$29.43
Electronic Technician Helper	8	\$16.72	\$3.01	\$0.66	\$0.34	\$20.73
Glazier	3	\$27.00	\$2.26	\$0.81	\$1.04	\$31.11
Glazier Helper	8	\$23.00	\$2.26	\$0.69	\$0.88	\$26.83
Laborer Common	163	\$15.96	\$2.14	\$0.32	\$0.70	\$19.11
Laborer Skilled	133	\$20.37	\$2.02	\$0.53	\$0.86	\$23.79
Lather	5	\$21.00	-	-	-	\$21.00
Lather Helper	2	\$18.00	-	-	-	\$18.00
Metal Installer (Miscellaneous)	1	\$22.50	-	\$0.87	\$0.87	\$24.24
Metal Installer Helper (Miscellaneous)	3	\$20.55	\$1.55	\$4.21	\$1.19	\$27.50
Painter	52	\$17.17	-	-	\$0.63	\$17.80
Painter Helper	1	\$13.00	-	-	\$0.43	\$13.43
Pipefitter	128	\$27.97	\$4.42	\$0.74	\$1.19	\$34.33
Pipefitter Helper	66	\$19.85	\$3.44	\$0.45	\$0.72	\$24.46
Plasterer	20	\$23.00	-	-	-	\$23.00
Plumber	230	\$28.83	\$4.42	\$0.96	\$1.13	\$35.34
Plumber Helper	248	\$20.85	\$3.83	\$0.52	\$0.77	\$25.98
Reinforcing Steel Setter	55	\$23.71	\$0.19	\$0.21	-	\$24.11
Reinforcing Steel Setter Helper	1	\$16.00	\$0.19	-	-	\$16.19
Roofer	45	\$21.09	\$1.50	\$0.10	\$0.74	\$23.43

# 2020 NORTH TEXAS CONSTRUCTION INDUSTRY WAGE SURVEY



Classification	Employees Represented	Avg. Basic Hourly Rate	Avg. Health & Welfare	Avg. Pension	Avg. Vacation	Avg. Total Package
Roofer Helper	7	\$17.93	\$1.50	\$0.10	\$0.40	\$19.93
Sheet Metal Worker	266	\$25.59	\$4.90	\$0.72	\$1.04	\$32.24
Sheet Metal Worker Helper	54	\$18.66	\$3.61	\$0.28	\$0.71	\$23.26
Steel Worker Structural	6	\$23.65	\$1.55	\$6.19	\$1.36	\$32.75
Steel Worker Structural Helper	5	\$16.80	\$1.55	\$4.40	\$0.97	\$23.72
Waterproofer	38	\$23.42	\$1.55	\$0.10	\$0.67	\$25.74
Crane, Clamsheel, Backhoe, Derrick, D'Line Shovel	53	\$21.22	\$1.27	\$1.88	\$0.77	\$25.14
Forklift	9	\$22.23	\$4.73	\$1.13	\$0.96	\$29.04
Foundation Drill Operator	4	\$19.50	\$4.40	-	\$6.00	\$29.90
Front End Loader	5	\$23.54	-	-	\$0.83	\$24.37
Truck Driver	22	\$21.60	\$2.13	\$0.52	\$0.94	\$25.19
Welder	71	\$25.57	\$3.89	\$0.85	\$1.18	\$31.50
Welder Helper	20	\$16.98	\$2.63	\$1.38	\$1.06	\$22.06

**SECTION 00 3060**  
**FORM 1295**

This contract requires that a Form 1295 be completed. The Form 1295 must be attached along with original sets of contracts for your contract to be processed with the City of Arlington. Failure to attach your Form 1295 will result in your contract not being processed.

You must complete Form 1295 online at the website of the Texas Ethics Commission. At that time you will be required to swear or affirm that the information you entered on the form is true and correct. Nevertheless, when it is complete, you must still:

1. Print it.
2. Sign it.
3. Submit it to the City of Arlington along with your contract.

Helpful Information for completing a Form 1295:

- FAQs for the 1295 are available here:  
[https://www.ethics.state.tx.us/whatsnew/FAQ\\_Form1295.html](https://www.ethics.state.tx.us/whatsnew/FAQ_Form1295.html)
- Instructional videos on how to fill out the form are available here:  
[https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm)
- You can fill out your form here:  
[https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm)



## SECTION 00 3080

### **MWBE SPECIAL CONTRACT PROVISIONS: SEALED BID**

#### **POLICY STATEMENT**

On March 30, 2021, the Arlington City Council approved the resolution to adopt the City's Minority/Woman Business Enterprise (MWBE) Policy & Procedures Manual. This MWBE Policy seeks to reduce race- and gender-based barriers and foster participation with minority and woman-owned businesses in contracting and procurement opportunities with the City of Arlington by increasing the capacities of such firms to perform as prime vendors and subcontractors as well as suppliers.

The City of Arlington reaffirms that it will not, nor will its contractors, discriminate based on race, age, color, religion, sex, national origin, ancestry, gender, disability, or place of birth in the award and performance of contracts.

Every locally funded contract will be evaluated by the City of Arlington's Office of Business Diversity (OBD) to determine the appropriate method for enhancing MWBE participation, including progress towards the achievement of the annual aspirational MWBE goal and other program objectives.

Procedures for implementation, including good faith efforts requirements, information submitted with bid proposals, reporting procedures, etc., shall be consistent with the procedures utilized in the City's <MWBE Policy & Procedures Manual>.

#### **MWBE PROJECT GOAL**

The City's MWBE goal, for this project is **20%**.

Trades identified for this solicitation includes: **General Contractor, Demolition, Earthwork, Concrete, Asphalt and Sealant.**

**In making a determination that the contractor has made a good-faith effort to meet the City's MWBE goals, the Office of Business Diversity shall consider specific documentation concerning the steps taken to obtain MWBE participation, with a consideration of the following factors listed on Good Faith Effort Form.**

If a contractor fails to submit the Good Faith Efforts checklist, with document, by the deadline for submission will be considered non-responsive.

The contractor's MWBE commitment percentage is based on the total value of the contract including any change orders and modifications throughout the contract agreement.

The criteria used to set a MWBE Contract Specific Goal shall include business availability, the nature of the contract, the City's past experiences with MWBE participation in similar contracts, price competitiveness, subcontracting opportunities, progress towards meeting the annual goal and other relevant factors.



A contractor cannot require a MWBE to sign an exclusive arrangement for the purpose of a bid/proposal submittal or enter a non-compete arrangement post award.

## SUBMITTAL OF REQUIRED DOCUMENTATION

The following documents must be received by the assigned City Project Manager or Department Designee within the allocated times shown in order for the bid or proposal to be considered responsive to the specification. The Offeror shall **DELIVER OR EMAIL** the MWBE documentation to the assigned City Project Manager or Department Designee; a faxed copy will not be accepted.

<b>MWBE Utilization Plan</b>	Received on bid opening date and time.
<b>Good Faith Effort Form</b> and supporting documentation (if participation is less than stated goal)	Received no later than 2:00 pm CST, on the <u>two</u> (2) City business day after the bid opening or proposal due date. <u>Should be sent to agent of record.</u>
<b>Intent to Perform as a Subcontractor</b>	Received no later than 2:00 pm, on the <u>two</u> (2) City business day after the bid opening or proposal due date. <u>Should be sent to agent of record.</u>

**Failure to submit the required MWBE documentation, based on the listed time and date, will result in the bid being considered non-responsive.**

## MWBE CERTIFICATIONS

The City will recognize MWBE companies that have received one or more certifications from the following organizations:

- North Central Texas Regional Certification Agency (NCTRCA),
- State of Texas Historically Underutilized Business (HUB),
- Texas Department of Transportation (TxDOT),
- DFW Minority Supplier Development Council (MSDC), and
- Woman's Business Council Southwest.

The City reserves the right to review, accept, or reject any certification from agencies not listed.

## POST AWARD COMPLIANCE

If change orders, amendments, or any Contract modifications are issued, the contractor has a contractual commitment to meet and/or exceed their MWBE utilization goal. Contractor is obligated to immediately notify OBD, in writing, of any agreed increase or decrease in the scope of work that will impact the MWBE participation on the contract.

The Contractor cannot terminate, substitute, or change the terms of the MWBE Utilization Plan prior to or after Contract award without the prior written consent of the OBD. If the Contractor is unable to meet its MWBE commitment with existing MWBEs, the Contractor shall satisfy its commitment, as it relates to scope of work changes, modifications, and or amendments, by soliciting new MWBEs, must submit a **Request for Approval of Change to MWBE Utilization Plan** for review and written approval from the OBD.

All payments must be submitted to our supplier diversity portal B2Gnow: <https://arlingtontx.diversitycompliance.com/>

For vendors who are not users of B2Gnow and would like to be added, please send an email to The Office of Business Diversity [mwbe@arlingtontx.gov](mailto:mwbe@arlingtontx.gov). Please include your first name, last name, email address, full company address and phone number to be added when you email the City of Arlington. Any missing information will result in your account not being created.

For training on how to utilize B2Gnow, please sign up at <https://arlingtontx.diversitycompliance.com/> and click on System Training.

## Office of Business Diversity

### Good Faith Effort Checklist



In making a determination that the contractor has made a good-faith effort to meet the City's MWBE goals, the Office of Business Diversity shall consider specific documentation concerning the steps taken to obtain MWBE participation, with a consideration of the following factors:

If a contractor fails to submit the Good Faith Efforts checklist, with document, by the deadline for submission will be considered non-responsive.

- ☐ Contractor attended the City's pre-bid or pre-proposal meeting.
- ☐ Contractor advertised in general circulation, trade association, and/or MWBE-focused media regarding subcontracting and/or supplier opportunities.
- ☐ Contractor solicited through reasonable and available means (e.g., written notices, advertisements) M/WBEs certified in the anticipated scopes of subcontracting of the contract, within sufficient time to allow them to respond. Attach detailed Contacts Log, including date, method of contact, person contacted and contact information, and the result of the contact.
- ☐ Contractor selected those portions of the contract consistent with the available M/WBEs, including breaking down the work into economically feasible units to facilitate M/WBE participation even when the proposer would prefer to perform those scopes with its own forces. Provide description of work selected.
- ☐ Contractor provided timely and adequate information about plans, specifications, scope of work and contract requirements to interested MWBEs. Followed up initial solicitations to answer questions and encourage M/WBEs to submit proposals or bids. Attach evidence of information provided, including the date, e.g., letters, emails, telephone logs, etc.
- ☐ Contractor negotiated in good-faith with interested MWBEs that have submitted proposals or bids and thoroughly investigated their capabilities, using good business judgement, and taking into consideration the MWBE subcontractor's price quote and not rejecting reasonable quotes from interested MWBE. Evidence of such negotiations includes the names, addresses, email addresses and telephone numbers of M/WBEs with whom the vendor negotiated; a description of the information provided to M/WBEs regarding the work selected for subcontracting; and explanations as to why agreements could not be reached with M/WBEs to perform the work.
- ☐ Contractor made effort to assist interested MWBEs to obtain bonding, lines of credit, or insurance as required by the City or the vendor for performance of the contract (if applicable).
- ☐ Contractor effectively utilized the services of M/WBE assistance groups; local, state, and federal M/WBE business assistance offices and other organizations that provide assistance in the recruitment and placement of MWBEs.

**Signature Prime Contractor:**

**Print Name:**

**Title**

**Date:**



## Office of Business Diversity

### MWBE UTILIZATION PLAN

Project Name \_\_\_\_\_

Project No: \_\_\_\_\_ Date: \_\_\_\_\_

#### LEGEND

MWBE = Minority/Woman Business Enterprise

\* Ethnicity = Native American (AI), Asian Pacific/Indian (AS), African American (BL), Hispanic (HI), Caucasian Female (WO), or Non- Minority (N/A)

Prime Contractor	MWBE (Yes/No)

LIST ALL SUBCONTRACTING OPPORTUNITIES (use additional sheets if necessary):

Name of Company and Description of Work Type	Potential MWBE Firm Ethnicity* (Yes/No)	Anticipated Dollar (\$) of Work

Please complete this form and include with proposal, as an attachment.

Upon formal award of said project, the proposer will submit a Prime, Subs & MWBE Report identifying the Local and/or MWBE subcontractor(s) that will perform the listed work. By signing below, the recommended proposer shall agree to meet their Local and/or MWBE goal based on the information provided on this document.

Name of Company's Main Contact Person \_\_\_\_\_

Signature of Main Contact Person \_\_\_\_\_



# MINORITY/WOMEN BUSINESS ENTERPRISE (MWBE)

Minority and/or Woman-owned Business Enterprises are encouraged to participate in all City procurement solicitation. In order to be identified as a certified Minority/Woman Business Enterprise with the City of Arlington, Texas; this form, along with a copy of the selected certification, should be included with the bid/proposal.

PLEASE CHECK THE APPROPRIATE ETHNICITY AND/OR GENDER:

**American Indian      Asian      Black      Hispanic      Woman Owned**

Certification Status: Is the firm certified as a Minority, Woman, or Disadvantaged Business Enterprise by a government or business development agency?      Yes      No (If yes, please select specific agency)

North Central Texas Regional Certification Agency (NCTRCA)

State of Texas Historically Underutilized Business (HUB)

Dallas/Fort Worth Minority Supplier Development Council (DFW MSDC) or NMSDC affiliate

Women's Business Council – Southwest (WBC-SW) or WBENC affiliate

Texas Department of Transportation, Disadvantaged Business Enterprise (TxDOT, DBE)

Small Business Administration, 8(A) Program

Other (please specify) \_\_\_\_\_

**The City of Arlington encourages minority participation and utilizing MWBE subconsultants where there are opportunities on this project.**

## For City Use Only:

I have reviewed this Utilization Plan and found that the \_\_\_\_\_ **HAS** or **HAS NOT** complied as per the City's M/WBE Special Provisions.

