

COUNTY OF GALVESTON SPECIFICATIONS AND CONTRACT DOCUMENTS

PAUL HOPKINS PARK PEDESTRIAN BRIDGE Bid # B191052

HUITT-ZOLIARS

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GALVESTON COUNTY PURCHASING DEPARTMENT



INVITATION TO BID

BID #B191052

PAUL HOPKINS PARK PEDESTRIAN BRIDGE

BID DUE DATE: 07/25/2019

2:00 P.M. CST

Rufus Crowder, CPPO, CPPB
Purchasing Agent
Galveston County
722 Moody (21st Street)
Fifth (5th) Floor
Galveston, Texas 77550
(409) 770-5372



INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

Sealed bids in sets of four (4), one (1) unbound original and three (3) copies will be received in the office of the County Purchasing Agent until 2:00 P.M. CST, on Thursday, July 25, 2019 and opened immediately in that office in the presence of the Galveston County Auditor and the Purchasing Agent. Sealed bids are to be delivered to Rufus G. Crowder, CPPO CPPB, Galveston County Purchasing Agent at the Galveston County Courthouse, 722 Moody (21st Street), Floor 5, Purchasing, Galveston, Texas 77550, (409) 770-5372. The time stamp clock located in the Purchasing Agent's office shall serve as the official time keeping piece for this solicitation process. Any bids received after 2:00 P.M. CST on the specified date will be returned unopened.

Purpose:

Galveston County is seeking a vendor to construct and install a metal bridge at Paul Hopkins Park and demolish the current wooden bridge.

All bids must be marked on the outside of the envelope:

BID #B191052, Paul Hopkins Park Pedestrian Bridge

Bids name and return address, should be prominently displayed on the bid package for identification purposes.

Bid Specifications can be obtained at the office of the Galveston County Purchasing Agent, located in the Galveston County Courthouse, 722 Moody, (21st Street), Floor 5, Purchasing, Galveston, Texas 77550, or by visiting the Galveston County website @ http://www.galvestoncountytx.gov/pu/Pages/BidListing.aspx

Bid prices shall be either lump sum or unit prices as shown on the bid sheet, if applicable. The net price will be delivered to Galveston County, including all freight, shipping, and license fees. Galveston County is tax exempt and no taxes should be included in your proposal pricing.

Upon satisfaction of contractual terms (e.g., goods delivered in promised condition, services rendered as agreed, etc.), contractor shall be paid via Galveston County's normal accounts payable process.

Bonding Requirements:

• **PROPOSAL GUARANTEE:** Evidencing its firm commitment to engage in the contract if Proposer is selected for award of contract, each Proposer is required to furnish with their proposal a Cashier's Check, or an acceptable Bidder's Bond, in the amount of five percent (5%) of the total contract price. The Bidder's Bond must be executed with a surety company authorized to do business in the State of Texas. Failure to furnish the bid/proposal guarantee in the proper form and amount, by the time set for opening of bids may be cause or rejection of the proposal.

• PERFORMANCE AND PAYMENT BONDS:

Successful proposer, before beginning work, shall execute a performance bond and a payment bond, each of which must be in the amount of the contract. The required payment and performance bonds must each be executed by a corporate surety in accordance with Section 1, Chapter 87, Acts of the 56th Legislature, Regular Session, 1959 (Article 7.19-1, Vernon's Texas Insurance Code).

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

The Galveston County Commissioners' Court reserves the right to waive any informality and to reject any and all bids and to accept the bid or bids which, in its opinion, is most advantageous to Galveston County with total respect the governing laws.

All contractors/subcontractors that are debarred, suspended or otherwise excluded from or ineligible for participation on federal assistance programs may not undertake any activity in part or in full under this project

Rufus G. Crowder, CPPO CPPB Purchasing Agent Galveston County

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GENERAL PROVISIONS – INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

1. BID PACKAGE

The Invitation to Bid, general and special provisions, drawings, specifications/line item details, contract documents and the Bid sheet are all part of the Bid package. BIDs must be submitted in sets of four (4), one (1) original and three (3) copies on the forms provided by the County if County forms are provided, including the Bid sheets completed in their entirety and signed by an authorized representative by original signature. Failure to complete and sign the Bid sheets/contract page(s) may disqualify the Bid from being considered by the Commissioners' Court. Any individual signing on behalf of the Bidder expressly affirms that he or she is duly authorized to tender this Bid and to sign the Bid sheet/contract under the terms and conditions in this bid on behalf of the Bidder and to bind the Bidder to the terms and conditions of this bid and the Bidder's response hereto. Bidder further understands that its' signing of the contract shall be of no effect unless the contract is subsequently awarded by the Commissioners' Court and the contract properly executed by the Commissioners' Court. All figures must be written in ink or typed. Figures written in pencil or with erasures are not acceptable. However, mistakes may be crossed out, corrections inserted, and initialed in ink by the individual signing the bid. If there are discrepancies between unit prices quoted and extensions, the unit price shall prevail. Each Bidder is required to thoroughly review this entire Bid package to familiarize themselves with the Bid procedures, the plans and specifications for the requested work, as well as the terms and conditions of the contract the successful Bidder will execute with the County.

2. BIDDER'S RESPONSIBILITY

The Bidder must affirmatively demonstrate its responsibility. The Bidder must also meet the following minimum requirements:

- A. have adequate financial resources or the ability to obtain such resources as required;
- B. be able to comply with all federal, state, and local laws, rules, regulations, ordinances and orders regarding this Invitation to Bid;
- C. have a satisfactory record of performance;
- D. have a satisfactory record of integrity and ethics; and
- E. be otherwise qualified and eligible to receive an award.

3. TIME FOR RECEIVING BIDS

Bids may be submitted by mail or hand delivery and **must be submitted only to the Galveston County Purchasing Agent**. If by delivery, the Bidder must deliver to the reception desk in the County Purchasing Agent's Office. The delivery and mailing instructions for the Galveston Count Purchasing Agent are the following:

Rufus Crowder, CPPO CPPB Galveston County Purchasing Agent 722 Moody, Fifth (5th) Floor Galveston, Texas 77550

Bids will **not** be accepted by facsimile transmission or by electronic mail (email) unless superseded by instructions within the Special Provisions sections of this solicitation. Bids must be received by the County Purchasing Agent on or before the deadline for the opening of the bids. For clarity, mailing date/postmark is **not** sufficient – bids **must be received** by the County Purchasing Agent on or before the deadline. Late bids will not be accepted and will be returned to the bidder unopened. Bids received prior to the submission deadline will be maintained unopened until the specified time for opening.

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The County Purchasing Agent will accept bids from 8:00 a.m. to 5:00 p.m. on each business day up to the submission deadline. Business days do not include Saturdays and Sundays, and do not include other days in which the County is closed for business in observance of holidays or for other reasons.

The time-stamp clock within the County Purchasing Agent's Office shall be the official time-clock for the purpose of this solicitation and thus shall be the determinant of whether the bid was timely received.

The bidder should prominently identify the procurement number and name on the outside of the envelope/mailing package. A label shall be provided for this purpose and usage of the label is preferred. If the bidder fails to identify the bid on the outside of the envelope as required, the Purchasing Agent will open the envelope for the sole purpose of identifying the bid number for which the submission was made. The envelope will then be resealed. No liability will attach to a County office or employee for the premature opening of a bid.

If a bid is not submitted, return this Invitation to Bid and state reason (s), otherwise your name may be removed from the Purchasing Agent's mailing list.

4. COMPETITIVENESS, INTEGRITY, INQUIRIES AND QUESTIONS

To prevent biased evaluations and to preserve the competitiveness and integrity of the procurement process, bidders are to direct all communications regarding this invitation to bid only to the Galveston County Purchasing Agent, unless otherwise specifically noted.

Do not contact the requesting department. Attempts by offering firms to circumvent this requirement will be viewed negatively and may result in rejection of the bid of the firm found to be in non-compliance.

All questions regarding this Invitation to Bid must be submitted in writing to:

Rufus Crowder, CPPO CPPB, Purchasing Agent 722 Moody Fifth (5th) Floor Galveston, Texas 77550 Fax: (409) 621-7997

E-mail: purchasing.bids@co.galveston.tx.us

All questions received and the responses thereto will be mailed, emailed, or faxed to all prospective bidders by addendum. No inquiries except clarification of instructions will be addressed by telephone.

Bidder is advised to carefully review this Invitation to Bid – it provides specific information necessary to aid participating firms in formulating a thorough response. Bidder's failure to examine all documents shall not entitle the bidder to any relief from the conditions imposing in the Invitation to Bid and the resultant contract.

An authorized person from the bidder must sign the bid. This signatory must be a person from the submitting firm who is duly authorized to tender and sign the bid on behalf of the bidder and to bind the bidder to the terms and conditions of this Invitation to Bid, the bidder's response, and all other terms and conditions of the contract. By this signature, the bidder further acknowledges that the bidder has read the bid documents thoroughly before submitting a bid and will fulfill the obligations in accordance to the terms, conditions, and specifications detailed herein.

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5. BID OPENING

The Purchasing Agent shall open the bids on the date and time specified herein. Information read aloud at the bid opening is at the sole discretion of the Purchasing Agent. The Purchasing Agent will examine bids promptly and thoroughly.

6. WITHDRAWAL OF BID/FIRM BID RULE

Bidders may request withdrawal of their sealed bid prior to the scheduled bid opening time provided the request for withdrawal is submitted to the Purchasing Agent in writing. No bids may be withdrawn for a period of sixty (60) calendar days after opening of the bids.

7. COMMISSIONERS COURT

No contract is binding on the County until it is properly placed on the Commissioners Court agenda, approved in open Court, authorized to be executed by the County Judge, and fully executed by both parties.

Department heads and elected officials are not authorized to enter into any type of agreement or contract on behalf of the County. Only the Commissioners Court acting as a body may enter into a contract on behalf of and contractually bind the County. Additionally, department heads and elected officials are not authorized to agree to any type of supplemental agreements or contracts for goods or services. Supplemental agreements are subject to review by the County Legal Department prior to being accepted and signed by the County's authorized representative.

8. REJECTION OF BIDS/DISQUALIFICATION

Galveston County, acting through its Commissioners Court, reserves the right to:

- reject any and all Bids in whole or in part received by reason of this Invitation to Bid;
- waive any informality in the Bids received;
- disregard the Bid of any Bidder determined to be not responsible;
- disregard the Bid of any Bidder determined to have not submitted its Bid timely; and/or;
- discontinue its efforts for any reason under this Bid package at any time prior to actual execution of contract by the County.

Bidders may be disqualified and rejection of Bids may be recommended to the Commissioners Court for any of (but not limited to) the following causes:

- A. Failure to use the bid forms furnished by the County, if applicable;
- B. Lack of signature by an authorized representative of bidder;
- C. Failure to properly complete the bid;
- D. Engaging in communications regarding this procurement during the pendency of this procurement with County officials and/or personnel who are not within the Purchasing Agent's Office;
- E. Failure to meet the mandatory requirements of this invitation to bid; and/or
- F. Evidence of collusion among bidders.

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9. RESTRICTIVE OR AMBIGUOUS SPECIFICATIONS

It is the responsibility of the prospective Bidder to review the entire Invitation to Bid packet and to notify the Purchasing Agent if the specifications are formulated in a manner that would restrict competition or appear ambiguous. Any protest or question(s) regarding the specifications or Bid procedures must be received in the Purchasing Agent's Office not less than seventy-two (72) hours prior to the time set for Bid opening. Bidders are to submit their Bid as specified herein or propose an approved equal.

10. SUBSTITUTES/DESCRIPTION OF MATERIALS AND EQUIPMENT

Any brand name or manufacturer reference used herein is intended to be descriptive and not restrictive, unless otherwise noted, and is used to indicate the type and quality of material. The term "or equal" if used, identifies commercially produced items that have the essential performance and salient characteristics of the brand name stated in the item description. All supplies, material, or equipment shall be new and of the most suitable grade for the purpose intended. For clarification, "new" includes products containing recovered materials that are EPA-designated items and additionally see Section 63 of these General Provisions on contracts involving federal funds. It is not the County's intent to discriminate against any materials or equipment of equal merit to those specified. However, if Bidder desires to use any substitutions, prior written approval must be obtained from the Purchasing Agent and sufficiently in advance such that an addendum may be issued. All material supplied must be one hundred percent (100%) asbestos free. Bidder, by submission of its bid, certifies that if awarded any portion of this procurement, the bidder will supply only material and equipment that is 100% asbestos free.

11. EXCEPTIONS TO BID

The Bidder will list on a separate sheet of paper any exceptions to the conditions of the bid. This sheet will be labeled, "Exceptions to Bid Conditions", and will be attached to the bid. If no exceptions are stated, it will be understood that all general and special conditions will be complied with, without exception.

The Bidder must specify in its Bid any alternatives it wishes to propose for consideration by the County. Each alternative should be sufficiently described and labeled within the Bid and should indicate its possible or actual advantage to the program being offered.

The County reserves the right to offer these alternatives to other Bidders.

12. PRICING

Bids will be either lump sum or unit prices as shown on the Bid sheet. The net priced items will be delivered to Galveston County, including all freight, shipping, and delivery charges.

Cash discount must be shown on bid, otherwise prices will be considered net. Unless prices and all information requested are complete, Bid may be disregarded and given no consideration.

In case of default by the contractor, the County of Galveston may procure the articles or services from other sources and may deduct from any monies due, or that may thereafter become due to the contractor, the difference between the price named in the contract of purchase order and the actual cost thereof to the County of Galveston. Prices paid by the County of Galveston shall be considered the prevailing market price at the time such purchase is made. Periods of performance may be extended if the facts as to the cause of delay justify such extension in the opinion of the Purchasing Agent and the Commissioners' Court.

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13. PROCUREMENT CARD (P-CARD) PROGRAM

The County of Galveston participates in a Procurement Card (P-Card) program that allows payments made to a vendor by credit card. This method typically results in substantially faster bill payments, sometimes within three (3) to five (5) days of the actual transaction date. All transaction fees from the card provider are to be paid by the successful contractor. If your company will accept payment via credit card (Visa, MasterCard), please notate this in your Bid submittal.

14. PASS THROUGH COST ADJUSTMENTS

Except in instances of extreme extenuating circumstances Contractor prices shall remain firm throughout the contract period and any renewals. Examples of extreme extenuating circumstances include such situations as a nationwide rail strike, oil shortage or oil embargo.

In extreme extenuating circumstances, Contractors may be allowed to temporarily "pass through" additional costs they are forced to incur through no fault of their own. A request for a pass through cost increase will not be considered unless a Contractor's cost for the Contractor's product exceeds 10% over the original cost for the product. Also, the increase in cost must be nationwide and consistent for a minimum period of sixty (60) days. Costs that historically are anticipated to rise over a period of time (for example only, such as wages or insurance costs) do not qualify for pass through. If a Contractor thinks he will be asking for a pass through cost adjustment during the term of the contract, then the original cost of the product to Contractor must be stated in Contractor's original bid.

A request for a pass through cost does not guarantee that one will be granted. Contractors must submit such information on each request as required by the County Purchasing Agent. The County Purchasing Agent will review each request on a case-by-case basis and if valid, submit the request to Commissioners Court for authorization and determination of the appropriateness of each request as well as amount and duration of increase. Contractors will not be permitted any additional compensation for mark-ups or profits based on the increase in price. Rather, such additional compensation will be limited to the actual increase in original cost to the Contractor as such increase is reflected by the original cost stated in the bid. But in no event will the amount of additional compensation exceed 25% increase in Contractor's original cost for the product as such cost is reflected in Contractor's original Bid or the duration exceed a period of sixty (60) days. In addition should the cost, during the period of the pass through, return to normal or decrease to below pre pass through prices, appropriate downward adjustments shall be made. No more than one pass through adjustment will be permitted per year.

15. MODIFICATION OF BIDS

A Bidder may modify a bid by letter at any time prior to the submission deadline for receipt of Bids. Modification requests must be received prior to the submission deadline. Modifications made before opening time must be initialed by Bidder guaranteeing authenticity. Bids may not be amended or altered after the official opening with the single exception that any product literature and/or supporting data required by the actual specifications, if any, will be accepted at any time prior to the Commissioners' Court considering of same.

16. PRE-BID CONFERENCE

A pre-bid conference for the purpose of discussing contract requirements and answering questions of prospective bidders may be conducted in this procurement. A pre-bid conference may be mandatory or voluntary. If the pre-bid conference is mandatory, then the County is authorized to condition acceptance of a bid on compliance with attendance. The Special Provisions of this procurement shall specify if a pre-bid conference is to be held and shall specify whether the pre-bid conference is mandatory or voluntary. Only a principal, officer, or employee of the bidder

GENERAL PROVISIONS – INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

may represent the bidder at the pre-bid conference and no person may represent more than one bidder at the pre-bid conference.

17. SIGNATURE OF BIDS

Each Bid shall give the complete mailing address of the Bidder and be signed by an authorized representative by original signature with the authorized representative's name and legal title typed below the signature line. Each bid shall include the Bidder's Federal Employer Identification Number (FEIN). Failure to sign the Contract page(s) and bid response sheets may disqualify the bid from being considered by the County. The person signing on behalf of the Bidder expressly affirms that the person is duly authorized to tender the bid and to sign the bid sheets and contract under the terms and conditions of this Invitation to Bid and to bind the Bidder thereto and further understands that the signing of the contract shall be of no effect until it is properly placed on the Commissioners' Court agenda, approved in open Court, authorized to be executed by the County Judge, and fully executed by both parties.

18. AWARD OF BIDS – EVALUATION CRITERIA AND FACTORS

The award will be made to the responsible Bidder whose bid is determined to be the lowest and best evaluated offer demonstrating the best ability to fulfill the requirements set forth in this Invitation to Bid. The proposed cost to the County will be considered firm and cannot be altered after the submission deadline.

"Lowest and best" means a bid or offer providing the best value considering associated direct and indirect costs, including transport, maintenance, reliability, life cycle, warranties, and customer service after a sale.

In determining the lowest and best bid for a contract for the purchase of earth-moving, material-handling, road maintenance, or construction equipment, the Commissioners Court may also consider the information submitted under Section 262.0255 of the Local Government Code; and in determining the lowest and best bid for a contract for the purchase of road construction material, the Commissioners Court may consider the pickup and delivery locations of the bidders and the cost to the county of delivering or hauling the material to be purchased. The Commissioners Court may award contracts for the purchase of road construction material to more than one bidder if each of the selected bidders submits the lowest and best bid for a particular location or type of material.

Each Bidder, by submitting a bid, agrees that if its' bid is accepted by the Commissioners' Court, such Bidder will furnish all items and services upon which prices have been tendered and upon the terms and conditions in this bid and contract.

The contractor shall commence work only after the transmittal of a fully executed contract and after receiving written notification to proceed from the County Purchasing Agent. The contractor will perform all services indicated in the bid in compliance with this contract.

Neither department heads nor elected officials are authorized to sign any binding contracts or agreements prior to being properly placed on the Commissioners' Court agenda and approved in open court. Department heads and other elected officials are not authorized to enter into any type of agreement or contract on behalf of Galveston County. Only the Commissioners' Court, acting as a body, may enter into a contract on behalf of the County. Additionally, department heads and other elected officials are not authorized to agree to any type of supplemental agreements or contracts for goods or services. Supplemental agreements are subject to review by the County Legal Department prior to being signed by the County's authorized representatives.

The County of Galveston reserves the right to accept bids on individual items listed, or group items, or on the bid as a whole; to reject any and all bids; to waive any informality in the bids; to disregard the bids that are not submitted timely; to disregard the bids of bidders determined to be not responsible; and to accept the bid that appears to be in the

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best interest of the County. The selection process may, however, include a request for additional information or an oral presentation to support the written bid.

In determining and evaluating the best bid, the pricing may not necessarily be controlling, but quality, equality, efficiency, utility, general terms, delivery, suitability of the service offered, and the reputation of the service in general use will also be considered along with any other relevant items. The Commissioners' Court shall be the sole judge in the determination of these matters.