Verified Goal attainment:

MBE \_\_\_\_%      WBE \_\_\_\_%

Reviewer

Date:

# Office of Business Diversity

## LETTER OF INTENT TO SUBCONTRACT



Project Number: \_\_\_\_\_

Project Title: \_\_\_\_\_

\_\_\_\_\_ ("Prime Contractor") agrees to enter into a contractual agreement with \_\_\_\_\_ ("MWBE Subcontractor"), who will provide the following goods/services on the above-referenced contract.

(Use broad categories (ex. "electrical work", "HVAC equipment purchase", etc.) to describe the goods/services to be provided).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

for an estimated amount of \$ \_\_\_\_\_ or \_\_\_\_\_ of the total estimated contract value.

Prime Contractor agrees to utilize said MWBE Subcontractor in the capacity indicated herein and MWBE Subcontractor agrees to work on the above-referenced contract in the capacity herein, contingent upon award of the contract to Prime Contractor.

\_\_\_\_\_  
Signature – Prime Contractor

\_\_\_\_\_  
Signature – MWBE Subcontractor

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title Date

\_\_\_\_\_  
Title Date

**SECTION 00 3090**

**VERIFICATION RELATING TO BOYCOTTING ISRAEL**

The State of Texas has passed legislation which is codified in Chapter 2270 of the Texas Government Code that prevents any municipal government from entering into a contract for goods and services unless the contractor makes certain verifications. The Contractor by signing below verifies that Contractor does not boycott Israel and will not boycott Israel during the term of the Contract. This verification when executed will be attached to the contract and become a part of the contract for all purposes. This verification relates to the contract for **Paving and Sidewalk Improvements, City of Arlington Project No. PJ000106.**

BY: \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Witness:

\_\_\_\_\_

END OF SECTION

## SECTION 00 3091

### Verification Relating to Boycotting Energy Companies

The State of Texas has passed legislation, which is codified in Chapter 2274 of the Texas Government Code, that prevents any municipal government from entering into a contract for goods and services unless the contractor makes certain verifications. The Contractor, by signing below, verifies that Contractor does not boycott energy companies and will not boycott energy companies during the term of the Contract. This verification, when executed, will be attached to the contract and become a part of the contract for all purposes. This verification relates to the contract for **Paving and Sidewalk Improvements, City of Arlington Project No. PJ000106.**

By:

Name: \_

Title:

Witness:

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## SECTION 00 3092

### Verification Relating to Discriminating Against Firearm or Ammunition Industries

The State of Texas has passed legislation, which is codified in Chapter 2274 of the Texas Government Code, that prevents any municipal government from entering into a contract for goods and services unless the contractor makes certain verifications. The Contractor, by signing below, verifies that Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, and that it will not discriminate against a firearm entity or firearm trade association during the term of this Contract. This verification, when executed, will be attached to the contract and become a part of the contract for all purposes. This verification relates to the contract for **Paving and Sidewalk Improvements, City of Arlington Project No. PJ000106.**

By:

Name: \_

Title:

Witness:

---



**DOCUMENT 00 9010**  
**ADDENDA**

1.  
2.  
3.  
4.  
5. 1. ADDENDA

6.  
7. Addenda for this project will be inserted here.  
8.  
9.  
10.  
11.  
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22.  
23.  
24.  
25.  
26.

**END OF SECTION**

**SECTION 01 0000**  
**SUMMARY OF WORK**

**PART 1        GENERAL**

**1.01   SECTION INCLUDES**

- A. Contract description.
- B. Conditions of the contract.
- C. Contractor's use of site and premises.
- D. Work sequence
- E. Owner occupancy

**1.02   CONTRACT DESCRIPTION**

- A. Work of the Project includes:
  - 1. Demolition existing sidewalk and curb, grind existing pavement, and install asphalt overlay at the Southeast branch Library in Arlington, Texas. Perform Work of each Contract under lump sum cost contract in accordance with the Conditions of Contract.
- B. Indication on the drawings or mention in the specifications of articles, materials, operations or methods requires that the Contractor provide each item indicated or mentioned of the quality or subject to the qualifications noted, and perform according to the conditions stated each operation described and provide therefore all necessary labor, equipment, services and incidentals.
  - 2. All subcontractors are responsible for examining the Architectural drawings for structural, mechanical, electrical and plumbing items. Any items shown on these drawings shall be furnished by the appropriate subcontractor.

**1.03   WORK BY OWNER**

- A. Schedule of Owner-furnished items
  - 1. Reference Drawings.
- B. Owner Responsibilities
  - 1. Arrange and pay for delivery to site in accordance with Progress Schedule.
  - 2. Inspect deliveries jointly with Contractor.
  - 3. Submit claims for transportation damage.
  - 4. Arrange for replacement of damaged, defective or missing items.
  - 5. Arrange for manufacturer's field services; arrange for and deliver manufacturer's warranties and bonds to Contractor.
- C. Contractor Responsibilities
  - 1. Designate submittals and delivery date for each product in Progress Schedule.
  - 2. Review shop drawings, product data, samples and other submittals. Submit to Architect with notification of any observed discrepancies or problems anticipated due to non-conformance with Contract Documents.
  - 3. Receive and unload products at site.
  - 4. Inspect deliveries jointly with Owner, record shortages and damaged or defective items.
  - 5. Handle products at site, including uncrating and storage.
  - 6. Protect products from damage and from exposure to elements.

7. Assemble, install, connect, adjust and finish products. Contractor shall make all necessary electrical and plumbing service connections to Owner-supplied equipment as shown in the Contract Documents.
8. Provide installation inspections required by public authorities.
9. Repair or replace items damaged by Contractor.

#### **1.04 CONTRACTOR USE OF SITE AND PREMISES**

- A. Coordinate use of premises under direction of Owner.
- B. Assume full responsibility for protection and safekeeping of products under this Contract.
- C. Obtain and pay for use of additional storage or work areas needed when required for operations under this Contract.
- D. There shall be no fires on the site or in the building. There shall be no dumping on Owner's property.
- E. After the site grading is substantially complete, the Contractor shall assume responsibility for all site grades and shall maintain and repair any erosion as required until a full stand of grass is established.

#### **1.05 WORK SEQUENCE**

- A. Work shall be started upon formal "Notice to Proceed" and Substantial Completion shall within the number of days bid by Contractor on the Bid Form.
- B. The Contractor agrees that, from the compensation otherwise to be paid, the Owner may retain the sum of \$500.00 for each calendar day after the Date of Substantial Completion that the Work remains incomplete. This sum is agreed upon as the proper measure of Liquidated Damages which the Owner will sustain per diem by the failure of the Contractor to complete the Work at the time stipulated in the Contract. This sum is not to be construed in any sense a penalty.
- C. The fire lane and fire hydrants are required by the City to be in place and operational prior to construction above the floor slab.

#### **1.06 OWNER OCCUPANCY**

- A. The Owner will occupy the premises during the entire period of construction.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.
- D. Execute Certificate of Substantial Completion for each designated portion of Work prior to Owner occupancy. Following execution of a Substantial Completion Certificate for a designated portion of work, the Contractor shall permit:
  1. Access for Owner personnel.
  2. Use of parking facilities for the benefit of the Owner.

**PART 2 – PRODUCTS – Not used.**

**PART 3 - EXECUTION – Not used.**

**END OF SECTION**

**SECTION 01 1020  
CASH ALLOWANCES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Owner Contingency.

**1.02 CONTINGENCY ALLOWANCES**

- A. Include in the Contract, a stipulated sum/price of
  - 1. Owner's Contingency Allowance in the amount of 10% of the base bid for use upon Owner's written Allowance Expenditure Authorization.
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Allowance Expenditure Authorization of funds from this Contingency Allowance.
- C. Funds will be drawn from the Contingency Allowance only by Allowance Expenditure Authorization.
- D. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

**1.03 COSTS INCLUDED IN ALLOWANCES**

- A. Cost of product to Contractor or subcontractor, less applicable trade discounts.
- B. Delivery to site.
- C. Labor required under allowance, only when labor is specific to be included.
- D. Applicable taxes.

**1.04 CONTRACTOR COST INCLUDED IN CONTRACT SUM**

- A. Products handling at site, including unloading, uncrating and storage.
- B. Protection of products from elements and from damage.
- C. Labor for installation and finishing, except when installation is specified as part of allowance.
- D. Other expenses required to complete installation.
- E. Contractor overhead and profit.

**1.05 ADJUSTMENT OF COSTS**

- A. Should the net cost be more or less than the specified amount of the allowance, the Contract Sum will be adjusted accordingly by Change Order.
- B. Submit any claims for anticipated additional costs at the site, or other expenses caused by the selection under the allowance, prior to execution of the work.
- C. Submit documentation for actual additional costs the site, or other expense caused by selection under the allowance, prior to execution of the Work.
- D. Failure to submit claims within the designated time will constitute a waiver of claims for additional costs.

**END OF SECTION**

**01 1020-1**  
CASH ALLOWANCES

**SECTION 01 2000  
PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Schedule of values.
- B. Applications for payment.
- C. Change procedures.
- D. Defect assessment.

**1.2 SCHEDULE OF VALUES**

- A. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet.
- B. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.
- C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the major specification Section. In addition to the Table of Contents, identify site mobilization, bonds, insurance, and record drawings.
- D. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- E. Revise schedule to list approved Change Orders, with each Application for Payment.

**1.3 APPLICATIONS FOR PAYMENT**

- A. Submit ONE copy of each application on AIA Form G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Submit an updated construction schedule with each Application for Payment.
- D. Payment Period: Submit at intervals stipulated in the Agreement
- E. Submit with transmittal letter.
- F. Submit waivers.
- G. Substantiating Data: When Architect/Engineer requires substantiating formation, submit data justifying dollar amounts in question. Include the following with the application:
  - 1. Partial release of liens from major subcontractors and vendors.
  - 2. Record documents for review by the Owner, which will be returned to the Contractor.
  - 3. Affidavits attesting to off-site stored products.
  - 4. Construction progress schedules, revised and current
  - 5. Affidavits attesting use of historically under-utilized businesses, used on this project, and percent payment made at each Pay Application to HUB Contractors.

**1.4 CHANGE PROCEDURES**

- A. Submittals: Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. The Architect/Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on AIA Form G710.

- 1 C. The Architect/Engineer may issue a Proposal Request which includes a detailed  
2 description of a proposed change with supplementary or revised drawings and  
3 specifications, a change in Contract Time for executing the change with a stipulation of  
4 any overtime work required and the period of time during which the requested price will  
5 be considered valid. Contractor will prepare and submit an estimate within 5 days.
- 6 D. The Contractor may propose changes by submitting a request for change to the  
7 Architect/Engineer, describing the proposed change and its full effect on the work.  
8 Include a statement describing the reason for the change, and the effect on the Contract  
9 Sum/Price and Contract Time with full documentation and a statement describing the  
10 effect on work by separate or other Contractors. Document any requested substitutions  
11 in accordance with Section 01 6000.
- 12 E. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed  
13 price quotation or Contractor's request for a Change Order as approved by  
14 Architect/Engineer.
- 15 F. Unit Price Change Order: For contract unit prices and quantities, the Change Order will  
16 be executed on a fixed unit price basis. For unit costs or quantities of units of work,  
17 which are not pre-determined, execute work under a Construction Change Directive.  
18 Changes in Contract Sum/Price or Contract Time will be computed as specified for Time  
19 and Material Change Order.
- 20 G. Construction Change Directive: Architect/Engineer may issue a directive, on AIA Form  
21 G713 Construction Change Directive signed by the Owner, instructing the Contractor to  
22 proceed with a change in the work, for subsequent inclusion in a Change Order.  
23 Document will describe changes in the work, and designate method of determining any  
24 change in Contract Sum/Price or Contract Time. Promptly execute the change.
- 25 H. Time and Material Change Order: Submit itemized account and supporting data after  
26 completion of change, within time limits indicated in the Conditions of the Contract.  
27 Architect/Engineer will determine the change allowable in Contract Sum/Price and  
28 Contract Time as provided in the Contract Documents.
- 29 I. Maintain detailed records of work done on Time and Material basis. Provide full  
30 information required for evaluation of proposed changes, and to substantiate costs for  
31 changes in the work.
- 32 J. Document each quotation for a change in cost or time with sufficient data to allow  
33 evaluation of the quotation.
- 34 K. Change Order Forms: AIA G701 Change Order.
- 35 L. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures  
36 of parties as provided in the Conditions of the Contract.
- 37 M. Correlation of Contractor Submittals:
- 38 1. Promptly revise Schedule of Values and Application for Payment forms to record  
39 each authorized Change Order as a separate line item and adjust the Contract  
40 Sum/Price.
- 41 2. Promptly revise progress schedules to reflect any change in Contract Time, revise  
42 sub-schedules to adjust times for other items of work affected by the change, and  
43 resubmit.
- 44 3. Promptly enter changes in Project Record Documents.

## 45 46 **1.5 DEFECT ASSESSMENT**

- 47 A. Replace the work, or portions of the work, not conforming to specified requirements.
- 48 B. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the  
49 work, the Architect/Engineer will direct an appropriate remedy or adjust payment.

- C. The defective work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the Architect/Engineer.
- D. The defective work will be partially repaired to the instructions of the Architect/Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Architect/Engineer.
- E. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- F. The authority of the Architect/Engineer to assess the defect and identify payment adjustment is final.
- G. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
  - 1. Products wasted or disposed of in a manner that is not acceptable.
  - 2. Products determined as unacceptable before or after placement.
  - 3. Products not completely unloaded from the transporting vehicle.
  - 4. Products placed beyond the lines and levels of the required work.
  - 5. Products remaining on hand after completion of the work.
  - 6. Loading, hauling, and disposing of rejected products.

**PART 2 PRODUCTS (NOT USED)**

**PART 2 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01 3000**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Coordination and project conditions.
- B. Field engineering.
- C. Progress meetings.
- D. Preinstallation meetings.
- E. Equipment electrical characteristics and components.
- F. Cutting and patching.
- G. Special procedures.