The County reserves the right to reject any or all Bids in whole or in part received by reason of this Invitation to Bid and may discontinue its efforts under this Invitation to Bid for any reason or no reason or solely for the County's convenience at any time prior to actual execution of the contract by the County.

A Bidder whose bid does not meet the mandatory requirements set forth in this Invitation to Bid may be considered non-compliant.

The invitation to submit a bid which appears in the newspaper, or other authorized advertising mediums, these general provisions, the specifications which follow, the Bid sheets, and any addenda issued are all considered part of the Bid.

Each Bidder, by submitting a bid, agrees that if its bid is accepted by the Commissioners' Court, such Bidder will furnish all items and services upon the terms and conditions in this Invitation to Bid and the resultant contract.

Notice of contract award is anticipated to be made within ninety (90) days of opening of Bids to the lowest responsive and responsible contractor, whose bid complies with all the requirements in the Invitation to Bid.

Contractor shall submit to the County, for approval, within ten (10) days from notice of contract award, all Certificates of Insurance evidencing the required coverage as described under Section 35, Requirement of and Proof of Insurance, or if different, then as described within the Special Provisions or resultant contract.

The contractor shall not commence work under these terms and conditions of the contract until all applicable Purchase Orders, Certificates of Insurance, Performance and Payment Bonds, and Irrevocable Letters of Credit (if required) have been approved by the County of Galveston and the Contractor has received notice to proceed in writing and an executed copy of the contract from the County Purchasing Agent.

19. DISPUTE AFTER AWARD/PROTEST

Any actual or prospective Bidder who is allegedly aggrieved in connection with the solicitation of this Invitation to Bid or award of a contract resulting therefrom may protest. The protest shall be submitted in writing to the Purchasing Agent within seven (7) calendar days after such aggrieved person knows of or should have known of the facts giving rise thereto. If the protest is not resolved by mutual agreement, the Purchasing Agent will promptly issue a decision in writing to the protestant. If the protestant wishes to appeal the decision rendered by the Purchasing Agent, such appeal must be made to the Commissioners' Court through the Purchasing Agent. The decision of the Commissioners' Court will be final. The Commissioners' Court need not consider protests unless this procedure is followed.

20. PUBLIC INFORMATION ACT (f/k/a Open Records Act)

The bidder acknowledges that the County is a government body for purposes of the Public Information Act, codified as Chapter 552 of the Texas Government Code, and as such is required to release information in accordance with the provisions of the Public Information Act.

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If bidder considers any of its submitted information to be proprietary in nature, trade secret, or otherwise confidential, then it must clearly and conspicuously mark such information as proprietary, trade, secret, or confidential. By the submission of its bid, Bidder expressly affirms that it has clearly and conspicuously marked any information within its submission that Bidder considers confidential, proprietary, and/or trade secret.

In the event the County receives a request for information under the Public Information Act seeking information that the Bidder has marked as confidential, proprietary, and /or trade secret, then the County agrees that it shall provide notice to the Bidder of the request for information and the request for decision process under the Public Information Act. Thus, the County will submit the initial correspondence to the Texas Attorney General – however, the burden is and shall be on the Bidder to submit correspondence to the Attorney General if the Bidder wishes its information to be withheld. Bidder is deemed to have knowledge of the Public Information Act. By the submission of its bid, bidder expressly acknowledges that the burden to withhold its' information from public disclosure lays with the bidder; thus, bidder further acknowledges and agrees that it shall submit comments to the Texas Attorney General in the request for decision process if bidder wishes to have its' information withheld from public disclosure.

21. BIDDER'S E-MAIL ADDRESSES - CONSENT TO DISCLOSURE

Notwithstanding the foregoing Section 19, Bidder acknowledges and agrees that the confidentiality of any and all email addresses Bidder uses or discloses in communicating with the County are **open** to the public in accordance with Section 552.137 of the Government Code and Bidder consents to the release of its email addresses.

22. RESULTANT CONTRACT

Bidder shall correctly and fully execute the resultant contract first. After this, the contract shall be set for consideration by the Commissioners' Court. If the Commissioners' Court authorizes the execution of the contract, the resultant contract shall become effective upon the Commissioners' Court execution of same, provided that the contract is executed by all parties to the contract. Contract documents shall consist of the contract, the General and Special Provisions, drawings, bid package (including best and final offer(s) if such is utilized), any addenda issued, and any change orders issued during the work. If applicable to the attached bid, bidder must sign three (3) original contracts and return all three with their bid submittal.

Bidder should submit a proposed contract with its Bid or its sample material terms and conditions for review and consideration.

23. CONTRACT TERM

The term of the resultant contract will begin on the date of full execution or the execution by the Commissioners' Court, whichever is later, and will terminate on the date specified in the resultant contract unless terminated earlier as herein set forth.

24. TERMINATION FOR DEFAULT

Failure of either party in the performance of any of the provisions of this contract shall constitute a breach of contract, in which case either party may require corrective action within ten (10) business days from date of receipt of written notice citing the exact nature of such breach. Failure of the party being notified to take corrective action within the

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prescribed ten (10) business days, or failure to provide written reply of why no breach has occurred, shall constitute a Default of Contract.

All notices relating to default by Bidder of the provisions of the contract shall be issued by the County through its Legal Department, and all replies shall be made in writing to the County Legal Department. Notices issued by or issued to anyone other than the County Legal Department shall be null and void and shall be considered as not having been issued or received.

Galveston County reserves the right to enforce the performance of this contract in any manner prescribed by law in the event of breach or default of this contract, and may contract with another party, with or without solicitation of bids or further negotiations. At a minimum, Bidder shall be required to pay any difference in service or materials, should it become necessary to contract with another source, plus reasonable administrative costs and attorney fees.

In the event of Termination for Default, Galveston County, its agents or representatives shall not be liable for loss of any profits anticipated to be made by Bidder.

In addition to the remedies stated herein, the County has the right to pursue other remedies permitted by law or in equity.

No waiver by either party of any event of default under this agreement shall operate as a waiver of any subsequent default under the terms of this agreement.

County reserves the right to terminate this contract immediately in the event Bidder:

- A. Fails to meet delivery or completion schedules; and/or
- B. Fails to otherwise perform in accordance with the accepted Bid and the contract.

25. TERMINATION FOR CONVENIENCE

County may terminate this contract upon at least thirty (30) calendar days prior written notice for its convenience or for any reason deemed by the County to serve the public interest. As well, County may terminate this contract upon thirty (30) calendar days prior written notice for any reason resulting from any governmental law, order, ordinance, regulation, or court order. In no event shall County be liable for loss of any profits anticipated to be made hereunder by Bidder should this contract be terminated early.

26. FORCE MAJEURE

If by reason of Force Majeure either Party shall be rendered unable, wholly or in part, to carry out its responsibilities under this contract by any occurrence by reason of Force Majeure, then the Party unable to carry out its responsibility shall give the other Party notice and full particulars of such Force Majeure in writing within a reasonable time after the occurrence of the event, and such notice shall suspend the Party's responsibility for the continuance of the Force Majeure claimed, but for no longer period.

Force Majeure means acts of God, floods, hurricanes, tropical storms, tornadoes, earthquakes, or other natural disasters, acts of a public enemy, acts of terrorism, sovereign conduct, riots, civil commotion, strikes or lockouts, and other causes that are not occasioned by either Party's conduct which by the exercise of due diligence the Party is unable to overcome and which substantially interferes with operations.

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27. ESTIMATED QUANTITIES

Any reference to quantities shown in the Invitation to Bid is an estimate only. Since the exact quantities cannot be predetermined, the County reserves the right to adjust quantities as deemed necessary to meet its requirements.

28. CONTRACTOR INVESTIGATION

Before submitting a bid, each Bidder shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the County upon which the contractor will rely. Bidder shall exercise due diligence and is further charged with knowledge of the local, State, and Federal laws, rules, and regulations applicable to this contract. If the bidder receives an award as a result of its bid submission in this procurement, the bidder's failure to have made such investigations and examinations will in no way relieve the bidder from its obligation to comply in every detail with all provisions and requirements of the contract, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the contractor for additional compensation and/or for excused nonperformance.

29. NO COMMITMENT BY COUNTY OF GALVESTON

This Invitation to Bid does not commit the County of Galveston to award any costs or pay any costs, or to award any contract, or to pay any costs associated with or incurred in the preparation of a bid in response to this Invitation to Bid and does not commit the County of Galveston to procure or contract for services or supplies.

30. BID COSTS BORNE BY BIDDER

Galveston County shall not be liable for any costs incurred by Bidder in preparation, production, or submission of a bid, including but not limited to best and final offer if applicable. As well, Galveston County shall not be liable for any work performed by Bidder prior to issuance of fully executed contract and properly issued notice to proceed. Galveston County shall not be liable for any costs incurred by Bidder by reason of attending a pre-Bid conference. Galveston County shall not be liable for any costs incurred by Bidder by reason of the County invoking use of best and final offers.

31. BEST AND FINAL OFFIERS (BAFO)

Not applicable.

32. SINGLE BID RESPONSE

If only one bid is received in response to the Invitation to Bid, a detailed cost bid may be requested of the single bidder. A cost/price analysis and evaluation and/or audit may be performed of the cost bid in order to determine if the price is fair and reasonable.

33. CHANGES IN SPECIFICATIONS

If it becomes necessary to revise any part of this bid, a written notice of such revision will be provided to all Bidders in the form of addenda. The County is not bound by any oral representations, clarifications, or changes made in the written specifications by the County's employees or officials, unless such clarification or change is provided to

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Bidders in a written addendum from the Purchasing Agent. Bidders are advised to inquire prior to the submission deadline as to whether any addenda to this invitation to bid have been issued, as the successful bidder will be required to abide by such addenda.