**1.2 COORDINATION AND PROJECT CONDITIONS**

- A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion and occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

**1.3 FIELD ENGINEERING**

- A. Employ Land Surveyor registered in State of Texas and acceptable to the Owner.
- B. Locate and protect survey control and reference points. Promptly notify Architect/Engineer of discrepancies discovered.
- C. Control datum for survey is that established by Owner provided survey.
- D. Verify setbacks and easements; confirm drawing dimensions and elevations.
- E. Provide field-engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- F. Submit copy of site drawing and certificate signed by Land Surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.
- G. Maintain complete and accurate log of control and survey work as Work progresses.
- H. Protect survey control points prior to starting site work; preserve permanent reference points during construction.



- I. Promptly report to Architect/Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
- J. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect/Engineer.

#### 1.4 PROGRESS MEETINGS

**COA-BDC will provide the following for each meeting:**

- A. Schedule and administer meetings throughout progress of the Work at weekly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, and reside at meetings.
- C. Attendance Required: Job superintendent, Owner, Architect/Engineer.
- D. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of Work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems impeding planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Maintenance of progress schedule.
  - 7. Planned progress during succeeding works period.
  - 8. Coordination of projected progress.
  - 9. Maintenance of quality and work standards.
  - 10. Effect of proposed changes on progress schedule and coordination.
  - 11. Other business relating to Work.
- E. Record minutes and distribute copies within five days after meeting to participants, with copies to Architect/Engineer/Owner, and those affected by decisions made.

#### 1.5 PREINSTALLATION MEETING

- A. When required in individual specification sections, convene preinstallation meeting at Project site prior to commencing work of specific section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific section.
- C. Notify Architect/Engineer four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of installation, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within five days after meeting to participants, with two copies to Architect/Engineer/Owner, and those affected by decisions made.

### PART 2 PRODUCTS

#### 2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Motors: Specific motor type is specified in individual specification sections.
- B. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.
- C. Cord and Plug: Furnish minimum 6-foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is

specified in individual specification sections.

## **PART 3 EXECUTION**

### **3.1 CUTTING AND PATCHING**

- A. Employ original skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements affecting:
  - 1. Structural integrity of element.
  - 2. Integrity of weather-exposed or moisture-resistant elements.
  - 3. Efficiency, maintenance, or safety of element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
  - 1. Fit the several parts together, to integrate with other Work.
  - 2. Uncover Work to install or correct ill-timed Work.
  - 3. Remove and replace defective and non-conforming Work.
  - 4. Remove samples of installed Work for testing.
  - 5. Provide openings in elements of work for penetrations of mechanical and electrical work.
- D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated fire resistant material to full thickness of penetrated element.
- J. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.
- K. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.

### **3.2 SPECIAL PROCEDURES**

- A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Finish surfaces as specified in individual product sections.

**END OF SECTION**

**SECTION 01 3300**  
**SUBMITTAL PROCEDURES**

**PART 1        GENERAL**

**1.1      SECTION INCLUDES**

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Product data.
- E. Shop drawings.
- F. Samples.
- G. Design data.
- H. Test reports.
- I. Certificates.
- J. Manufacturer's field reports.

**1.2      SUBMITTAL PROCEDURES**

- A. Transmit each submittal with Engineer accepted form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- D. Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Architect/Engineer at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- G. Identify variations from Contract Documents and product or system limitations, which may be detrimental to successful performance of the completed work.
- H. Provide space for Contractor and Architect/Engineer review stamps.
- I. When revised for resubmission, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

**1.3      CONSTRUCTION PROGRESS SCHEDULES**

- A. Submit preliminary outline Schedules within 15 days after date established in Notice to Proceed for coordination with Owner's requirements. After review, submit detailed schedules within 15 days modified to accommodate revisions recommended by Engineer.
- B. Submit revised Progress Schedules with each Application for Payment.

- C. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.
- D. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- E. Submit a computer generated horizontal bar chart with separate line for each major portion of Work or operation, identifying first workday of each week.
- F. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- G. Indicate estimated percentage of completion for each item of Work at each submission.
- H. Provide separate schedule of submittal dates for shop drawings, product data, and samples, including products identified under Allowances, and dates reviewed submittals will be required from Engineer. Indicate decision dates for selection of finishes.
- I. Indicate delivery dates for products identified under Allowances.
- J. Revisions To Schedules:
  - 1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
  - 2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
  - 3. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.

#### 1.4 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

#### 1.5 PRODUCT DATA

- A. Product Data: Submit to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents. Provide copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes described in this Section.
- B. Submit the number of copies, which the Contractor requires, plus two copies, which will be retained by the Engineer.
- C. Clearly mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Show dimensions and clearances required.
- E. Show performance characteristics and capacities.
- F. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

- 1 G. After review distribute in accordance with the Submittal Procedures article above  
2 and provide copies for record documents described in Section 01 7010.  
3
- 4 1.6 SHOP DRAWINGS
- 5 A. Shop Drawings: Submit to Engineer for review for the limited purpose of checking  
6 for conformance with information given and the design concept expressed in the  
7 Contract Documents. Produce copies and distribute in accordance with SUBMITTAL  
8 PROCEDURES article and for record documents purposes described in this Section.  
9 B. Indicate special utility and electrical characteristics, utility connection requirements,  
10 and location of utility outlets for service for functional equipment and appliances.  
11 C. Original drawings prepared by Contractor, Subcontractor, Supplier or Distributor,  
12 which illustrate some portion of the work; showing fabrication layout, setting or  
13 erection details.  
14 D. Prepared by qualified detailer.  
15 E. Identify details by reference to sheet and detail numbers shown on contract  
16 drawings.  
17 F. Submit in the form of one reproducible transparency and 3 opaque reproductions.  
18
- 19 1.7 SAMPLES – N/A  
20
- 21 1.8 DESIGN DATA
- 22 A. Submit for the Engineer's knowledge as contract administrator or for the Owner.  
23 B. Submit for information for the limited purpose of assessing conformance with  
24 information given and the design concept expressed in the Contract Documents.  
25
- 26 1.9 TEST REPORTS
- 27 A. Submit for the Engineer's knowledge as contract administrator or for the Owner.  
28 B. Submit test reports for information for the limited purpose of assessing  
29 conformance with information given and the design concept expressed in the  
30 Contract Documents.  
31
- 32 1.10 CERTIFICATES
- 33 A. When specified in individual specification sections, submit instructions and  
34 certification by the manufacturer, installation/application subcontractor, or the  
35 Contractor to Engineer, in quantities specified for Product Data.  
36 B. Indicate material or product conforms to or exceeds specified requirements. Submit  
37 supporting reference data, affidavits, and certifications as appropriate.  
38 C. Certificates may be recent or previous test results on material or product, but must  
39 be acceptable to Architect/Engineer.  
40
- 41 1.11 MANUFACTURER'S FIELD REPORTS
- 42 A. Submit reports for the Engineer's benefit as contract administrator or for the Owner.  
43 B. Submit report in duplicate within 30 days of observation to Engineer for information.  
44 C. Submit for information for the limited purpose of assessing conformance with  
45 information given and the design concept expressed in the Contract Documents.  
46  
47

1   **PART 2        PRODUCTS**

2  
3                    Not Used.

4  
5   **PART 3        EXECUTION**

6  
7                    Not Used.

8  
9                                   **END OF SECTION**

1 **SECTION 01 4000**  
2 **QUALITY REQUIREMENTS**

3 **PART 1 GENERAL**

4 **1.1 SECTION INCLUDES**

- 5 A. Quality control and control of installation.  
6 B. Tolerances  
7 C. References.  
8 D. Mock-up requirements.  
9 E. Testing and inspection services.  
10 F. Manufacturers' field services.  
11 G. Examination.  
12 H. Preparation.

13 **1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION**

- 14 A. Monitor quality control over suppliers, manufacturers, products, services, site  
15 conditions, and workmanship, to produce Work of specified quality.  
16 B. Comply with manufacturers' instructions, including each step in sequence.  
17 C. When manufacturers' instructions conflict with Contract Documents, request  
18 clarification from Engineer before proceeding.  
19 D. Comply with specified standards as minimum quality for the Work except where  
20 more stringent tolerances, codes, or specified requirements indicate higher  
21 standards or more precise workmanship.  
22 E. Perform Work by persons qualified to produce required and specified quality.  
23 F. Verify field measurements are as indicated on Shop Drawings or as instructed by  
24 manufacturer.  
25 G. Secure products in place with positive anchorage devices designed and sized to  
26 withstand stresses, vibration, physical distortion, or disfigurement.

27 **1.3 TOLERANCES**

- 28 A. Monitor fabrication and installation tolerance control of products to produce  
29 acceptable Work. Do not permit tolerances to accumulate.  
30 B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict  
31 with Contract Documents, request clarification from Engineer before proceeding.  
32 C. Adjust products to appropriate dimensions; position before securing products in  
33 place.

34 **1.4 REFERENCES**

- 35 A. For products or workmanship specified by association, trade, or other consensus  
36 standards, comply with requirements of standard, except when more rigid  
37 requirements are specified or are required by applicable codes.  
38 B. Conform to reference standard by date of issue current on date of Contract  
39 Documents, except where specific date is established by code.  
40 C. Obtain copies of standards where required by product specification sections.  
41 D. When specified reference standards conflict with Contract Documents, request  
42 clarification from Engineer before proceeding.  
43 E. Neither contractual relationships, duties, nor responsibilities of parties in Contract  
44 nor those of Engineer shall be altered from Contract Documents by mention or

inference otherwise in reference documents.

## 1.5 MOCK-UP REQUIREMENTS – N/A

## 1.6 TESTING AND INSPECTION SERVICES

- A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection.
- B. The independent firm will perform tests, inspections and other services specified in individual specification sections and as required by Architect/Engineer/Owner.
  - 1. Laboratory: Authorized to operate in State of Texas.
  - 2. Laboratory Staff: Maintain full time registered Engineer on staff to review services.
  - 3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
- C. Testing, inspections and source quality control may occur on or off project site. Perform off-site testing as required by Architect/Engineer or Owner.
- D. Reports will be submitted by independent firm to Architect/Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
  - 1. Notify Architect/Engineer and independent firm 24 hours prior to expected time for operations requiring services.
  - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
- F. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- G. Re-testing or re-inspection required because of non-conformance to specified requirements should be performed by same independent firm on instructions by Architect/Engineer. Payment for re-testing or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
- H. Agency Responsibilities:
  - 1. Test samples of mixes submitted by Contractor.
  - 2. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.
  - 3. Perform specified sampling and testing of products in accordance with specified standards.
  - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 5. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or products.
  - 6. Perform additional tests required by Architect/Engineer.
  - 7. Attend preconstruction meetings and progress meetings.
- I. Agency Reports: After each test, promptly submit two copies of report to Architect/Engineer and to Contractor. When requested by Architect/Engineer, provide interpretation of test results. Include the following:



1. Date issued.
  2. Project title and number.
  3. Name of inspector.
  4. Date and time of sampling or inspection.
  5. Identification of product and specifications section.
  6. Location in Project.
  7. Type of inspection or test.
  8. Date of test.
  9. Results of tests.
  10. Conformance with Contract Documents.
- J. Limits On Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  2. Agency or laboratory may not approve or accept any portion of the Work.
  3. Agency or laboratory may not assume duties of Contractor.
  4. Agency or laboratory has no authority to stop the Work.

#### 1.7 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

### PART 2 PRODUCTS – NOT USED

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Examine and verify specific conditions described in individual specification sections.
- B. Verify utility services are available, of correct characteristics, and in correct locations.

#### 3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

**END OF SECTION**

**SECTION 01 7000**  
**EXECUTION AND CONTRACT CLOSE OUT**

**PART 1      GENERAL**

**1.1      SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Pre-installation meetings.
- C. Cutting and Patching.
- D. Surveying for laying out the work.
- E. Cleaning and Protection.
- F. Close out procedures, including Contractor's correction Punch List, except payment procedures.
- G. General requirements for maintenance services.

**1.2      RELATED REQUIREMENTS**

- A. Section 01 3000 Administration Requirements: Submittals procedures, Electronic document submittal service.

**1.3      REFERENCE STANDARDS**

- A. NFPA 241 – Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013

**1.4      SUBMITTALS**

- A. See Section 01 3000 Administration Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
  - 1. On request, submit documentation verifying accuracy of survey work.
  - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
  - 3. Submit surveys and survey logs for the project record.
- C. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
  - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Include design drawings and calculations for bracing and shoring.
  - 2. Identify demolition firm and submit qualifications.
  - 3. Include a summary of safety procedures.
- D. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate Contractor,
  - 6. Include in request:
    - a. Identification of Project.
    - b. Location and description of affected work.
    - c. Necessity for cutting or alteration.
    - d. Description of proposed work and products to be used.
    - e. Alternatives to cutting and patching.
    - f. Effect on work of Owner or separate Contractor.

- g. Written permission of affected separate Contractor.
- h. Date and time work will be executed.
- E. Project Record Documents: Accurately record actual locations of capped and active utilities.

## 1.5 QUALIFICATIONS

- A. For demolition work, employ a firm specializing in the type of work required.
  - 1. Minimum of 5 years of documented experience.
- B. For survey work, employ a land surveyor registered in the State in which the Project is located and acceptable to Engineer. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.
- C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State in which the Project is located.

## 1.6 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- D. Dust Control: Execute work by methods of minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
  - 1. Minimize amount of bare soil exposed at one time.
  - 2. Provide temporary measures such as berms, dikes, and drains to prevent water flow.
  - 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
  - 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- G. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances, and pollutants produces by construction operations. Comply with federal, state, and local regulations.

## 1.7 COORDINATION

- A. Coordinate scheduling, submittals, and work of various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building.

- Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
  - F. Coordinate completion and clean-up of work of separate sections.
  - G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

## **PART 2 PRODUCTS**

### **2.1 PATCHING MATERIALS**

- A. New materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products; Determine by inspecting and testing produces where necessary, referring to existing work as a standard.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specifications sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

### **3.2 PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

### **3.3 PREINSTALLATION MEETINGS**

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Engineer four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with one copy each to Engineer, Owner, participants, and those affected by decisions made.

### 3.4 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Engineer of any discrepancies discovered.
- C. Contractor shall locate and protect survey control and reference points.
- D. Control datum for survey is that indicated on Drawings.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Promptly report to Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- G. Replace dislocated survey control points base on original survey control. Make no changes without prior written notice to Engineer.
- H. Utilize recognized engineering survey practices.
- I. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.
- J. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
  - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
  - 2. Grid or axis for structures.
  - 3. Building foundation, column locations, ground floor elevations.
- K. Periodically verify layouts by same means.
- L. Maintain a complete and accurate log of control and survey work as it progresses.
- M. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

### 3.5 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.

### 3.6 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.
  - 5. Repair areas adjacent to cuts to required condition.
  - 6. Repair new work damaged by subsequent work.
  - 7. Remove samples of installed work for testing when requested.
  - 8. Remove and replace defective and non-conforming work.

- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Patching:
  - 1. Finish patched surfaces to match finish that existed prior to patching. On continues surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  - 2. Match color, texture, and appearance.
  - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

### **3.7 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

### **3.8 PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Prohibit traffic from landscaped areas.
- E. Remove protective coverings when no longer needed; re-use or recycle plastic covering if possible.

### **3.9 FINAL CLEANING**

- A. Execute final cleaning prior to final project assessment.
  - 1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Use cleaning materials that are nonhazardous.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or name plates on mechanical and electrical equipment.
- D. Clean site; sweep paved areas, rake clean landscaped surfaces.
- E. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.10 CLOSE OUT PROCEDURES**

- 1 A. Make submittals that are required by governing or other authorities.
- 2 1. Provide copies to Engineer and Owner.
- 3 B. Accompany Project Coordinator on preliminary inspection to determine items to be listed
- 4 for completion or correction in the Contractor's Correction Punch List for Contractor's
- 5 Notice of Substantial Completion.
- 6 C. Notify Engineer when work is considered ready for Substantial Completion inspection.
- 7 D. Submit written certification containing Contractor's Correction Punch List, that Contract
- 8 Documents have been reviewed, work has been inspected, and that work is complete in
- 9 accordance with Contract Documents and ready for Substantial Completion inspection.
- 10 E. Conduct Substantial Completion inspection and create Final Correction Punch List
- 11 containing Engineer's and Contractor's comprehensive list of items identified to be
- 12 completed or corrected and submit to Engineer.
- 13 F. Correct items of work listed in Final Correction Punch List and comply with requirements
- 14 for access to Owner-occupied areas.
- 15 G. Accompany Project Coordinator on Contractor's preliminary final inspection.
- 16 H. Notify Engineer when work is considered finally complete and ready for Substantial
- 17 Completion final inspection.
- 18 I. Complete items of work determined by Engineer listed in executed Certificate of
- 19 Substantial Completion.
- 20
- 21
- 22
- 23

**END OF SECTION**

**SECTION 02 22 00**  
**SITE DEMOLITION**

**PART 1 - GENERAL**

**1.1 SECTION INCLUDES**

- A. Demolish designated structures and portions of existing facilities.
- B. Remove materials from site.
- C. Disconnect, cap, and remove identified utilities.

**1.2 RELATED SECTIONS**

- A. Section 01 57 00: Temporary Controls.
- B. Section 01 78 00: Closeout Submittals.
- C. Section 02 30 00: Earthwork.

**1.3 REFERENCED STANDARDS**

- A. American National Standards Institute (ANSI): A10.6: "American National Standard Safety Requirements for Demolition.

**1.4 SUBMITTALS**

- A. Submit demolition and removal procedures and schedule under provisions of Section 01 33 00 - Shop Drawings, Product Data and Samples.
- B. Submit record documents under provisions of Section 01 78 00 – Closeout Submittals. Accurately record actual locations of capped utilities and subsurface obstructions.

**1.5 QUALIFICATIONS**

- A. Demolition Firm: Company specializing in performing the work of this section with minimum 5 years documented experience.

**1.6 REGULATORY REQUIREMENTS**

- A. Conform to applicable codes for demolition of structures, safety of adjacent structures, dust control, runoff control, disposal.
- B. Obtain required permits from authorities.
- C. Notify affected utility companies before starting work and comply with their requirements.
- D. Do not close or obstruct roadways, sidewalks, or hydrants without permits.
- E. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials, and when removing such materials from the project site.



## 1.7 EXISTING CONDITIONS

- A. Conduct demolition to minimize interference with adjacent portion of structures to remain.
- B. Conduct operations with minimum interference with public usage of buildings. Maintain protected egress and access at all times.

## 1.8 PROTECTION

- A. Take care to ensure that there shall be no damage to elements or portions thereof which are not required to be removed. Erect and maintain temporary shoring, bracing, and other means to safeguard the structural integrity of the existing portions of building and its parts to remain.
- B. Erect and maintain temporary bracing, shoring, lights, barricades, signs, and other means to protect the public, workers, and other persons, and finishes and improvements to remain from damage; all in accordance with applicable regulatory requirements.
- C. Erect and maintain temporary barriers to confine dust and debris.
- D. Protect existing trees to remain. Keep area within the drip line clear of construction traffic, parking, soil contamination, soil stockpiling, storage of materials, debris, and ponding water.

## 1.9 EXAMINATION OF SITE

- A. Before submitting a Bid, Bidders shall visit and examine site to ascertain actual nature and scope of demolition work. Submittal of a Bid shall be taken as evidence that such an examination has been made and various features noted. Later claims for extra compensation on account of additional labor, materials, or equipment required for difficulties encountered in demolition work shall not be recognized.

## **PART 2 - PRODUCTS**

### 2.1 GENERAL

- A. Materials designated for demolition shall become the Contractor's property; remove and dispose of such materials unless otherwise indicated or specified. Sales of salvage materials are not allowed on site.
- B. Furnishings and equipment items to remain Owner's property shall be removed by him prior to the start of demolition (or shall be designated on the Drawings herein to be removed and stored by Contractor). Items not so designated shall be considered debris and shall be removed and disposed of accordingly.
- C. Carefully disconnect, remove and protect items directed by the Architect to be salvaged.
- D. Transport salvaged items to on-site storage areas.
- E. Fill Materials: Type specified in Section 02300 - Earthwork.

## **PART 3 - EXECUTION**

### **3.1 INSPECTIONS**

- A. Prior to starting demolition, make inspection and report observable defects and structural weaknesses of construction designated for demolition, of adjacent structures, and of improvements to remain. If unsatisfactory conditions exist, do not commence demolition until appropriate determinations have been made.
- B. Following demolition, make inspection and report defects and structural weaknesses of items partially demolished, cut, or removed; of adjacent structures; and of improvements remaining.

### **3.2 PREPARATION**

- A. Prevent movement or settlement of adjacent structures. Provide bracing, shoring, and underpinning as required.
- B. Protect existing appurtenances, structures and landscaping which are not to be demolished.
- C. Locate, disconnect, remove, and cap designated utility lines within demolition areas.
- D. Mark location of disconnected utilities. Identify utilities and indicate capping locations on Project Record Documents.

### **3.3 DEMOLITION REQUIREMENTS**

- A. Conduct demolition to minimize interference with adjacent structures.
- B. Cease operations immediately if adjacent structures appear to be in danger. Notify Architect. Do not resume operations until directed.
- C. Conduct operations with minimum interference to public or private accesses. Maintain protected egress and access at all times.
- D. Obtain written permission from adjacent property owners when demolition equipment shall traverse, infringe upon or limit access to their property.

### **3.4 DEMOLITION**

- A. Perform demolition in accordance with ANSI 10.6 and applicable regulatory requirements.
- B. Remove items designated for demolition within the limits of work indicated, and as required to perform the work. Do not remove anything beyond the limits of demolition indicated without the prior written approval of Architect. If in doubt whether to remove an item, obtain written approval prior to proceeding.
- C. Demolish indicated structures and appurtenances in an orderly and careful manner. Remove materials carefully providing format and structurally sound junctures between new and existing materials. Demolish structures above each floor level before damaging supporting members on lower levels.
- D. Upon discovery of hazardous materials (asbestos, P.C.B's, etc) or if it is suspected that hazardous materials have been encountered, cease work immediately and notify the Architect.
- E. Except where noted otherwise, immediately remove demolished material from site.

- F. Remove materials to be re-installed or retained in manner to prevent damage. Store and protect under provisions of Section 01610 – Basic Product Requirements.
- G. Remove and promptly dispose of contaminated, vermin infested, or dangerous materials encountered.
- H. Do not burn or bury materials on site.
- I. Remove concrete slabs on grade where designated or as required to produce the intended results.
- J. Keep work sprinkled to minimize dust. Provide hoses and watermain or hydrant connections for this purpose.
- K. Backfill areas excavated caused as a result of demolition. Use soil and methods specified in Section 02 30 00 - Earthwork.
- L. Rough grade and compact areas affected by demolition to maintain site grades and contours. Do not allow water to pond in excavations.
- M. Remove demolished materials from site as work progresses. Leave site in clean condition.
- N. Demolish concrete in small sections.
- O. Do not jackhammer within 2 inches of reinforcing or structural steel to remain; remove final 2 inches of material using chipping guns or suitable hand tools.
- P. If in the event hazardous materials (asbestos, PCP's, etc.) are encountered during the course of the demolition work, or if it is even suspected that such materials shall or have been encountered cease work immediately in the affected area and promptly notify Architect.

### 3.5 CUTTING

- A. Make new openings neat, as close as possible to profiles indicated and only to extent necessary for new work.
- B. Do not cut or alter structural members unless specifically indicated or approved, and do not damage reinforcing or structural steel to remain.
- C. At concrete, masonry, paving, and other materials where edges of cuts and holes shall remain exposed in the completed work, make cuts using power-sawing and coring equipment. Sawcut full depth of work to be removed for flush exposed face. Do not overcut at corners of cut openings. Provide 6" diameter core cuts at corners of concrete to be sawcut and removed prior to sawcutting.
- D. Upon completion of cutting and coring, clean remaining surfaces of loose particles and dust.

### 3.6 PIPES, DUCTS, AND CONDUITS

- A. Remove deactivated mechanical, plumbing, and sprinkler piping, ducts, and electrical conduit, including fastenings, connections, and other related appurtenances and accessories which would otherwise be exposed in the completed work or interfere with construction operations.
- B. Cap deactivated piping systems at points of cutoff.

### 3.7 RECONDITIONING EXISTING SUBSTRATES

- A. Clean surfaces on which new materials shall be applied, removing adhesives, bitumen, and other adhering materials, as necessary to furnish acceptable substrates for new materials.
- B. Perform sandblasting, chipping, grinding, acid washing, etching, and other work as required by conditions encountered and new materials involved.
- C. Use of acids or other cleaning agents shall include neutralizing, washing, rinsing, and drying, as applicable.
- D. Determine substrate requirements for reconditioned surfaces in cooperation with the manufacturer's representative and installer of each new material involved.

**END OF SECTION**

## SECTION 31 25 00

### EROSION AND SEDIMENTATION CONTROL

#### PART 1 - GENERAL

##### 1.1 SECTION INCLUDES

- A. This Section pertains to the provisions for the control of erosion for all areas effected by construction and in stockpile areas and includes seeding, hydromulching, silt fences, sediment barriers, the construction of temporary swales and sedimentation basins as required and shown on the drawings.
- B. Work under this section shall be coordinated with the Section 01570 - Temporary Controls During Construction.

##### 1.2 RELATED SECTIONS

- A. Section 01 57 00: Temporary Controls.
- B. Section 02 20 00: Site Preparation.
- C. Section 31 05 00: Earthwork.

#### PART 2 - PRODUCTS

##### 2.1 GRASS

- A. Materials for seeding shall conform to TxDOT Item 164 for the district in which the project is located.

##### 2.2 FERTILIZER

Fertilizer shall conform to TxDOT Item 166. Use commercial grade fertilizers to insure germination and growth. Analysis by weight shall be 16-4-8 or 15-5-10 for Nitrogen, Phosphoric Acid and Potash.

##### 2.3 WATER

Use clean potable water for maintaining the grass.

##### 2.4 EROSION CONTROL MATTING

Enkamat 7010.

##### 2.5 ROCK RIP RAP, CRUSHED STONE BEDDING, AND FILTER FABRIC

Rock rip rap shall consist of field stone or rough-hewn quarry stone as nearly uniform in sections as practicable. The rock rip rap and crushed stone bedding shall have a specific gravity of at least 2.25 and shall have a percent wear not more than 30 when tested by the Los Angeles Abrasion Test, ASTM C131 and shall be resistant to action of air, water, and freeze/thaw. If thickness of riprap is not specified on drawings, 18-inches shall be required, meeting TxDOT Item 432.3 (2)(C). Gradation shall be as shown on the Construction Drawings. Filter fabric for rock rip rap shall meet the U.S. Army Corps of Engineers Specification CW02215, November 1977, and shall meet or exceed the following criteria:

Equivalent Opening Size (EOS)	70-100
Tensile Strength (ASTM 1682)	200 lbs. min. each direction
Puncture Strength (ASTM D751)	80 lbs. min.
Abrasion Resistance (ASTM D1175/D1682)	55 lbs. min. each direction

#### PART 3 - EXECUTION

##### 3.1 GENERAL

Contractor shall keep disturbed areas to a minimum required to adequately perform the work. At all times the Contractor shall maintain the site in such a manner that minimizes erosion of the site. The execution of work under this section shall be in conformance with the NPDES rulings and the site Storm Water Pollution Prevention Plan.

### 3.2 SEEDING

- A. Disturbed portions of the site and stockpile areas shall be seeded within 14 days if the phasing of the construction operations are anticipated to leave those portions of the areas unworked for 21 days or more.
- B. Seeding operations shall be performed in accordance to the TxDOT Standard Specifications, Item 164, titled "Seeding for Erosion Control" using the materials specified for that District and the season in which the seeding operations are to occur.
- C. Seeded areas shall be maintained until the project is accepted by Owner. Maintenance shall include but not be limited to watering, fertilizing, reseeding, mowing and erosion repair as may be required. Grass shall be cut when the average height of the grass reaches six (6) inches. Clippings may be mulched back into the seeded areas. Prior to acceptance of the grassed areas, a minimum coverage of 95 percent shall be achieved, with no individual bare area greater than two square yards.
- D. Fertilizer shall be applied in accordance with TxDOT Item 166, at a rate of not less than 450 lbs/acre.

### 3.3 DRAINAGE DITCHES

- A. Drainage ditches shall be grassed immediately upon final grading.
- B. Erosion of the banks of the drainage ditches shall be repaired immediately and re-stabilized. Care shall be taken not to rut and damage ditch. Damaged ditch shall be repaired immediately.
- C. Sediment barriers shall be placed at intervals along the ditch as shown on the drawings and as necessary to help trap sediment on the site. Sediment and other debris trapped by the barriers shall be removed on a daily basis as needed.
- D. Ditch side slopes shall not be steeper than three (3) feet horizontal to one (1) foot vertical.
- E. Maintenance of the ditches during construction shall include but not be limited to mowing, re-grading, sediment removal, re-seeding, bank repair and debris removal.
- F. Sediment removed from the ditches may be respread on the site.
- G. Contractor shall work with other contractors at the site in maintaining existing ditch and ditches. Where necessary for access to the work areas, adequately sized culverts shall be installed and maintained to provide the access without disturbing the site drainage.
- H. Ditch not designated to remain in place at the completion of the contract shall be cleaned of any muck, debris and other unsuitable material and filled with approved fill before final grading operations begin.
- I. Temporary and permanent drainage ditches shall be provided as required to carry drainage away from the work area to an approved outfall point. Unless otherwise shown on the drawings, ditches shall be earthen "V" shaped channels graded to a sufficient depth and slope to carry the anticipated runoff, but at least two (2) feet deep with a slope of 0.1%.

### 3.4 FILL AND CUT SLOPES

- A. Fill slopes in all cases shall be no steeper than 3:1 unless specifically stated on the drawings.
- B. When cut slopes exceed 2:1 for depths over three (3) feet, proper bracing and shoring per OSHA requirements shall be used and maintained.
- C. For permanent slopes, cut or fill, between 2:1 and 10:1, erosion protection shall be provided with hydromulching, sodding, seeding, or other method as approved.

### 3.5 SEDIMENTATION BASINS

- A. Description
  - 1. Sedimentation ponds shall be provided where designated on the drawings.
  - 2. All drainage from cleared areas shall be routed through the sedimentation basin.
  - 3. Contractor shall be responsible for the operation and maintenance of the pond during construction.
- B. Maintenance
  - 1. Contractor shall be responsible for maintaining the pond and the outfall and sediment retarding structure in good working condition throughout the time the pond is to be in operation.
  - 2. When sediment and debris fill the pond to over one third (1/3) its designed capacity, the pond shall be cleaned out.
  - 3. The sediment from the clearing operation shall be stockpiled in its own separate area or removed from the site, as required, and adequate drainage provisions must be made such that drainage from the sediment stockpile drains back into the sediment pond. When approved by Engineer, sediment removed from the pond may be spread over the site.

### 3.6 EROSION CONTROL BARRIERS

- A. Erosion control barriers shall be provided at intervals along ditches as shown on the drawings and as necessary to meet the requirements of the Storm Water Pollution Prevention Plan.
- B. The barriers shall be silt fence or hay bales placed as shown on the drawings and details.
- C. Barriers shall be maintained in good working condition and replaced when damaged.

### 3.7 EROSION CONTROL MATTING

Install matting as per manufacturer's recommendation.

**END OF SECTION 02 37 00**

**SECTION 32 12 16**  
**ASPHALT PAVING**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Work Specified in this Section:
  - 1. Subgrade preparation.
  - 2. Soil sterilization.
  - 3. Aggregate base course.
  - 4. Tack coat.
  - 5. Asphaltic concrete paving.
  - 6. Asphalt emulsion seal coat.
  - 7. Redwood headers
  - 8. Patching and repair of existing pavement.
- C. Related Work Specified Elsewhere:
  - 1. Site preparation and earthwork, including rough grading.
  - 2. Portland cement concrete curbs, drives, and paving.
  - 3. Pavement marking and parking bumpers.

**1.2 QUALITY ASSURANCE**

- A. Proportioning of Plant Mix: Determine the exact proportions of bituminous binder and mineral aggregate required to produce a mixture equal to mix quality specified **Related Sections:**

**1.3 SUBMITTALS**

- A. Product Data: Submit technical product data and application directions for all manufactured products.
- B. Certificates and Statement: Submit certificates from all asphalt concrete products suppliers attesting that quality, gradation, proportions, and mixing of materials supplied conform to requirements specified. Materials not conforming to specified requirements are defective. Reject defective materials whether or not in place. Submit a certified statement supported by weight tickets showing the following information:
  - 1. Calculations showing minimum amount of asphaltic concrete materials required for total area to be paved.
  - 2. Amounts actually installed.



#### **1.4 JOB CONDITIONS**

- A. Provide protection and repair adjacent surfaces and areas which may be stained or damaged because of installation. Protect installed paving until final acceptance. Repair or replace damaged or defective paving to original specified condition.

#### **1.5 WARRANTY**

- A. In addition to warranty required in Division 1, provide 2-year warranty against weed or plant growth through paving for two years. Warranties shall cover all portions of asphaltic concrete in which creeping, shoving, cracking, raveling, or softening occurs or in which any weed growth occurs, and depressed areas which collect water due to improper grading, placing, or defective materials during the warranty period. Repairs include the restoration of adjoining or applied materials and finish items.

### **PART 2 - PRODUCTS**

#### **2.1 MATERIALS**

- A. Soil Sterilizer: An approved standard product non-selective borate-chlorate type sterilizer having minimum 46% boron-trioxide equivalent. Tebuthiuron, marketed as "Spike 80W", manufactured by Elanco Products Company, Indianapolis, IN 46285, may be used as an alternate to boron trioxide products. In either case, the material shall be approved for use under asphalt paving by the State of California EPA.
- B. Aggregate Base Course: Caltrans Class II Base (Minimum R-Value=78), 3/4" size gradation maximum.
- C. Tack Coat: Asphalt emulsion, SS-1 H, State Standard Spec Section 94.
- D. Asphaltic Concrete Surface Course: 3/4" mix, asphalt type Caltrans Performance Grade PG 64-10.
- E. Asphalt Emulsion Seal Coat: "Guardtop", manufactured by Industrial Asphalt, 13130 East Los Angeles Street, P.O. Box 2263, Irwindale, CA 91706 (818) 814-1428, "Slurry-Mix" by Ted R. Jenkins Co., Inc., or "Plush Tex" by Koch Asphalt Company.
  - 1. The material shall conform to the following:

PHYSICAL PROPERTIES		
Physical Property, Units	Test Method	Acceptable Value
Cone penetration at 77°F, dmm	ASTM D 217	340 min., 430 max.
Nonvolatile components, percent	325 $\mu$ , 1.5 hours	60 min., 70 max.
Percent by weight nonvolatile soluble in trichloroethylene	ASSHTO T 45	20 min., 35 max.
Wet track abrasion test	ASTM 3910	30 Average
Accelerated weathering	Fed Spec	Passes
Resistance to wind driven rain at 98	Fed Spec	Passes
Ultraviolet resistance, 12 years		No cracking, peeling, chipping,
Density, pounds per gallon		10.9
Color		Black

2. Provide crack fillers and related materials of same manufacturer.

## PART 3 - EXECUTION

### 3.1 PREPARATORY WORK

- A. Subgrade Preparation: Conform to GreenBook Subsection 301-1. Proof roll the subgrade and perform all necessary rolling and compacting to obtain firm, even subgrade surface. Fill and consolidate depressed areas. Remove unsuitable materials and replace with clean fill. Compact top 12" to minimum 90% relative compaction, determined as specified in Section 31200, at any location. Maintain the subgrade slightly above optimum moisture content until covered with subsequent materials.
- B. Manhole and Catch Basin Frame Adjustments:
  1. Verify frames for manholes, catch basins and other such units, within areas to be paved, are at their proper elevation.
  2. Adjust frames as required to match paving. Provide temporary closures over openings until completion of rolling operations. Remove closures at completion of the work. Set covers to grade, flush with the surface of adjoining pavement surface.
- C. Soil Sterilizing: Apply sterilizer according to manufacturer's directions using dry or aqueous spray process, minimum quantity of dry undiluted material per 100 SF of paving conforming to the manufacturer's directions for control of medium and heavier weed growth and to meet warranty requirements. If necessary, apply supplemental watering to fully dissolve all sterilizer and obtain 2" to 3" penetration into the subgrade. Reroll treated subgrade to specified compaction. Do not apply sterilizer during rain or windy weather and prevent contamination of landscaping areas:

### 3.2 ASPHALT CONCRETE PAVING

- A. Aggregate Base Course: Conform to GreenBook Subsection 301-2, place in one or two layers as required to obtain 95% relative compaction. Deliver to site as a uniform mixture. Construct to indicated compacted thickness.

B. Asphalt Concrete: Conform to GreenBook Subsection 302-5 including the requirements for smoothness and density. Construct paving to minimum compacted thickness indicated. Where thickness of more than 2-inches is shown, install asphalt surface materials in two courses, leveling course and surface course, total compacted depth as scheduled.

1. Place the asphalt concrete mixture on the prepared surface, spread and strike-off. Spread mixture at minimum temperature of 225 degrees F. Inaccessible and small areas may be placed by hand. Place each course to the required grade, cross section and scheduled compacted thickness.
2. Place materials in strips not less than 10'-6" wide, unless otherwise directed. After the first strip has been placed and rolled, place all succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course materials.
3. Carefully make joints between old and new pavements, and between successive day's work, to ensure a continuous bond between adjoining work. Construct joints to have the same texture, density and smoothness as other sections of the asphalt concrete course.
4. Apply tack coat to contact surfaces of existing pavement, curbs and structures abutting pavement.
5. Begin rolling operations when the mixture will bear the weight of the roller without excessive displacement. Compact areas inaccessible to rollers with hot hand tampers or vibrating plate compactors.
6. Perform breakdown rolling immediately following the rolling of transverse and longitudinal joints and the outside edge. Check grade and smoothness after the breakdown rolling. Repair displaced areas by loosening and filling with hot loose material before continuing rolling.
7. Perform second rolling as soon as possible after the breakdown rolling, while the mixture is hot and in condition for proper compaction. Continue the second rolling until the mixture has been thoroughly compacted.
8. Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until all roller marks are eliminated and the course has attained maximum density. Provide a smooth unyielding surface, true to thickness and elevation required.
9. Remove and replace mixtures that become mixed with foreign materials and all defective areas. Cut out such areas and fill with fresh, hot asphalt concrete. Compact by rolling to the required surface density and smoothness.
10. Remove deficient areas for the full depth of the course. Cut sides perpendicular and parallel to the direction of traffic with edges vertical. Apply a tack coat before placing asphalt concrete mixture.
11. After final rolling, do not permit vehicular traffic on the pavement until it has cooled and hardened and in no case sooner than 12 hours.

C. Seal Coat: Clean and treat with weed killer all cracks 1/8" and larger, then fill with crack filler. Remove all oil and grease deposits, loose dirt, and raveled particles. Immediately prior to application of seal coat, spray with mist of water to damp surface free from puddles.

1. For existing or weathered surfaces, prime surface using specified tack coat emulsion, diluted one part to 5 parts water, as recommended by seal coat manufacturer. Apply at

rate of one gallon per 100 square feet. Allow to dry.

2. Apply seal coat in 2 applications. The first coat shall be spread and allowed to dry. Then apply second coat. The application rate for the 2 coats shall be between 20 and 45 gallons per 1,000 square feet, depending on porosity of the surface.
3. Omit screenings unless specifically directed otherwise.

### **3.3 PATCHING EXISTING PAVEMENT**

- A. Where new paving joins existing, and where trenches are cut in existing paving, patch with asphalt concrete. Prior to patching, sawcut edges at least 6" back from all ragged edges and compact subgrade to a firm, unyielding subgrade.
- B. Field verify extent and location of paving scheduled for replacement, repair, and resurfacing. The work includes filling trenches in existing paving, where indicated or required because of utility construction.
- C. Coordinate junction of new and existing pavement. Saw cut existing pavement to provide a uniform straight-line transition. Meet existing surface levels and maintain drainage slopes. Feathering of transitions is not acceptable.
- D. Crushed rock base of existing pavement may be reused, following approval by Soils Engineer, provided its integrity is maintained. Provide new base material as specified, if existing is insufficient or unsuitable. Compact crushed rock base of same thickness as existing to 1" below existing asphalt concrete pavement.
- E. Apply emulsion or hot liquid asphalt tack coat to sawcut edges prior to patching. Apply and compact asphalt concrete pavement making neat edges where new and existing join.

### **3.4 PROTECT AND CLEANING**

- A. Protect newly placed material from traffic by barricades or other suitable methods acceptable to the Architect. Protect asphalt paving from construction and vehicular damage until project acceptance.
- B. Sweep asphalt paving and wash free of stains, discolorations, dirt and other foreign material immediately before project acceptance. If stains remain after cleaning, apply a coat of sealer.