The County of Galveston reserves the right to revise or amend the specifications up to the time set for opening of bids. Such revisions and amendments, if any, shall be announced by form of addenda. Copies of such addenda (or addendum in the event only one addendum is issued in the procurement) shall be furnished to all prospective contractors. Prospective contractors are defined as those contractors listed on the County's Invitation to Bid list for this material/service or those who have obtained documents from the Purchasing Agent's Office subsequent to the advertisement. If revisions and amendments require changes in quantities or prices proposed, or both, the date set for opening of bids may be postponed by such number of days as in the opinion of the County shall enable contractors to revise their bids. In any case, the bid opening shall be at least seven (7) business days after the last revising or amendment addendum and the addendum shall include an announcement of the new date, if applicable, for the opening of bids.

34. BID IDEAS AND CONCEPTS

The County reserves to itself the right to adopt or use for its benefit, any concept, plan, or idea contained in any bid.

35. BID DISCLOSURES

While this procurement is pending, the names of those who submitted bids will not be made public unless in conformity with the County Purchasing Act. Likewise, no pricing or staffing information will be released unless in conformity with the County Purchasing Act. Bidders are requested to withhold all inquiries regarding their bid or other submissions until after an award is made. No communication is to be had with any County employee or official, other than the County Purchasing Agent, regarding whether a bid was received - violations of this provision may result in the rejection of a bid.

36. INDEMNIFICATION

The contractor agrees to assume all risks and responsibility for, and agrees to indemnify, defend, and save harmless, the County of Galveston, its elected and appointed officials and department heads, agents and employees from and against all claims, demands, suits, actions, recoveries, judgments, and costs and expenses including reasonable attorney's fees for the defense thereof arising out of or in connection therewith on account of the loss of life, property or injury or damage to the person which shall arise from contractor's operations under this contract, its use of County facilities and/or equipment or from any other breach on the part of the contractor, its employees, agents or any person(s), in or about the County's facilities with the expressed or implied consent of the County. Contractor shall pay any judgment with cost which may be obtained against Galveston County resulting from contractor's operations under this contract.

Contractor agrees to indemnify and hold the County harmless from all claims of subcontractors, laborers incurred in the performance of this contract. Contractor shall furnish satisfactory evidence that all obligations of this nature herein above designated have been paid, discharged or waived. If Contractor fails to do so, then the County reserves the right to pay unpaid bills of which County has written notice direct and withhold from Contractor's unpaid compensation a sum of money reasonably sufficient to liquidate any and all such lawful claims.

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37. REQUIREMENT OF AND PROOF OF INSURANCE

The successful Bidder shall furnish evidence of insurance to the County Purchasing Agent and shall maintain such insurance as required hereunder or as may be required in the Special Provisions or resultant contract, if different. Contractor shall obtain and thereafter continuously maintain in full force and effect, commercial general liability insurance, including but not limited to bodily injury, property damage, and contractual liability, with combined single limits as listed below or as may be required by State or Federal law, whichever is greater.

- A. For damages arising out of bodily injury to or death of one person in any one accident : ONE HUNDRED THOUSAND AND NO/100 (\$100,000.00) DOLLARS.
- B. For damages arising out of bodily injury to or death of two or more persons in any one accident: THREE HUNDRED THOUSAND AND NO/100 (\$300,000.00) DOLLARS.
- C. For any injury to or destruction of property in any one accident:
 ONE HUNDRED THOUSAND AND NO/100 (\$100,000,000) DOLLARS.

Insurance shall be placed with insurers having an A.M. Best's rating of no less than A. Such insurance must be issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from loss or damage that may arise to any person or property by reason of services rendered by Contractor.

Galveston County shall be listed as the additional insured on policy certificates and shall be provided with no less than thirty (30) calendar days prior notice of any changes to the policy during the contractual period.

Certificates of Insurance, fully executed by a licensed representative of the insurance company written or countersigned by an authorized Texas state agency, shall be filed with the County Purchasing Agent within ten (10) business days of issuance of notification from the County Purchasing Agent to Bidder that the contract is being activated as written proof of such insurance and further provided that Bidder shall not commence work under this contract until it has obtained all insurance required herein, provided written proof as required herein, and received written notice to proceed issued from the County Purchasing Agent.

Proof of renewal/replacement coverage shall be provided prior to the expiration, termination, or cancellation date of any policy and Galveston County shall be named as an additional insured on any such renewal/replacement coverage and a certificate of insurance showing such shall be provided to the Purchasing Agent. Said insurance shall not be cancelled, permitted to expire, or changed without at least thirty (30) days prior written notice to the County.

Insurance required herein shall be maintained in full force and effect during the life of this contract and shall be issued on an occurrence basis. Contractor shall require that any and all subcontractors that are not protected under the Contractor's own insurance policies take and maintain insurance of the same nature and in the same amounts as required of Contractor and provide written proof of such insurance to Contractor. Proof of renewed/replacement coverage shall be provided prior to the expiration, termination, or cancellation date of any policy. Contractor shall not allow any subcontractor to commence work on the subcontract until such insurance required for the subcontractor has been obtained and approved.

Workers' Compensation Insurance: Successful Bidder shall carry in full force Workers' Compensation Insurance Policy(ies), if there is more than one employee, for all its' employees, including but not limited to full time, part time, and emergency employees employed by the successful Bidder. Current insurance certificates certifying that such policies as specified above are in full force and effect shall be furnished by successful Bidder to the County.

Insurance is to be placed with insurers having a Best rating of no less than A. The Bidder shall furnish the County with certificates of insurance and original endorsements affecting coverage required by these insurance clauses within

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ten (10) business days of receiving notification from the County Purchasing Agent that the contract is being activated. The certificates and endorsements for each insurance policy are to be signed by a person authorized by the insurer to bind coverage on its behalf. The Bidder shall be required to submit annual renewals for the term of this contract prior to expiration of any policy.

In addition to the remedies stated herein, the County has the right to pursue other remedies permitted by law or in equity.

The County agrees to provide Bidder with reasonable and timely notice of any claim, demand, or cause of action made or brought against the County arising out of or related to utilization of the property. Bidder shall have the right to defend any such claim, demand, or cause of action at its sole cost and expense and within its sole and exclusive discretion. The County agrees not to compromise or settle any claim or cause of action arising out of or related to the utilization of the property without the prior written consent of the Bidder.

In no event shall the County be liable for any damage to or destruction of any property belonging to the Bidder.

Subrogation Waiver. Bidder and Bidder's insurance carrier waive any and all rights to subrogation against Galveston County in regard to any suit or claim arising out of personal injury or property damage resulting from Bidder's performance under this agreement.

38. BID GUARANTEE

Unless specified differently within the Special Provisions of this procurement, each Bidder shall be required to submit a bid guarantee with its bid as required within this Section.

Evidencing its firm commitment to engage in contract if Bidder is selected for award of contract, each Bidder is required to furnish with their bid a cashier's check or an acceptable Bidder's bond in the amount of five percent (5%) of the total contract price. If Bidder is using a bond, then the Bidder bond must be executed with a surety company authorized to do business in the State of Texas. Failure to furnish the bid guarantee in the proper form and amount, by the time set for opening of bids may be cause for rejection of the bid.

The cashier's check or Bidder/bid bond (as applicable) will be returned to each respective unsuccessful Bidder(s) subsequent to the Commissioners Court award of contract, and shall be returned to the successful Bidder upon the completion and submission of all contract documents. Provided however, that the cashier's check or Bidder bond will be forfeited to the County as liquidated damages should successful Bidder fail to execute the contract within thirty (30) days after receiving notice of the acceptance of its bid.

39. PERFORMANCE AND PAYMENT BONDS (if required)

Successful Bidder, before beginning work, shall execute a performance bond and a payment bond, each of which must be in the amount of the contract. The required payment and performance bonds must each be executed by a corporate surety authorized to write surety bonds in the State of Texas and in accordance with Chapter 3503 of the Insurance Code (codified in 2005 and originally within Section 1, Chapter 87, Acts of the 56th Leg., R.S., 1959, and in Article 7.19-1, Vernon's Texas Insurance Code).

The performance and payment bonds must each clearly and prominently display on the bond or on an attachment to the bond:

- a.) The name, mailing address, physical address, and telephone number, including the area code, of the surety company to which any notice of claim should be sent; or
- b.) The toll-free telephone number maintained by the Texas Department of Insurance under Subchapter B, Chapter

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521, Insurance Code, and a statement that the address of the surety company to which any notice of claim should be sent may be obtained from the Texas Department of Insurance by calling the toll free-telephone number.

The performance bond shall be solely for the protection of Galveston County, in the full amount of the contract, and conditioned on the faithful performance of the work in accordance with the plans, specifications, and contract documents. The payment bond is solely for the protection and use of payment bond beneficiaries who have a direct contractual relationship with the prime contractor or a subcontractor to supply labor or material, and in the amount of the contract.

The payment and performance bonds required to be furnished herein must be furnished before the contractor begins work and are a requirement for issuance of a Notice to Proceed. Such bonds must be furnished to the Galveston County Purchasing Agent within thirty (30) calendar days after the date of the full execution of the contract or, if applicable, as required under Chapter 2253, Government Code, whichever is earlier. Contractor's failure to provide the required payment and performance bonds within such time period shall constitute an event of default under this contract. Contractor shall not commence work until all applicable certificates of insurance, performance bonds, and payment bonds have been received and approved by the County Purchasing Agent and the Contractor receives notice to proceed in writing that has been issued by the County Purchasing Agent.

Additionally, if this request for bid is for the award of a public works contract, then compliance with Chapter 2253 of the Texas Government Code, which is known as the McGregor Act, is mandatory. Performance and payment bonds are required to be furnished in accordance with Chapter 2253 of the Texas Government Code. Bidder should familiarize itself with the entire provisions of Chapter 2253 of the Texas Government Code.

40. PATENT AND COPYRIGHT PROTECTION

The Bidder agrees at its sole expense to protect the County from claims involving infringement of patents, copyright, trademark, trade secret, or other intellectual property rights. Bidder shall indemnify and save harmless the County of Galveston, its officers, employees, and agents, from liability of any nature and kind whatsoever, including without limitation cost and expenses, for or on account of any copyrighted, trademarked, trade secret, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, or other intellectual property rights, including its use by the County. Bidder also agrees that if Bidder is awarded this contract, that no work performed hereunder shall be subject to patent, copyright, or other intellectual property by Bidder.