### **3.5 FIELD QUALITY CONTROL**

- A. Provide field quality control testing and inspection during asphaltic concrete paving operations. Cooperate with, provide access to the work, obtain samples and assist testing agency and their representatives in execution of their functions.
- B. Before constructing base course, field verify subgrade surfaces are adequate and meet or exceed design bearing values. Provide a minimum of one test for each type of paving required.

- C. When requested, perform laboratory tests on asphalt pavement mixes to determine conformity with specified requirements.
- D. Test in-place asphalt base course and surface courses for compliance with density, thickness, and surface smoothness. Take not less than 4" diameter pavement specimens of each completed course. Repair test specimen holes to match adjacent work.
  - 1. Average density of in-place material: Equal to or greater than 97%, with no individual determination less than 95% of average density of laboratory specimens.
  - 2. Perform one test for density for each course for each day's work.
  - 3. Thickness: Make one test for each 5,000 square feet of each type of paving. In-place compacted thickness tested in accordance with ASTM D 3549 will not be acceptable if exceeding following allowable variations:
    - a. Base Course: Plus or minus 1/2 inch.
    - b. Surface Course: Plus or minus 1/4 inch.
- E. Surface Smoothness: Test finished surface of each hot-mixed asphalt course for smoothness, using 10-foot straightedge applied parallel with and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness:
  - 1. Base Course Surface: 1/4 inch.
  - 2. Wearing Course Surface: 3/16 inch.
  - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch
- F. Drainage Test: Flood all paving with water when rolling is completed, and paving is cool. Remove paving in improperly draining areas and install properly draining paving as directed at no extra cost to District. Correction of low areas by skin patching is not acceptable.

**END OF SECTION 32 12 16**

## **SECTION 32 12 16A**

### **SPECIFICATIONS FOR MILLING OF EXISTING PAVEMENT**

#### **PART 1 – GENERAL**

- 1 . 1 It is the intent of this specification to govern the milling of the existing pavement surface, with specified equipment, to a depth as specified in the plans, as located, and identified in the plans, on the specified roads in preparation for overlay with wearing course.
- 1 . 2 The contractor, pursuant to the contract, shall at all times comply with all applicable Federal, State and local laws governing safety and health, including Federal Construction Safety Act (Public Law 91-54) Federal Register, April 17, 1971 (Title 29, Code of Federal Regulations, Part 1518 (No Part 1926) - Safety and Health Regulations for Construction.) The contractor pursuant to the contract shall take any other needed actions on his own responsibility, or as directed by the Engineer, as reasonably necessary to protect the life and health of personnel on the job.

#### **PART 2 - MILLING OF EXISTING PAVEMENT**

- 2.1 **EQUIPMENT**  
Use a milling machine designed and built for this type of work. Provide a machine with an effective automatic grade and slope control system and having the capacity to mill concrete patches. Use a small milling machine (width of cut 24" or less) to mill adjacent to the curb and around all manholes, inlets, and any other structures not accessible or practical to be milled by the milling machine. The small milling machine shall also be used to square off the beginning and ending edges of the roadway. The areas milled with the small milling machine shall be milled to the same depth as the remainder of the project area. The milled product produced by the small mill must be completely removed from the project site.
- 2.2 **MILLING OPERATION**  
Mill so the finished surface is free from gouges, grooves, ridges and in accordance with the surface tolerance requirements, or as directed. Remove milled material, as specified, immediately after the milling operations to facilitate traffic control. Use care to remove the existing material around all utility facilities within the work areas. Repair or replace, to the satisfaction of the utility owner, utility facilities which are damaged by the milling operation. Control the rate of milling to avoid tearing of the mat, resulting in chunky and non-uniformly milled material. Separate oversize and chunky milled material as directed. Keep the milled pavement surface free of all loose materials and dust. The Contractor shall use water as necessary to minimize airborne dust.

#### **PART 3- DISPOSITION OF MILLED MATERIAL**

Satisfactorily dispose of the milled material offsite.

#### **PART 4- TRAFFIC CONTROL**

Maintain and control traffic. A minimum of one traffic lane must be passable at any time. At no time will the contractor be allowed to completely close the roadway to traffic.

#### **PART 5-MEASUREMENT AND PAYMENT**

The work shall be paid per Square Yard. The unit cost shall include milling, removal disposal of milled material, site cleanup required by the work performed and Traffic Control.

#### **PART 6- STARTING AND COMPLETING WORK**

The start and completion dates for the work is listed in the Special Provision section of the Bid Documents. Requests for extensions will only be considered for delays caused by extreme weather conditions.

## **SPECIFICATIONS FOR PAVEMENT OVERLAY**

### **PART 1 – GENERAL**

- 1.1 It is the intent of these specifications to govern the paving of the street outlined with a Bituminous Wearing Course overlay with the material and to the depths indicated in the specifications.
- 1.2 The contractor, pursuant to the contract, shall always comply with all applicable Federal, State and local laws governing safety and health, including Federal Construction Safety Act (Public Law 91-54) Federal Register, April 17, 1971 (Title 29, Code of Federal Regulations, Part 1518 (No Part 1926) - Safety and Health Regulations for Construction.) The contractor pursuant to the contract shall take any other needed actions on his own responsibility, or as directed by the Township, as reasonably necessary to protect the life and health of personnel on the job.

### **PART 2– JOB MIX FORMULA**

The Contractor shall provide a copy of the plant job mix formula to the Engineer prior to starting the work. The job mix shall provide information in accordance with Item 321216..

### **PART 3 – ROADWAY PREPARATION**

- 3.1 It shall be the responsibility of the contractor to ensure the road surface is clean and free of dirt, trash, debris and all other substances that would prevent the bonding of the new material to the old before beginning work. The Contractor shall fill all irregularities in the existing roadway. This may be accomplished by individual application of material to the required areas.
- 3.2 When directed by the Engineer, the Contractor shall install a leveling or scratch course.
- 3.3 All butt joints are considered part of this item.
- 3.4 Materials required to fill irregularities in the existing roadway is considered incidental to the Contract. This material will not be used in determining the thickness of the surface course.

### **PART 4– BITUMINOUS MATERIAL**

The surface course shall consist of a Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to 3.0 million ESAL's, 9.5 mm mix, SRL H, Overlay constructed on the existing roadway surface. The bituminous wearing course shall have a minimum thickness as specified in the specifications and plans after final compaction.



## **PART 5– TACK COAT**

A tack coat shall be applied to the surface of the existing pavement (not required on cold mill recycled pavements) and the surface of the curbs and concrete structures below the pavement surface elevation. The material shall be applied at a rate to leave a uniform asphalt residue from .02 to .07 gallon per square yard.

## **PART 6– HAULING EQUIPMENT**

Haul bituminous paving mixtures in tightly sealed vehicles free of petroleum oils, solvents, or other materials which adversely affect bituminous concrete. Provide adequate covers of sufficient size and quality to protect the entire load, under all conditions and prevent temperature loss. Deliver mixture at correct laying temperature, free from lumps of chilled material.

## **PART 7– BITUMINOUS PAVERS**

- 7.1 Use self-contained, power-propelled units, with activated screeds or strike-off assemblies, that produce a finished surface of required evenness and texture. Provide a unit that does not tear, shove, or gouge the mixture. Use a unit that is heated, if necessary, and capable of spreading and finishing bituminous plant mix material to widths and depths indicated. Use pavers capable of being operated at forward speeds consistent with satisfactory laying of the mixture, equipped with receiving hoppers having sufficient capacity for uniform spreading, and with distribution systems that place the mixture uniformly in front of the screeds.
- 7.2 Do not use equipment that causes tracks, leaves indented areas not corrected by later scheduled operations, produces flushing or other permanent blemishes or fails to produce a satisfactory surface. Do not use blade graders or drags.

## **PART 8– ROLLERS**

On overlay paving, use steel wheel rollers only. The use of pneumatic tire rollers shall not be permitted. All rollers must meet the requirements of Section 108.05(c)3.

## **PART 9- SPREADING AND FINISHING**

- 9.1 Lay bituminous paving mixtures when the temperature is not more than 15-degree F below the minimum temperature shown on the bituminous material supplier's bill of lading and when not exceeding the maximum specified temperature.
- 9.2 When unforeseen delays in paving are encountered limited tonnage may be placed if mixture temperature at the time is not more than 25-degree F below the minimum indicated on the material supplier's bill of lading and the compacted pavement meets required density.
- 9.3 Spread and strike off the mixture, using a bituminous paver for the entire lane width or as much lane as may be practical. Adjust screed assemblies to provide the required cross section and depth. In areas where mechanical spreaders cannot be used, place and screed the mixture with suitable hand tools. There shall be no segregation of material, caused by broadcast spreading or excessive handwork.
- 9.4 Adjacent to flush curbs, gutters, and other abutting structures place the wearing course mixture uniformly higher so, when compacted, it will be slightly above the edge of the abutting structure.

## **PART 10- COMPACTION**

- 10.1 Compact by rolling to specified density. Roll the surface when the mixture is in proper condition and when rolling will not cause undue displacement, cracking, or shoving. Use a vibratory roller operating in vibrating mode. Continuously roll until the specified density is obtained and roller marks are eliminated. Unless otherwise directed, start rolling longitudinally at the sides and progress gradually toward the center of the pavement. On super elevated curves, begin rolling on the low side and progress to the high side, overlapping on successive trips by at least half the width of the rollers. Uniformly lap each preceding track or cover the entire surface with rear wheels when using three-wheel rollers. Operate rollers slowly enough to avoid displacement of hot mixture and satisfactorily correct displacement resulting from reversing roller directions or from other causes. When adjoining lanes are placed, follow the same rolling procedure but only after compaction of the fresh mix directly behind the paver at the longitudinal joint. Finish rolling with a second vibratory roller in the static mode or with a tandem roller.
- 10.2 Keep wheels of steel-wheel rollers moist and clean to prevent adhesion of fresh material, but do not use excess water.
- 10.3 Immediately after placing the bituminous material, round or bevel the exposed outer edges to avoid a sharp, ragged, open, or unfinished appearance and to prevent edge breakdown. Immediately repair edge breakdowns.
- 10.4 For areas inaccessible to rollers, compact with mechanical vibrating hand tampers.

## **PART 11- CURB SEAL**

- 11.1 Where the wearing course is placed adjacent to curbs, the joint shall be sealed after the surface has cooled, **BUT NO MORE THAN 24 HOURS AFTER PAVING HAS BEEN COMPLETED**, with hot asphalt cement for a distance of twelve inches from the curb. The seal shall be evenly applied to the surface by means of squeegees immediately after final rolling and sealed with hot irons so that the surface voids are completely filled. This seal shall also be placed around all utility structures, including, but not limited to, manholes, inlets and water valves.

- 11.2 Prior to sealing, clean and make free from harmful material from the area to be sealed. Control application rate so residual asphalt completely fills surface voids and provides a watertight seal along the curb. If necessary, apply emulsified asphalt in two applications. Remove excess bituminous material.
- 11.3 TxDOT #1 fine screenings, or sand, shall be placed at all transverse road joints, private driveways, and utility structures to prevent tracking of the sealant by motor vehicles.

#### **PART 12– MAINTENANCE AND PROTECTION OF TRAFFIC**

- 12.1 Maintenance and protection of traffic during construction shall be in accordance with Publication 408, Section 900 and 901 inclusive, and shall not be considered a pay item.
- 12.2 No vehicular traffic or loads shall be permitted on the newly completed surface course until adequate stability has been obtained and the material has cooled sufficiently to prevent distortion or loss of fines.

#### **PART 13– PAYMENT AND MEASUREMENT**

- 13.1 Payment for the overlay shall be by the unit price.
- 13.2 Payment for any scratch or leveling course, if required, shall be incidental to the item.
- 13.3 This work shall include bituminous leveling course, binder build up, bituminous material to fill irregularities, butt joints, tack coat, wearing course and seals at curbs, joints and utility structures, and maintenance and protection of traffic shall be incidental to the pay item .

#### **PART 14– STARTING AND COMPLETING WORK**

The start and completion dates for the overlay work is listed in the Special Provision section of the Bid Documents. Requests for extensions will only be considered for delays caused by extreme weather conditions.

#### **END OF SECTION**

## **SECTION 32 13 14**

### **SIDEWALKS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings, Bidding Requirements, Contract Forms, Conditions of the Contract and Division 1 - General Requirements apply to the work of this section.

##### **1.2 DESCRIPTION OF WORK**

- A. Work included in this section: Concrete walks, inclines, and ramps.
- B. Related work described elsewhere:
  - 1. Section 31 05 00 - Earthwork
  - 2. Section 32 13 13 - Rigid Pavement

#### **PART 2 -PRODUCTS**

##### **2.1 CONCRETE**

3500 psi at 28 days.

##### **2.2 REINFORCEMENT**

#3 bars @ 16" o.c. both ways

##### **2.3 EXPANSION JOINTS**

Premolded joint filler at 48' o.c. maximum.

##### **2.4 NON-SLIP FINISH**

- A. Provide ¼" deep grooves at 2" o.c. on ramps and incline walks.
- B. Provide cast aluminum nosings at exterior steps.

##### **2.5 DIVIDER STRIPS**

Construction grade Redwood where indicated.

#### **PART 3 -EXECUTION**

##### **3.1 PLACEMENT AND CURING**

- A. Place and cure as per requirements of Section 03 30 00.

##### **3.2 FINIS**

- A. Unless otherwise indicated, finish will be fine hair broom finish on all exterior walks.
  - 1. Draw fine-hair broom across concrete surface perpendicular to line of traffic.

**END OF SECTION 32 13 14**

## SECTION 33 42 00

### STORMWATER CONVEYANCE

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Site storm sewer drainage piping, fittings and accessories, and bedding.
  - 2. Connection of storm sewer system to municipal storm sewer system.
  - 3. Catch basins, paved area drainage, site surface drainage, and storm water detention facilities.
- B. Related Documents: The "Standard Specifications for Public Work Construction", latest edition as published by the North Central Texas Council of Governments (NCTCOG) and the "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges", latest edition as published by the Texas Department of Transportation (TxDOT), both apply to the Work of this Section.
- C. Related Sections:
  - 1. Section 31 23 00 - Excavation and Fill: Earthwork for utilities.
  - 2. Section 33 30 00 - Sanitary Sewerage Utilities: Site sanitary sewer system.
  - 3. Section 03 30 00 - Cast-In-Place Concrete: Concrete for catch basins, inlets, and junction boxes.

##### 1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - 1. ASTM A 760 - Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains.
  - 2. ASTM C 12 - Practice for Installing Vitrified Clay Pipe Lines.
  - 3. ASTM C 76 - Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
  - 4. ASTM C 443 - Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
  - 5. ASTM D 2321 - Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.
  - 6. ASTM D 3034 - Specification for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings.
  - 7. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

##### 1.3 DEFINITIONS

- A. Bedding: Fill placed under, beside and directly over pipe, prior to start of backfill operations.

##### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product
- B. Shop Drawings:
  - 1. Manholes: Include plans, elevations, sections, details, frames, and covers.
  - 2. Catch basins and stormwater inlets. Include plans, elevations, sections, details, frames, covers, and grates.
  - 3. Stormwater Detention Structures: Include plans, elevations, sections, details, frames, covers, design calculations, and concrete mix-design reports.
- C. Close Out Procedures: Procedures for closeout submittals.
  - 1. Project Record Documents: Accurately record the following.
    - a. Actual locations of pipe runs, connections, manholes, catch basins, cleanouts, and invert elevations.
    - b. Identify and describe unexpected variations to subsoil conditions and location of uncharted utilities.

- 1.5 INFORMATIONAL SUBMITTALS  
A. Field quality-control reports.
- 1.6 QUALITY ASSURANCE  
A. Regulatory Requirements: Conform to state and local Public Works Standard Specifications for materials and installation of the work of this Section.  
B. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- 1.7 DELIVERY, STORAGE, AND HANDLING  
A. Do not store plastic manholes, pipe, and fittings in direct sunlight.  
B. Protect pipe, pipe fittings, and seals from dirt and damage.  
C. Handle manholes in accordance with manufacturer's written rigging instructions.  
D. Handle catch basins and stormwater inlets in accordance with manufacturer's written rigging instructions.
- 1.8 FIELD CONDITIONS  
A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service in accordance with requirements indicated:  
1. Notify Construction Manager no fewer than two days in advance of proposed interruption of service.  
2. Do not proceed with interruption of service without Construction Manager's written permission.

## **PART 2 - PRODUCTS**

- 2.1 PIPE MATERIALS
- A. Reinforced Concrete Pipe and Fittings:  
1. Pipe: ASTM C 76, Class III, Wall A, B or C, unless indicated otherwise on Drawings.  
2. Gaskets: Bell-and-spigot or gongue-and-groove ends and gasketed joints fifth ASTM C 443; rubber gaskets sealant joints with ASTM C 990, bitumen or butyl-rubber sealant, compression gaskets installed in accordance with manufacturer's published instructions.  
3. Source Limitations: Obtain concrete pipe and fittings from single manufacturer.
- B. Corrugated Steel Pipe and Fittings:  
1. Pipe: ASTM A 760/A 760M, Type I; galvanized, aluminized or bituminous coated round pipe, arch pipe, or slotted drain pipe as indicated on Drawings, 16 gage unless otherwise indicated.  
a. Provide slotted drain pipe with 1.75 inch wide drain guide waterway openings and 6 inch minimum height drain guide.  
2. Fittings:  
a. Matching band connectors.  
b. Sleeve gaskets in accordance with manufacturer's recommendations.  
c. Fittings of similar form and construction as pipe.  
3. Source Limitations: Obtain corrugated-steel pipe and fittings from single manufacturer.
- C. Spiral Rib Metal Pipe and Fittings:  
1. Pipe: ASTM A 760, Type 1R; Galvanized, aluminized or bituminous coated as indicated on Drawings.  
2. Fittings: Provide re- corrugated pipe ends with semi-corrugated Hugger-type bands and "O" ring gaskets in accordance with manufacturer's recommendations.  
3. Source Limitations: Obtain spiral rib metal pipe and fittings from single manufacturer.
- D. Polyvinyl Chloride (PVC) Pipe and Fittings:  
1. Pipe: ASTM D 3034, SDR 35 Rated.  
a. Continuously mark pipe with manufacturer's name, pipe size, cell classification, SDR rating, and ASTM D 3034 classification.  
2. Joints: ASTM D 3034, Table 2; integrally molded bell ends with factory supplied elastomeric gaskets and lubricant.  
3. Source Limitations: Obtain PVC pipe and fittings from single manufacturer.

- E. High-Density Polyethylene (HDPE) Pipe:
1. Pipe: AASHTO M252, M294 & MP7-97 Type "S" (Corrugated Polyethylene Pipe).
    - a. Pipe shall have a smooth interior and a corrugated annular exterior.
    - b. Continuously mark pipe with manufacturer's name, pipe size and AASHTO classification.
    - c. Pipe shall be installed per manufacturer's recommendations.
    - d. Subject to compliance with project requirements, manufacturers offering Products which may be incorporated in the Work include the following:
      - 1) Hancor, Findlay, OH (888) 367-7473: Sure-Lok F477.
      - 2) Product Substitution Procedure: Product options and substitutions. Substitutions: permitted.
  2. Joints: Pipe shall be joined with a bell and spigot joint incorporating ASTM F477 gasket material insuring a leak resistant performance.
  3. Source Limitations: Obtain HDPE pipe and fittings from single manufacturer.

## 2.2 INLETS, CATCH BASINS AND JUNCTION BOXES

- A. Lid and Frame: Cast iron as indicated on Drawings.
- B. Structure: As indicated on Drawings.
- C. Concrete: Specified in Section 03 30 00.

## 2.3 DRAINS

- A. Cast-Iron Area Drains:
  1. Source Limitations: Obtain cast-iron area drains from single manufacturer.
  2. Description: ASME A112.6.3 gray-iron round body with anchor flange and round secured grate. Include bottom outlet with inside caulk or spigot connection, of sizes indicated.
  3. Top-Loading Classification(s): Heavy Duty.
- B. Cast-Iron Trench Drains:
  1. Source Limitations: Obtain cast-iron trench drains from single manufacturer.
  2. Description: ASME A112.6.3, 6-inch- wide top surface, rectangular body with anchor flange or other anchoring device, and rectangular secured grate. Include units of total length indicated and quantity of bottom outlets with inside caulk or spigot connections, of sizes indicated.
  3. Top-Loading Classification(s): Heavy Duty and Extra-Heavy Duty.
- C. Steel Trench Drains:
  1. Source Limitations: Obtain steel trench drains from single manufacturer.
  2. Description: Factory fabricated from ASTM A 242/A 242M, welded steel plate, to form rectangular body with uniform bottom downward slope of 2 percent toward outlet, anchor flange, and grate. Include units of total length indicated, bottom outlet of size indicated, outlet strainer, acid-resistant enamel coating on inside and outside surfaces, and grate with openings of total free area at least two times cross-sectional area of outlet.
  3. Plate Thicknesses: 1/8 inch and 1/4 inch.
  4. Overall Widths: 7-1/2 inches and 12-1/3 inches.
- D. Grate Openings: 3/8-by-3-inch slots.

## 2.4 ENCASEMENT FOR PIPING

- A. Standard: ASTM A 674 or AWWA C105/A21.5.
- B. Material: Linear low-density polyethylene film of 0.008-inch or cross-laminated HDPE film of 0.004-inch minimum thickness.
- C. Form: Sheet or tube.
- D. Color: Black or natural.

## 2.5 MANHOLES

- A. Standard Precast Concrete Manholes:
  1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
  2. Diameter: 48 inches minimum unless otherwise indicated.
  3. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.

4. Base Section: 6-inch minimum thickness for floor slab and 4-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
  5. Riser Sections: 4-inch minimum thickness, and lengths to provide depth indicated.
  6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated, and top of cone of size that matches grade rings.
  7. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
  8. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.
  9. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches.
  10. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.
  11. Grade Rings: Reinforced-concrete rings, 6- to 9-inch total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.
- B. Designed Precast Concrete Manholes:
1. Description: ASTM C 913; designed in accordance with ASTM C 890 for A-16 (AASHTO HS20-44), heavy-traffic, structural loading; of depth, shape, and dimensions indicated, with provision for sealant joints.
  2. Ballast: Increase thickness of one or more precast concrete sections or add concrete to manhole as required to prevent flotation.
  3. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
  4. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.
  5. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches.
  6. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.
  7. Grade Rings: Reinforced-concrete rings, 6- to 9-inch total thickness, to match diameter of manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope.
- C. Fiberglass Manholes:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Associated Fiberglass Enterprises.
    - b. Containment Solutions, Inc.
    - c. L. F. Manufacturing, Inc.
  2. Source Limitations: Obtain fiberglass manholes from single manufacturer.
  3. Description: ASTM D 3753.
  4. Diameter: 48 inches minimum unless otherwise indicated.
  5. Ballast: Increase thickness of concrete base as required to prevent flotation.
  6. Base Section: Concrete, 6-inch minimum thickness.
  7. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.
  8. Steps: Individual FRP steps or FRP ladder, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches.
  9. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole



frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.

10. Grade Rings: Reinforced-concrete rings, 6- to 9-inch total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.

D. Manhole Frames and Covers:

1. Description: Ferrous; 24-inch ID by 7- to 9-inch riser with 4-inch- minimum width flange and 26-inch- diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."
2. Material: ASTM A 536, Grade 60-40-18 ductile iron unless otherwise indicated.

## 2.6 CONCRETE

A. General: Cast-in-place concrete in accordance with ACI 318, ACI 350, and the following:

1. Cement: ASTM C 150/C 150M, Type II.
2. Fine Aggregate: ASTM C 33/C 33M, sand.
3. Coarse Aggregate: ASTM C 33/C 33M, crushed gravel.
4. Water: Potable.

B. Portland Cement Design Mix: 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 1064/A 1064M, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.

C. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio. Include channels and benches in manholes.

1. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to three-fourths of pipe diameter. Form curved channels with smooth, uniform radius and slope.
  - a. Invert Slope: Per plans.
2. Benches: Concrete, sloped to drain into channel.
  - a. Slope: Per plans.

D. Ballast and Pipe Supports: Portland cement design mix, 3000 psi minimum, with 0.58 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 1064/A 1064M, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.

## 2.7 CATCH BASINS

A. Standard Precast Concrete Catch Basins:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Base Section: 6-inch minimum thickness for floor slab and 4-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
3. Riser Sections: 4-inch minimum thickness, 48-inch diameter, and lengths to provide depth indicated.
4. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.
5. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
6. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.
7. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch- diameter frame and grate.
8. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 60 inches.
9. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.

- B. Designed Precast Concrete Catch Basins: ASTM C 913, precast, reinforced concrete; designed in accordance with ASTM C 890 for A-16 (ASSHTO HS20-44), heavy-traffic, structural loading; of depth, shape, and dimensions indicated, with provision for joint sealants.
  - 1. Joint Sealants: ASTM C 990, bitumen or butyl rubber.
  - 2. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.
  - 3. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch- diameter frame and grate.
  - 4. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 60 inches.
  - 5. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.
- C. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16 (AASHTO HS20-44), structural loading. Include flat grate with small square or short-slotted drainage openings.
  - 1. Size: 24 by 24 inches minimum unless otherwise indicated.
  - 2. Grate Free Area: Approximately 50 percent unless otherwise indicated.
- D. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16 (AASHTO HS20-44), structural loading. Include 24-inch ID by 7- to 9-inch riser with 4-inch- minimum width flange, and 26-inch- diameter flat grate with small square or short-slotted drainage openings.
  - 1. Grate Free Area: Approximately 50 percent unless otherwise indicated.

## 2.8 STORMWATER INLETS

- A. Curb Inlets: Made with vertical curb opening, of materials and dimensions in accordance with utility standards.
- B. Gutter Inlets: Made with horizontal gutter opening, of materials and dimensions in accordance with utility standards. Include heavy-duty frames and grates.
- C. Combination Inlets: Made with vertical curb and horizontal gutter openings, of materials and dimensions in accordance with utility standards. Include heavy-duty frames and grates.
- D. Frames and Grates: Heavy duty, in accordance with utility standards.

## 2.9 STORMWATER DETENTION STRUCTURES

- A. Cast-in-Place Concrete, Stormwater Detention Structures: Constructed of reinforced-concrete bottom, walls, and top; designed in accordance with ASTM C 890 for A-16 (AASHTO HS20-44), heavy-traffic, structural loading; of depth, shape, dimensions, and appurtenances indicated.
  - 1. Ballast: Increase thickness of concrete as required to prevent flotation.
  - 2. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch- diameter frame and cover.
  - 3. Steps: Individual FRP steps; FRP ladder; or ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of structure to finished grade is less than 60 inches.
- B. Manhole Frames and Covers: ASTM A 536, Grade 60-40-18, ductile-iron castings designed for heavy-duty service. Include 24-inch ID by 7- to 9-inch riser with 4-inch- minimum width flange, and 26-inch- diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."

## 2.10 PIPE OUTLETS

- A. Head Walls: Cast-in-place reinforced concrete, with apron and tapered sides.
- B. Riprap Basins: Broken, irregularly sized and shaped, graded stone in accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control."
  - 1. Average Size: NSSGA No. R-3, screen opening 2 inches.
  - 2. Average Size: NSSGA No. R-4, screen opening 3 inches.
  - 3. Average Size: NSSGA No. R-5, screen opening 5 inches.