41. CONFLICT OF INTEREST DISCLOSURE REPORTING (FORM CIO)

Bidder may be required under Chapter 176 of the Texas Local Government Code to complete and file a conflict of interest questionnaire (CIQ Form). The CIQ Form pertains to business relationship, gift giving and family relationship reporting. If bidder is required to file a CIQ Form, then the completed CIQ Form must be filed with the County Clerk of Galveston County, Texas.

Business relationship. If Bidder has an employment or other business relationship with a local government officer of Galveston County or with a family member of a local government officer of Galveston County that results in the officer or family member of the officer receiving taxable income that exceeds \$2,500.00 during the preceding 12-month period, then Bidder **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

Gift-giving. If Bidder has given a local government officer of Galveston County or a family member of a local government officer of Galveston County one or more gifts with an aggregate value of more than one-hundred dollars

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(\$100.00) during the preceding 12-months, then Bidder **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

Family member. For purposes of the business relationship and gift giving reporting requirements, a "family member" means a person related to another person with the first degree of consanguinity or affinity, as described by Subchapter B, Chapter 573, Texas Government Code. Examples of persons within the first degree by consanguinity or affinity include a son, daughter, father, mother, spouse, son-in-law, daughter-in-law, father-in-law, mother-in-law, stepson, stepdaughter, stepmother, and stepfather.

Family relationship. If Bidder has a "family relationship" with a local government officer of Galveston County then Bidder **MUST** complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County, regardless of whether Bidder has a business relationship or has given gifts to the local government officer or a family member of the local government officer. For this purpose, "family relationship" means Bidder is related within the third degree by consanguinity or the second degree by affinity, as those terms are defined under Chapter 573 of the Texas Government Code, to a local government officer of Galveston County. Examples of such relationships include a son, daughter, mother, father, brother, sister, grandchild, great-grandchild, grandparent, great-grandparent, niece, nephew, uncle, aunt, spouse, mother-in-law, father-in-law, daughter-in-law, son-in-law, spouse's grandchild, spouse's grandparent, grandparent's spouse, grandchild's spouse, stepson, stepdaughter, stepmother, and stepfather.

Bidder must file its original CIQ Form with the Galveston County Clerk. The Galveston County Clerk has offices at the following locations:

Galveston County Clerk

Galveston County Justice Center, Suite 2001 600 59th Street Galveston, Texas 77551

Galveston County Clerk

North County Annex, 1st Floor 174 Calder Road League City, Texas 77573

Again, if Bidder is required to file a CIQ Form, the original completed form is filed with the Galveston County Clerk (not the Purchasing Agent).

For Bidder's convenience, a blank CIQ Form is enclosed with this bid package. Blank CIQ Form(s) may also be obtained by visiting the Purchasing Agent's website – this website is linked from the Galveston County homepage, at http://www.galvestoncountytx.gov.

Chapter 176 specifies deadlines for the filing of CIQ Forms (both initial filings and updated filings).

It is Bidder's sole responsibility to file a true and complete CIQ Form with the Galveston County Clerk if Bidder is required to file by the requirements of Chapter 176 of the Local Government Code. Bidder is advised that it is an offense to fail to comply with the disclosure reporting requirements dictated under Chapter 176 of the Texas Local Government Code, and the failure to file may be grounds to void the contract, if Bidder is awarded a contract.

If bidder has any questions about compliance with Chapter 176, Bidder may wish to consult its' legal counsel. Compliance is the individual responsibility of each person, business, and agent who is subject to Chapter 176 of the Texas Local Government Code.

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42. DISCLOSURE OF INTERESTED PARTIES/FORM 1295

Under Section 2252.908 of the Government Code, any business entity that enters into a contract with Galveston County that requires the approval of the Commissioners Court must submit a "Disclosure of Interested Parties" to the County prior to the execution of the contract. This form, the "Disclosure of Interested Parties" form was promulgated by the Texas Ethics Commission, and is the "Form 1295". **This procurement is subject to these requirements.**

The Texas Ethics Commission was charged with promulgating rules to implement Section 2252.908 of the Government Code. The rules adopted by the Texas Ethics Commission are located at Sections 46.1, 46.3, and 46.5 of Title 1 of the Texas Administrative Code. Thus, the law covering these requirements is located at Section 2252.908 of the Government Code, and in Title 1, Sections 46.1, 46.3, and 46.5 of the Texas Administrative Code.

The Texas Ethics Commission's website is: www.ethics.state.tx.us. The area of the Texas Ethics Commission website pertaining to Form 1295 is:

www.ethics.state.tx.us/whatsnew/elf info form1295.htm.

Form 1295 must be completed electronically through the Texas Ethics Commission website (handwritten forms are not allowable). Once the business entity has completed their electronic filing of Form 1295, then the business entity must print out the electronically completed form, and sign and notarize the Form 1295. Once Form 1295 is signed and notarized, the business entity must submit their completed, signed, and notarized Form 1295 to the Galveston County Purchasing Agent.

Successful Proposer is and shall be subject to these requirements, and no resultant contract may be executed by the Commissioners Court until the completed, signed, and notarized Form 1295 is on file with the County Purchasing Agent.

No portion of the Form 1295 process commits the County to any type of award of contract whatsoever.

After the Purchasing Agent's Office receives the completed, signed, and notarized Form 1295, the Purchasing Agent's Office will, within 30 days, go the Texas Ethics Commission website to submit electronic confirmation of the County's receipt of the completed, signed, and notarized Form 1295.

43. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS & REQUIREMENT TO REGISTER IN SAM

Bidder certifies that neither it, nor any of its Principals, are presently debarred, suspended, proposed for debarment, disqualified, excluded, or in any way declared ineligible for the award of contracts by any Federal agency. Contractor agrees that it shall refund Galveston County for any payments made to Contractor while ineligible. Contractor acknowledges that Contractor's uncured failure to perform under this Agreement, if such should occur, may result in Contractor being debarred from performing additional work for the County, the respecting State Agency administering the grant funding the contract, if applicable, the State, FEMA or HUD (as applicable), and other Federal and State entities. Further, Bidder has executed the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters and returned the fully completed and executed original certification with the submission of its bid. The truthful and fully completed and executed original of the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters must be included with the submission of Bidder's Bid and is a mandatory requirement of this Invitation to Bid. Bidder's failure to include the fully completed and executed original of this Certification shall be considered non-compliance with the requirements of this Invitation to Bid and grounds for the rejection of Bidder's Bid. Proposer shall immediately notify the County Purchasing Agent if it becomes debarred or suspended, placed on the Consolidated List of Debarred

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Contractors, or in any other way becomes ineligible for award of contract by any Federal agency. This Certification is a material fact relied upon by Galveston County; if it is later determined that the contractor did not comply with 2 C.F.R. Part 180 and 2 C.F.R. Part 3000, in additional to the remedies available to Galveston County and the State agency administering this grant, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment of contractor.

If the contract to be awarded pursuant to this procurement involves the use of Federal funds, then bidder must also be registered in the Federal Contractor Registry through the System for Award Management (SAM) to be eligible for award of contract pursuant to this procurement.

Information regarding the SAM is available at:

http://www.federalcontractorregistry.com/?gclid=CIG1hf2rr8wCFYkCaQoducANZw or at https://www.sam.gov/portal/SAM/#1.

No contract involving the use of Federal funds may be awarded to any bidder unless and until such registration is current and in good standing under SAM. Successful bidder must maintain SAM registration throughout the entire term of the agreement with the County. If this contract involves the use of Federal funds, then bidder must enclose proof of such SAM registration within its response, which is also a mandatory requirement of this procurement; failure to enclose such proof shall be considered non-compliance with the requirements of this procurement and grounds for the rejection of bidder's response to this procurement (i.e., bid, proposal, or qualifications statement, as applicable).

44. SOVEREIGN IMMUNITY

The County specifically reserves any claim it may have to sovereign, qualified, or official immunity as a defense to any action arising in conjunction with this contract.

45. CONTROLLING LAW AND VENUE

Bidder acknowledges and agrees that the contract is and shall be governed and construed by the laws of the State of Texas and that venue shall lie exclusively in a court of competent jurisdiction in Galveston County, Texas.

46. MERGERS, ACQUISITIONS

The Bidder shall be required to notify the County of any potential for merger or acquisition of which there is knowledge at the time that a bid is submitted.

If subsequent to the award of any contract resulting from this Invitation to Bid the Bidder shall merge or be acquired by another firm, the following documents must be submitted to the County:

- A. Corporate resolutions prepared by the awarded Bidder and the new entity ratifying acceptance of the original contract, terms, conditions and prices;
- B. New entity's Federal Identification Number (FEIN);
- C. New entity's proposed operating plans;
- D. New entity's proof of registration in SAM for contracts involving Federal funds;
- E. New entity's certification regarding debarment;

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- F. New entity's certification regarding lobbying; and
- G. W-9 Form for new entity.

Moreover, Bidder is required to provide the County with notice of any anticipated merger or acquisition as soon as Bidder has actual knowledge of the anticipated merger or acquisition. The New Bidder's proposed plan of operation must be submitted prior to merger to allow time for submission of such plan to the Commissioners Court for its approval.

47. DELAYS

The County reserves the right to delay the scheduled commencement date of the contract if it is to the advantage of the County. There shall be no additional costs attributed to these delays should any occur. Bidder agrees it will make no claims for damages, for damages for lost revenues, for damages caused by breach of contract with third parties, or any other claim by Bidder attributed to these delays, should any occur. In addition, Bidder agrees that any contract it enters into with any third party in anticipation of the commencement of the contract will contain a statement that the third party will similarly make no claim for damages based on delay of the scheduled commencement date of the contract.

48. ACCURACY OF DATA

Information and data provided through this Invitation to Bid are believed to be reasonably accurate.

49. SUBCONTRACTING/ASSIGNMENT

Bidder shall not assign, sell, or otherwise transfer its contract in whole or in part without prior written permission of the County acting by and through its Commissioners' Court. Such consent, if granted, shall not relieve the Bidder of any of its responsibilities under this contract.