- C. Filter Stone: In accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control," No. FS-2, No. 4 screen opening, average-size graded stone.
- D. Energy Dissipaters: In accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control," No. A-1, 3-ton average weight armor stone, unless otherwise indicated.

## 2.11 DRY WELLS

- A. Description: ASTM C 913, precast, reinforced, perforated concrete rings. Include the following:
  - 1. Floor: Cast-in-place concrete.
  - 2. Cover: Liftoff-type concrete cover with cast-in lift rings.
  - 3. Wall Thickness: 4 inches minimum with 1-inch diameter or 1-by-3-inch- maximum slotted perforations arranged in rows parallel to axis of ring.
    - a. Total Free Area of Perforations: Approximately 15 percent of ring interior surface.
    - b. Ring Construction: Designed to be self-aligning.
  - 4. Filtering Material: ASTM D 448, Size No. 24, 3/4- to 2-1/2-inch washed, crushed stone or gravel.
- B. Manufactured PE Dry Wells:
  - 1. Description: Manufactured PE side panels and top cover that assemble into 50-gal. storage capacity units.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - a. NDS Inc.
  - 3. Source Limitations: Obtain manufactured PE dry wells from single manufacturer.
  - 4. Side Panels: With knockout ports for piping and seepage holes.
  - 5. Top Cover: With knockout port for drain.
  - 6. Filter Fabric: As recommended by unit manufacturer.
  - 7. Filtering Material: ASTM D 448, Size No. 24, 3/4- to 2-1/2-inch washed, crushed stone or gravel.
- C. Description: Constructed-in-place aggregate type. Include the following:
  - 1. Lining: Clay or concrete bricks.
  - 2. Lining: Concrete blocks or precast concrete rings with notches or weep holes.
  - 3. Filtering Material: ASTM D 448, Size No. 24, 3/4- to 2-1/2-inch washed, crushed stone or gravel.
  - 4. Cover: Precast, reinforced-concrete slab, designed for structural loading in accordance with ASTM C 890 and made in accordance with ASTM C 913. Include slab dimensions that will extend 12 inches minimum beyond edge of excavation, with bituminous coating over entire surface. Cast cover with opening for manhole in center.
  - 5. Manhole: 24-inch- diameter, reinforced-concrete access lid with steel lift rings. Include bituminous coating over entire surface.

## 2.12 STORMWATER DISPOSAL SYSTEMS

- A. Chamber Systems:
  - 1. Source Limitations: Obtain chamber systems from single manufacturer.
  - 2. Storage and Leaching Chambers: Molded PE with perforated sides and open bottom. Include number of chambers, distribution piping, end plates, and other standard components as required for system total capacity.
  - 3. Filtering Material: ASTM D 448, Size No. 24, 3/4- to 2-1/2-inch washed, crushed stone or gravel.
  - 4. Filter Mat: Geotextile woven or spun filter fabric, in one or more layers, for minimum total unit weight of 4 oz./sq. yd..
- B. Pipe Systems: Perforated manifold, header, and lateral piping complying with AASHTO M 252 for NPS 10 and smaller, AASHTO M 294 for NPS 12 to NPS 60. Include proprietary fittings, couplings, seals, and filter fabric.
  - 1. Source Limitations: Obtain pipe systems from single manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Progress Cleaning: Verification of existing conditions before starting work.  
Construction Waste Management and Disposal  
Final Cleaning.
- B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
  - 1. Verify that survey benchmark and intended elevations for the Work are as indicated on Drawings.
  - 2. Verify that trench cut and excavation is ready to receive Work and excavations, dimensions, and elevations are as indicated on Drawings.
- C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
- D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

### 3.2 PREPARATION

- A. Hand trim excavations to required elevations. Correct over excavation with fine aggregate.
- B. Remove large stones or other hard matter which could damage piping or impede consistent backfilling or compaction.

### 3.3 BEDDING

- A. Excavate pipe trench as specified in Section 31 23 00. Hand trim excavation for accurate placement of pipe to elevations indicated.
- B. Place bedding material at trench bottom, level materials in continuous layers not exceeding 6 inches compacted depth, each layer. Place compacted bedding material to elevation of paving subgrade as indicated on Drawings.
- C. Maintain optimum moisture content of bedding material to attain required compaction density.
- D. Remove excess backfill and excavated material from site.

### 3.4 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping in accordance with the following:
  - 1. Install piping pitched down in direction of flow.
  - 2. Install piping NPS 6 and larger with restrained joints at tee fittings and at changes in direction. Use corrosion-resistant rods, pipe or fitting manufacturer's proprietary restraint system, or cast-in-place concrete supports or anchors.
  - 3. Install piping with 48- inch- minimum cover, or as shown on plans.
  - 4. Install corrugated-steel piping in accordance with ASTM A 798/A 798M.
  - 5. Install PVC cellular-core piping in accordance with ASTM D 2321 and ASTM F 1668.
  - 6. Install PVC sewer piping in accordance with ASTM D 2321 and ASTM F 1668.
  - 7. Install PVC profile gravity sewer piping in accordance with ASTM D 2321 and ASTM F 1668.

8. Install PVC water-service piping in accordance with ASTM D 2321 and ASTM F 1668.
9. Install reinforced-concrete sewer piping in accordance with ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."

### 3.5 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping in accordance with the following:
  1. Join corrugated-steel sewer piping in accordance with ASTM A 798/A 798M.
  2. Join corrugated-aluminum sewer piping in accordance with ASTM B 788/B 788M.
  3. Join PVC cellular-core piping in accordance with ASTM D 2321 and ASTM F 891 for solvent-cemented joints.
  4. Join PVC corrugated sewer piping in accordance with ASTM D 2321 for elastomeric-seal joints.
  5. Join PVC sewer piping in accordance with ASTM D 2321 and ASTM D 3034 for elastomeric-seal joints or ASTM D 3034 for elastomeric-gasketed joints.
  6. Join PVC profile gravity sewer piping in accordance with ASTM D 2321 for elastomeric-seal joints or ASTM F 794 for gasketed joints.
  7. Join reinforced-concrete sewer piping in accordance with ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
  8. Join dissimilar pipe materials with nonpressure-type flexible couplings.
- B. Join force-main pressure piping in accordance with the following:
  1. Join PVC pressure piping in accordance with AWWA M23 for gasketed joints.
  2. Join PVC water-service piping in accordance with ASTM D 2855 for solvent-cemented joints.
  3. Join dissimilar pipe materials with pressure-type couplings.

### 3.6 DRAIN INSTALLATION

- A. Install type of drains in locations indicated.
  1. Use Light-Duty, top-loading classification drains in earth or unpaved foot-traffic areas.
  2. Use Medium-Duty, top-loading classification drains in paved foot-traffic areas.
  3. Use Heavy-Duty, top-loading classification drains in vehicle-traffic service areas.
  4. Use Extra-Heavy-Duty, top-loading classification drains in roads.
- B. Embed drains in 4-inch- minimum concrete around bottom and sides.
- C. Fasten grates to drains if indicated.
- D. Set drain frames and covers with tops flush with pavement surface.
- E. Assemble trench sections with flanged joints.
- F. Embed trench sections in 4- inch- minimum concrete around bottom and sides.

### 3.7 MANHOLE INSTALLATION

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections with sealants in accordance with ASTM C 891.
- C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.
- D. Set tops of frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches above finished surface elsewhere unless otherwise indicated.

### 3.8 CATCH BASIN INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames and grates to elevations indicated.

### 3.9 STORMWATER INLET AND OUTLET INSTALLATION

- A. Construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
- B. Construct riprap of broken stone, as indicated.
- C. Install outlets that spill onto grade, anchored with concrete, where indicated.
- D. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.
- E. Construct energy dissipaters at outlets, as indicated.

### 3.10 DRY WELL INSTALLATION

- A. Excavate hole to diameter of at least 6 inches greater than outside of dry well. Do not extend excavation into ground-water table.
- B. Install precast, concrete-ring dry wells in accordance with the following:

1. Assemble rings to depth indicated.
2. Extend rings to height where top of cover will be approximately 8 inches below finished grade.
3. Backfill bottom of inside of rings with filtering material to level at least 12 inches above bottom.
4. Extend effluent inlet pipe 12 inches into rings and terminate into side of tee fitting.
5. Backfill around outside of rings with filtering material to top level of rings.
6. Install cover over top of rings.
- C. Install manufactured, PE dry wells in accordance with manufacturer's written instructions and the following:
  1. Assemble and install panels and cover.
  2. Backfill bottom of inside of unit with filtering material to level at least 12 inches above bottom.
  3. Extend effluent inlet pipe 12 inches into unit and terminate into side of tee fitting.
  4. Install filter fabric around outside of unit.
  5. Install filtering material around outside of unit.
- D. Install constructed-in-place dry wells in accordance with the following:
  1. Install brick lining material dry and laid flat, with staggered joints for seepage. Build to diameter and depth indicated.
  2. Install block lining material dry, with staggered joints and 20 percent minimum of blocks on side for seepage. Install precast concrete rings with notches or weep holes for seepage. Build to diameter and depth indicated.
  3. Extend lining material to height where top of manhole will be approximately 8 inches below finished grade.
  4. Backfill bottom of inside of lining with filtering material to level at least 12 inches above bottom.
  5. Extend effluent inlet pipe 12 inches into lining and terminate into side of tee fitting.
  6. Backfill around outside of lining with filtering material to top level of lining.
  7. Install manhole over top of dry well. Support cover on undisturbed soil. Do not support cover on lining.

### 3.11 CONCRETE PLACEMENT

- A. Place cast-in-place concrete in accordance with ACI 318.

### 3.12 CHANNEL DRAINAGE SYSTEM INSTALLATION

- A. Install with top surfaces of components, except piping, flush with finished surface.
- B. Assemble channel sections to form slope down toward drain outlets. Use sealants, adhesives, fasteners, and other materials recommended by system manufacturer.
- C. Embed channel sections and drainage specialties in 4-inch- minimum concrete around bottom and sides.
- D. Fasten grates to channel sections if indicated.
- E. Assemble channel sections with flanged or interlocking joints.
- F. Embed channel sections in 4-inch - minimum concrete around bottom and sides.

### 3.13 STORMWATER DISPOSAL SYSTEM INSTALLATION

- A. Chamber Systems: Excavate trenches of width and depth, and install system and backfill in accordance with chamber manufacturer's written instructions. Include storage and leaching chambers, filtering material, and filter mat.
- B. Piping Systems: Excavate trenches of width and depth, and install piping system, filter fabric, and backfill, in accordance with piping manufacturer's written instructions.

### 3.14 CONNECTIONS

- A. Connect nonpressure, gravity-flow drainage piping in building's storm building drains specified in Section 221413 "Facility Storm Drainage Piping."
- B. Connect force-main piping to building's storm drainage force mains specified in Section 221413 "Facility Storm Drainage Piping." Terminate piping where indicated.
- C. Make connections to existing piping and underground manholes.
  1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye

- fitting, plus 6-inch overlap, with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.
- 2. Make branch connections from side into existing piping, NPS 4 to NPS 20. Remove section of existing pipe, install wye fitting into existing piping, and encase entire wye with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.
- 3. Make branch connections from side into existing piping, NPS 21 or larger, or to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.
  - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.
  - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
- 4. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.
- D. Connect to sediment interceptors specified in Section 221323 "Sanitary Waste Interceptors."
- E. Pipe couplings, expansion joints, and deflection fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.
  - 1. Use nonpressure-type flexible couplings where required to join gravity-flow, nonpressure sewer piping unless otherwise indicated.
    - a. Unshielded flexible couplings for same or minor difference OD pipes.
    - b. Unshielded, increaser/reducer-pattern, flexible couplings for pipes with different OD.
    - c. Ring-type flexible couplings for piping of different sizes where annular space between smaller piping's OD and larger piping's ID permits installation.
  - 2. Use pressure-type pipe couplings for force-main joints.

### 3.15 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
  - 1. Close open ends of piping with at least 8-inch- thick, brick masonry bulkheads.
  - 2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.
- B. Abandoned Manholes and Structures: Excavate around manholes and structures as required and use one procedure below:
  - 1. Remove manhole or structure and close open ends of remaining piping.
  - 2. Remove top of manhole or structure down to at least 36 inches below final grade. Fill to within 12 inches of top with stone, rubble, gravel, or compacted dirt. Fill to top with concrete.
- C. Backfill to grade in accordance with Section 312000 "Earth Moving."

### 3.16 IDENTIFICATION

- A. Materials and their installation are specified in Section 312000 "Earth Moving." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
  - 1. Use warning tape or detectable warning tape over ferrous piping.
  - 2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

### 3.17 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
  - 1. Submit separate reports for each system inspection.
  - 2. Defects requiring correction include the following:

- a. Alignment: Less than full diameter of inside of pipe is visible between structures.
  - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
  - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
  - d. Infiltration: Water leakage into piping.
  - e. Exfiltration: Water leakage from or around piping.
- 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
- 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
  - 1. Do not enclose, cover, or put into service before inspection and approval.
  - 2. Test completed piping systems in accordance with requirements of authorities having jurisdiction.
  - 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
  - 4. Submit separate report for each test.
  - 5. Gravity-Flow Storm Drainage Piping: Test in accordance with requirements of authorities having jurisdiction, UNI-B-6, and the following:
    - a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
    - b. Option: Test plastic piping in accordance with ASTM F 1417.
  - 6. Force-Main Storm Drainage Piping: Perform hydrostatic test after thrust blocks, supports, and anchors have hardened. Test at pressure not less than 1-1/2 times the maximum system operating pressure, but not less than 150 psig (kPa).
    - a. Ductile-Iron Piping: Test in accordance with AWWA C600, "Hydraulic Testing" Section.
    - b. PVC Piping: Test in accordance with AWWA M23, "Testing and Maintenance" Chapter.
- C. Leaks and loss in test pressure constitute defects that must be repaired.
- D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

### 3.18 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with water.

**END OF SECTION 33 42 00**