50. INDEPENDENT CONTRACTOR

Bidder expressly acknowledges that it is an independent contractor. Nothing in this agreement is intended nor shall be construed to create an agency relationship, an employer/employee relationship, a joint venture relationship, or any other relationship allowing County to exercise control or direction over the manner or method by which Bidder or its subcontractors perform in providing the requirements stated in the Invitation to Bid.

51. MONITORING PERFORMANCE

The County shall have the unfettered right to monitor and audit the Bidder's work in every respect. In this regard, the Bidder shall provide its full cooperation and insure the cooperation of its employees, agents, assigns, and subcontractors. Further, the Bidder shall make available for inspection and/or copying when requested, original data, records, and accounts relating to the Bidder's work and performance under this contract. In the event any such material is not held by the Bidder in its original form, a true copy shall be provided.

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52. SUBJECT TO APPROPRIATION OF FUNDS

State law prohibits the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved by the Commissioners' Court. Galveston County anticipates this to be an integral part of future budgets to be approved during the periods of this contract, except for unanticipated needs or events which may prevent such payments against this contract. However, Galveston County cannot guarantee the availability of funds, and enters into this contract only to the extent such funds are made available through appropriation (allocation) by the Commissioners' Court. This contract shall not be construed as creating any debt on behalf of the County of Galveston in violation of TEX. CONST. art. XI, § 7, and it is understood that all obligations of Galveston County are subject to the availability of funds.

53. CONTRACTS SUBJECT TO GRANT FUNDING

Notwithstanding the foregoing, if the contract to be awarded by this procurement is funded with Federal or State grant funds, the bidder acknowledges that the obligations of the County under the contract are contingent upon the continued availability of grant funding to meet the County's obligations. If the grant(s) to the County is reduced, de-obligated, or otherwise discontinued or terminated, Contractor agrees that the County may immediately terminate the contract without penalty or any liability whatsoever on the part of the County, the State, or the Federal awarding agency.

54. PROCUREMENT ETHICS

Galveston County is committed to the highest ethical standards. Therefore, it is a serious breach of the public trust to subvert the public purchasing process by directing purchases to certain favored vendors, or to tamper with the competitive bidding process, whether it's done for kickbacks, friendship or any other reason. Since misuse of the purchasing power of a local government carries criminal penalties, and many such misuses are from a lack of clear guidelines about what constitutes an abuse of office, the Code of Ethics outlined below must be strictly followed.

Galveston County also requires ethical conduct from those who do business with the County.

CODE OF ETHICS – Statement of Purchasing Policy:

Public employment is a public trust. It is the policy of Galveston County to promote and balance the objective of protecting the County's integrity and the objective of facilitating the recruitment and retention of personnel needed by Galveston County. Such policy is implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public office.

Public employees must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the Galveston County procurement organization.

To achieve the purpose of this Article, it is essential that those doing business with Galveston County also observe the ethical standards prescribed herein.

General Ethical Standards:

It shall be a breach of ethics to attempt to realize personal gain through public employment with Galveston County by any conduct inconsistent with the proper discharge of the employee's duties.

It shall be a breach of ethics to attempt to influence any public employee of Galveston County to breach the standards of ethical conduct set forth in this code.

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It shall be a breach of ethics for any employee of Galveston County to participate directly or indirectly in a procurement when the employee knows that:

- The employee or any member of the employee's family, has a financial interest pertaining to the procurement;
- A business or organization in which the employee or any member of the employee's family, has a financial
 interest pertaining to the procurement; or
- Any other person, business, or organization with which the employee or any member of the employee's
 family is negotiating or has an arrangement concerning prospective employment is involved in the
 procurement.

Gratuities:

It shall be a breach of ethics for any person to offer, give, or agree to give any employee or former employee of Galveston County, or for any employee or former employee of Galveston County to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or bid pending before this government.

Kickbacks:

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

Contract Clause:

The prohibition against gratuities and kickbacks prescribed above shall be conspicuously set forth in every contract and solicitation by Galveston County.

Confidential Information:

It shall be a breach of ethics for any employee or former employee of Galveston County to knowingly use confidential information for actual or anticipated personal gain, or for the actual or anticipated gain of any other person.

Prohibition against Contingent Fees:

It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a Galveston County contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business. Failure to abide by this section constitutes a breach of ethical standards.

Representation:

Bidder represents and warrants, by signing and submitting its bid, that it has not retained anyone in violation of this section prohibiting contingent fees.

Contract Clause:

The representation prescribed above shall be conspicuously set forth in every contract and solicitation thereof.

55. NON-COLLUSION AFFIDAVIT

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Bidder certifies, by signing and submitting a bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the contractor has not directly or indirectly induced or solicited another contractor to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any contractor or anyone else to put in a sham bid or that anyone shall refrain from bidding; that the contractor has not in any manner, directly or indirectly, sought by agreement, communications, or conference with anyone to fix the bid price of the contractor of any other bidder, or to fix any overhead, profit or cost element of the bid price, or that of any other contractor, or to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the contractor has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any cooperation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

A blank Non-Collusion Affidavit is included with this Bid packet. Bidder must enclose a truthful and fully executed original Non-Collusion Affidavit with the submission of its bid. This is a mandatory requirement of this Invitation to Bid. Failure to include the truthfully and fully executed Non-Collusion Affidavit in the submission of its Bid shall be considered non-compliance with the requirements of this Invitation to Bid by the Bidder and grounds for the rejection of Bidder's submission.

No negotiations, decisions, or actions shall be initiated by any company as a result of any verbal discussion with any County employee prior to the opening of responses to this Invitation to Bid.

No officer or employee of the County of Galveston, and no other public or elected official, or employee, who may exercise any function or responsibilities in the review or approval of this undertaking shall have any personal or financial interest, direct or indirect, in any contract or negotiation process thereof. The above compliance request will be part of all County of Galveston contracts for this service.

56. CERTIFICATION REGARDING LOBBYING

Bidder certifies that:

- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the bidder, to any person for influencing or attempting to influence a department or employee of an agency, a member of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
- b. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence a department or employee of any agency, a member of Congress, a department or employee of congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the bidder shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.
- c. Bidder shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

The truthful and fully completed and executed original of the Certification Regarding Lobbying (included with bid packet) must be included with the submission of Bidder's Bid and is a mandatory requirement of this Invitation to Bid. Bidder's failure to include the fully completed and executed or original of this Certification shall be considered

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non-compliant with the requirements of this Invitation to Bid and grounds for the rejection of the Bidder's Bid. Submission of the certification is a prerequisite for making or entering into a contract with Bidder and is imposed by Section 1352, Title 31, United States Code. Further, any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

57. NON-DISCRIMINATION

a. Equal Employment Opportunity: Bidder will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, genetic information or veteran status. Bidder will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, sex, disability, genetic information or veteran status. Such action shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Bidder agrees to post in conspicuous places, available to employees and applicants for employment, notices of employment.

Bidder will, in all solicitation or advertisements for employees placed by or on behalf of Bidder, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, disability, genetic information, or veteran status.

Bidder will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this Agreement so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.

Bidder will include the provisions herein in every subcontract or purchase order unless exempted.

- b. Drug Free Work Place Act: Bidder shall comply with all applicable requirements of the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D; 41 U.S.C. § 8102, et seq.) and implementing regulations thereunder.
- c. Americans with Disabilities Act: Bidder shall comply with all applicable provisions of the Americans with Disabilities Act of 1990 (Public Law 101-136) and implementing regulations thereunder.
- d. OSHA Regulations: Bidder agrees to maintain and to display any applicable materials for its employees in accordance with OSHA regulations.
- e. Compliance with Immigration Laws and Use of E-Verify: Bidder agrees to comply with all requirements of the U.S. Immigration Reform and Control Act of 1986, as amended, and any implementing regulations thereto. Bidder further agrees to utilize the E-Verify system through the Department of Homeland Security on its employees. Bidder shall not employ unauthorized aliens, and shall not assign services to be performed to any supplier or subcontractor who are unauthorized aliens. If any personnel performing any services hereunder are discovered to be an unauthorized alien, then Bidder will immediately remove such personnel from performing services hereunder and shall replace such personnel with personnel who are not unauthorized alien(s).
- f. State and Federal Law Compliance: Bidder agrees to comply with all other State and Federal laws and regulations applicable to the provision of services under this contract.

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58. RECORD RETENTION AND RIGHT TO AUDIT

Bidder shall keep and maintain all records associated with this contract for a minimum of five (5) years from the close of the contract or as required by Federal or State law or regulation, whichever period is longer. If awarded this contract, Bidder shall allow the County reasonable access to the records in Bidder's possession, custody, or control that the County deems necessary to assist it in auditing the services, costs, and payments provided hereunder. If this contract involves the use of Federal or State funds, then Bidder shall also allow reasonable access to representatives of the Office of Inspector General, the General Accounting Office, the State Auditor's Office, and the other Federal and/or State agencies overseeing the funds that such entities deem necessary to facilitate review by such agencies and Bidder shall maintain fiscal records and supporting documentation for all expenditures in a manner that conforms with OMB Circular A-87 (relocated to 2 C.F.R. Part 225) and this contract.

59. TITLE VI ASSURANCES/TxDOT

The County is subject to Title VI of the Civil Rights Act of 1964 and the Federal and State laws and regulations of the United States Department of Transportation and Texas Department of Transportation (TxDOT). Pursuant to these requirements, the County must have its contractors provide required assurances on compliance with non-discrimination by itself and its subcontractors. The Title VI Assurances within this Subsection are not exhaustive – whenever any Federal, State, or Local requirement requires additional clauses, this list shall not be construed as limiting. 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 incorporated herein by reference and made a part of this contract.
- (2) Non-discrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the basis of race, color, national origin, religion, sex, age, disability or Veteran status 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 Subcontractors, Including Procurement 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 procurement 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, national origin, religion, sex, age, disability or Veteran status.
- (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 Galveston County or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to Galveston County or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) Sanctions for Non-compliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, Galveston County shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:

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- (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 procurement 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 Galveston County 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 Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request Galveston County to enter into such litigation to protect the interests of Galveston County, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

60. SECTION 231.006, FAMILY CODE/DELINQUENT CHILD SUPPORT

Pursuant to Title 5, Section 231.006 of the Texas Family Code, as applicable, Bidder certifies that it, including all of its principals, is/are current in child support payments and that it is eligible to receive payments from State funds under a contract for property, materials, or services. Bidder acknowledges and agrees that if it is awarded this contract, then the ensuing agreement may be terminated and payment withheld if this certification is inaccurate. Finally, by the submission of its bid, the Bidder certifies that it has included the names and social security numbers of each person with at least 25% ownership interest in Bidder within its response to the Invitation to Bid and that all such persons are current in child support payments.

61. ANTITRUST

Pursuant to 15 U.S.C. § 1, et seq., and Texas Business and Commerce Code, Chapter 15, Contractor, by the submission of its bid, certifies that neither Contractor nor any natural person, proprietorship, firm, corporation, partnership, association, or institution represented by Contractor or anyone acting for such natural person, proprietorship, firm, corporation, partnership, association, or institution has violated any Federal or State antitrust laws or communicated the nature of the offer, directly or indirectly, to any competitor or other person engaged in a similar line of business.

62. LABOR STANDARDS

On contracts funded under a federal grant: Bidder acknowledges that the contract to be awarded pursuant to this solicitation is on a grant program funded with Federal funds. Bidder shall comply with the requirements of 29 CFR Part 5 and Part 30 and shall be in conformity with Executive Order 11246, entitled "Equal Employment Opportunity", Copeland, "Anti-Kickback" Act (40 U.S.C. 3145, 29 C.F.R. Part 3), the Davis-Bacon and Related Acts (40 U.S.C. 3141-3148, 29 C.F.R. Parts 1,3, and 5), the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.), and all other applicable Federal, State, and local laws and regulations pertaining to labor standards, insofar as those acts apply to the performance of this Agreement. Bidder is also responsible for ensuring that all subcontractors comply with the requirements of 29 CFR Part 5 and Part 30 and shall be in conformity with Executive Order 11246, entitled "Equal Employment Opportunity", Copeland "Anti-Kickback" Act, the Davis-Bacon and Related Acts (29 CFR Parts 1, 3 and 5), the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.), and all other applicable Federal, State, and local laws and regulations pertaining to labor standards, insofar as those acts apply to the performance of this Agreement.

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63. PROCUREMENT LAWS

- a. Bidder shall comply with all applicable local, State, and Federal procurement laws, rules, and regulations.
- b. If this contract is made pursuant to a federal award, then Contractor acknowledges that the contract is subject, without limitation, to applicable provisions within 2 C.F.R. Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Contractor shall comply with applicable provisions within 2 C.F.R., Sections 200.319 through 200.326, including but not limited to the following:
 - 1.) **Equal Employment Opportunity**, 41 C.F.R. Part 60-1.4(b) (applicable to federally assisted construction contracts).
 - (a) During the performance of this contract, the contractor agrees as follows:
 - (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national original, disability, or veteran status. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, national original, disability or veteran status. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national original, disability, or veteran status.
 - (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and by rules, regulations, and relevant orders of the Secretary of Labor.
 - (5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to contractor's books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
 - (7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The

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contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

- 2.) Small and minority business, women's business enterprises, and labor surplus area firms (2 C.F.R. § 200.321). The County is required to take affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. This includes requiring the prime contractor, if subcontracts are to be let in the performance of this contract, to itself take affirmative steps in letting the subcontract. Accordingly, if subcontracts are to be let in the performance of this contract, the contractor must take affirmative steps in the letting of the subcontract(s), which must include:
 - (a) placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - (b) assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - (c) dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises; and
 - (d) using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

In accordance with FEMA procurement guidance:

A small business is a business that is independently owned and operated, not dominant in the field of operation in which it is bidding on Galveston County contracts, and qualified as a small business under the Small Business Administration criteria and size standards at 13 C.F.R. Part 121.

A women's business enterprise is a business enterprise that is: (a) at least 51 percent owned by one or more women or, in the case of a publicly owned business, at least 51 percent of the stock is owned by one or more women; and (b) whose management and daily operations are controlled by one or more women.

A minority business is a business that is (a) at least 51 percent owned by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of the stock is owned by one or more minority group members; and (b) whose management and daily operations are controlled by one or more minority group members.

3.) Davis-Bacon Act as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 must include a provision for compliance with the Davis-Bacon Act as supplemented by the Department of Labor regulations (29 C.F.R. Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractor must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity (the County) must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be condition upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contract must also include a provision for compliance with the Copeland Anti-Kickback Act (40 U.S.C. § 3145) as supplemented by the Department of Labor regulations (29 C.F.R. Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

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- 4.) Compliance with the Copeland "Anti-Kickback" Act. Contractor is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which the person is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. "Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by any other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined under this title [Title 18, U.S.C.] or imprisoned not more than five years, or both." 18 U.S.C. § 874.
 - (a) Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable, which are incorporated by reference into this contract.
 - (b) The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the Federal awarding agency may be appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
 - (c) Breach. A breach of the contract clause above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

5.) Contract Work Hours and Safety Standards Act.

- (a) Where applicable, all contracts awarded by the County in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by the Department of Labor regulations at 29 C.F.R. Part 5. Under 40 U.S.C. 3702 of the Contract Work Hours and Safety Standards Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.S. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchase of supplies or material or articles ordinarily available on the open market, or contractors for transportation or transmission of intelligence.
- (b) Compliance with the Contract Work Hours and Safety Standards Act.
 - (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and onehalf times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
 - (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this subsection the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this subsection, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard work week of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this subsection.

GENERAL PROVISIONS – INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

- (3) Withholding for unpaid wages and liquidated damages. The awarding Federal agency, State agency, or the County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this subsection.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this subsection and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this subsection.

6.) Rights to Inventions Made Under a Contractor Agreement.

- (a) If the Federal award meets the definition of "funding agreement" under 37 C.F.R. § 401.2(a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under the "funding agreement," the recipient or subrecipient must comply with the requirements of 37 C.F.R. Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.
- (b) Stafford Act Disaster Grants. This requirement does not apply to Public Assistance, Hazard Mitigation Grant Program, Crisis Counseling Assistance and Training Grant program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement."
- (c) The regulations and 37 C.F.R. § 401.2(a) currently defines "funding agreement" as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

7.) Clean Air Act (42 U.S.C. §§ 7401 – 7671q) and the Federal Water Pollution Control Act 933 U.S.C. §§ 1251-1387), as amended.

- (a) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401, et seq., and agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Contract Act, as amended, 33 U.S. C. § 1251, et seq.
- (b) The contractor agrees to report each violation of the Clean Air Act and/or the Federal Water Pollution Control Act to the Federal awarding agency, the State agency administering the grant, and the Regional Office of the Environmental Protection Agency (EPA) and understands and agrees that the Federal awarding agency, the State agency, and the EPA will, in turn, report each violation as required to assure notification to Galveston County, the Federal Emergency Management Agency, and the appropriate EPA Regional Office.

GENERAL PROVISIONS – INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

8.) **Debarment and Suspension (Executive Orders 12549 and12689).** A contract award must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. Part 180 that implement Executive Orders 12549 and 12689. The Contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

Contractor must comply with 2 C.F.R. Part 180, Subpart C and 2 C.F.R. Part 3000, Subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. Bidder agrees to comply with the requirements of 2 C.F.R. Part 180, Subpart C, and 2 C.F.R. Part 3000, Subpart C, while this offer is valid and through the period of any contract that may arise from this offer. The bidder further agrees to include a provision requiring such compliance in its lower tier covered transactions.

9.) Procurement of Recovered Materials.

- (a.) A non-Federal entity that is a State agency or agency of a political subdivision of the State and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, Public Law No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962).
- (b.) In the performance of this contract, the contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
 - (1) Competitively within a timeframe providing for compliance with the contract performance schedule;
 - (2) Meeting contract performance requirements; or
 - (3) At a reasonable price.
- (c) Information about this requirement is available at EPA's Comprehensive Procurement Guidelines website, http://www.epa.gov/cpg/. The list of EPA-designated items is available at https://www.epa.gov/cpg/products.htm.

In the event of any discrepancy between the provisions in this Section 61 of General Provisions and provisions on the same subject elsewhere within this procurement, the most stringent shall control.

64. ENTIRETY OF AGREEMENT AND MODIFICATION

This contract contains the entire agreement between the parties. Any prior agreement, promise, negotiation or representation not expressly set forth in this contract has no force or effect. Any subsequent modification to this contract must be in writing, signed by both parties.

An official representative, employee, or agent of the County does not have the authority to modify or amend this contract except pursuant to specific authority to do so granted by the Galveston County Commissioners' Court.

65. NOTICE

All notices or other communications required or permitted under this contract shall be in writing and shall be deemed to have been duly given if delivered personally in hand, transmitted by facsimile, or mailed certified mail, return receipt requested with proper postage affixed and addressed to the appropriate party at the following address or at such other address as may have been previously given in writing to the parties (Bidder shall provide its notice information with its Bid submission). If mailed, the notice shall be deemed delivered when actually received, or if

GENERAL PROVISIONS – INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

earlier, on the third day following deposit in a United States Postal Service post office or receptacle, duly certified, return receipt requested, with proper postage affixed. If delivered in person, notice shall be deemed delivered when receipted for by, or actually received by, the receiving Party. If transmitted by facsimile, notice shall be deemed delivered when receipt of such transmission is acknowledged.

To the County at:

Hon. Mark Henry, County Judge of Galveston County 722 Moody (21st Street), Second (2nd) Floor Galveston, Texas 77550 Fax: (409) 765-2653

With copies to:

Rufus Crowder, CPPO CPPB, Galveston County Purchasing Agent 722 Moody (21st Street), Fifth (5th) Floor Galveston, Texas 77550 Fax: (409) 621-7997 Robert Boemer, Director, Galveston County Legal Department 722 Moody (21st Street), Fifth (5th) Floor Galveston, Texas 77550 Fax: (409) 770-5560

To the Contractor at:

(Bidder to provide its contact name, address, and facsimile number for notice under the contract.)

66. USE OF DHS SEAL, LOGO, AND FLAGS PROHIBITED WITHOUT PRIOR APROVAL

Contractor must obtain permission from the U.S. Department of Homeland Security financial assistance office (DHS FAO) **prior** to using DHS seals(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials, including use of the United States Coast Guard seal, logo, crests or reproductions of flags or likenesses of Coast Guard Officials.

67. FEDERAL GOVERNMENT NOT A PARTY

Contractor acknowledges that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to Galveston County, contractor, or any other party pertaining to any matter resulting from the contract.

68. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

In contracts funded through Federal grants, Contractor acknowledges that 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements (31 U.S.C. § 3801, et seq.) and the implementing regulations thereunder, 49 C.F.R. Part 79, apply to Contractors actions pertaining to the contract.

GENERAL PROVISIONS – INVITATION TO BID PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

69. LEAD AND ASBESTOS

If this invitation to bid involves remediation, demolition, reconstruction, rehabilitation, repair, or construction, or other applicable activities, the Contractor shall be responsible for performing investigations of lead and asbestos containing materials, and any required lead and asbestos abatement in compliance with Federal, State, and local laws, rules, regulations, ordinances and orders, relating to lead abatement and asbestos abatement as applicable, including but not limited to the Texas Asbestos Health Protection Act, codified as Chapter 1954 of the Occupations Code; the Texas Asbestos Health Protection Regulations, located at Title 25, Part 1, Chapter 295, Subchapter C of the Texas Administrative Code; Chapter 1955 of the Texas Occupations Code (lead-based paint abatement); the Texas Environmental Lead Reduction regulations, located at Title 25, Part 1, Chapter 295, Subchapter I of the Texas Administrative Code; the federal National Emission Standards for Asbestos regulations, located at Title 40, Part 61, Subpart M of the Code of Federal Regulations, and the National Emission Standards for Hazardous Air Pollutants. Contractor shall perform such inspections, encapsulation, remediation or other actions as required by federal, State, or local requirements in accordance with the federal Environmental Protection Agency (EPA), Texas Department of State Health Services (TXDSHS), and Texas Commission on Environmental Quality (TCEQ) requirements.

70. ACKNOWLEDGMENT OF GOVERNMENT RECORD

Bidder acknowledges that its submission in this Invitation to Bid, including its response, bid, certifications, affidavits, Vendor Forms (i.e., PEID, W-9, CIQ, etc.) constitutes government records under Chapter 37 of the Texas Penal Code.

71. COMPLIANCE WITH GALVESTON COUNTY PURCHASING POLICIES AND PROCEDURES

Bidder acknowledges, by its submission in this Invitation to Bid, that it shall comply with the Galveston County Purchasing Policies & Procedures Manual approved by Order of the Galveston County Commissioners Court on March 7, 2018.

End of General Provisions Section

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SPECIAL PROVISIONS PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

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SPECIAL PROVISIONS PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

The Special Provisions and the General Provisions of this Invitation to Bid and the Exhibits attached hereto are made a part of this agreement between the Parties. In the event of a conflict between the General Provisions and the Special Provisions, the terms of the Special Provisions shall control.

A. PURPOSE

Galveston County is seeking a vendor to construct and install a metal bridge at Paul Hopkins Park and demolish the current wooden bridge.

B. DEFINITIONS (As mentioned in FAR Subpart 52.2—Text of Provisions and Clauses)

52.202-1 Definitions.

Definitions (Nov 2013)

When a solicitation provision or contract clause uses a word or term that is defined in the Federal Acquisition Regulation (FAR), the word or term has the same meaning as the definition in FAR 2.101 in effect at the time the solicitation was issued, unless—

- (a) The solicitation, or amended solicitation, provides a different definition;
- (b) The contracting parties agree to a different definition;
- (c) The part, subpart, or section of the FAR where the provision or clause is prescribed provides a different meaning; or
- (d) The word or term is defined in FAR Part 31, for use in the cost principles and procedures

C. BID SURETY

A Bid surety/bond is a requirement of this solicitation.

D. PERFORMANCE AND PAYMENT BONDS

Performance and Payment Bonds are a requirement of this solicitation.

E. DAVIS-BACON WAGE RAGES

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

F. BEST AND FINAL OFFERS (BAFO)

The Best and Final Offer process is not applicable to this solicitation.

G. PROCUREMENT TIMELINE

A timeline for this Bid and initial process is included below. Galveston County reserves the right to change these dates and will notify Bidders of any changes:

Advertise BID (first date of publication) Advertise BID (second date of publication) Deadline for Questions & Inquiries Bids due from public/Bid Opening Wednesday, July 3, 2019 Wednesday, July 10, 2019 Monday, July 15, 2019 by 5:00 p.m. Thursday, July 25, 2019 at 2:00 p.m.

SPECIAL PROVISIONS PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY

H. PERSONNEL TO CONTACT

Bidders desiring an explanation or interpretation relative to this solicitation must request it in writing. Oral explanations or instructions will not be binding. Any information given to a Bidder, which in the opinion of the County affects all responders or would be prejudicial to other Bidders if not communicated, shall be furnished to all Bidders as an addendum to the solicitation. Bidders **must** direct all inquiries to the following:

Rufus G. Crowder, CPPO CPPB
Purchasing Agent
722 21st Street (Moody)
Galveston, Texas 77550

e-mail: purchasing.bids@co.galveston.tx.us

Bidders must e-mail their requests (with the subject line "Paul Hopkins Park Pedestrian Bridge – Bid# B191052– Questions") for additional information and/or clarification to the address listed above. The request must include the Bidder's name and the BID number and title. Any request for additional information or clarification must be received in writing no later than seven (7) calendar days prior to the Bid due date. Late requests or those not delivered to the proper address may not receive a reply. Bidders shall not attempt to contact the County by any other means. The Purchasing Agent's Office shall post the answers to the County website from the procurement web page and via addendum.

The County will issue responses to inquiries and any other corrections or amendments, it deems necessary, in the form of a written addendum, issued prior to the Bid Submission Date. The County, at its sole discretion, may not issue a response to a RFI submittal. Bidders should not rely on any oral or written representations, statements, or explanations, other than those made in this BID or in any written addendum to this BID. Where there appears to be conflict between the BID and any issued addenda, the last addendum issued will prevail. Addenda will be posted and made available on the County's procurement web page. It is the Bidder's sole responsibility to ensure receipt of all addenda prior to submitting its Bid. All Bidders should check the County's procurement web page for all addenda prior to submitting a response. The County's procurement web page is located at www.galvestoncountytx.gov/pu/Pages/OpenSolicitations.aspx. and current solicitations are at www.galvestoncountytx.gov/pu/Pages/OpenSolicitations.aspx.

The Bidder must acknowledge the receipt of all addenda on the forms provided. In the event a Bidder fails to acknowledge receipt of such addenda, the County may, at its sole discretion, determines that such failure to acknowledge any or all addenda does not materially affect the Bid and waive the acknowledgement of one or more addenda.

Bidders who submit inquiries *after* the deadline date for receipt of questions indicated on the Procurement Timeline, risk that its response in the procurement will not be responsive or competitive because the County is not able to respond before the Bid receipt date or in sufficient time for the Bidder to prepare a responsive or competitive submittal.

All questions and responses as posted on the County website pertaining to this BID are considered an addendum to, and part of, this BID. Each Bidder shall be responsible to monitor the County website for new or revised BID information. The County shall not be bound by any verbal information nor shall it be bound by any written information that is not either contained within the BID or formally issued as an addendum by the Purchasing Agent's Office.

SPECIAL PROVISIONS PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY

I. PROGRAM ADMINISTRATION & CONTRACT MANAGEMENT

The Program Administrator/Contract Manager that will manage the work to be performed under the resultant contract for the purpose of this Bid is:

Julie Diaz, Director
Galveston County Parks and Cultural Services
4102 Main Street (FM 519)
La Marque, TX 77568
409 934-8114

Email: julie.diaz@co.galveston.tx.us

J. TYPE OF CONTRACT

It is the intent of this solicitation to enter into a contract that meets federal guidelines. It is imperative that all responders seeking a contract under this BID solicitation effort must familiarize and adhere to the procurement standards as referenced in 2 C.F.R. Part 200, Sections 200.317-200.326, and Appendix II, 2 C.F.R. Part 200. Sections 200.317-200.326 and Appendix II are attached hereto as **Exhibit A.**

The resultant contract consists of the following documents: Invitation to Bid, General Provisions, Special Provisions, General Terms and Conditions (including specifications, drawings, and addenda), Bidder's Bid, Bid Sheets, contract award, and any other documents referenced herein or attached hereto for the work. Collectively these documents may also be referred to as the Plans and Specifications.

In an effort to satisfy cost reasonableness responsibilities at the time of each extension period, the County of Galveston reserves the right to obtain additional quotes and current pricing information from the successful contractor and other contractors to perform the work as stated per the specification listed herein and in the resultant. The solicited results may be used by the County to determine if the contract extensions will be considered or other service options be utilized.

K. COLLATERAL CONTRACT

The County reserves the right to provide by separate contract or otherwise, in such manner as not to delay its programs or damage said Contractor, all labor and material essential to the completion of the work that is not included in this contract.

Award prices include all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the work. Whenever the Awardee is required or desires to use any design, device, material or process covered by letters of patent or copyright, the Awardee shall indemnify and save harmless the County, its officers, agents and employees from any and all claims for infringement by reason of the use of any such patented design, tool, material, equipment, or process, to be performed under the contract, and shall indemnify the County its officers, agents, and employees for any costs, expenses and damages which may be incurred by reason of any infringement at any time during the prosecution or after the completion of the work.

L. LABOR

Contractor is encouraged to use local labor, but not at the expense of poor workmanship and higher cost. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. Contractor agrees to post in a conspicuous place a notice setting forth provisions of this non-discrimination clause.

SPECIAL PROVISIONS PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY

M. INSURANCE

Bidder must submit, with its response, a current certificate of insurance evidencing coverage in the amounts specified below or greater. In lieu of submitting a certificate of insurance, Respondents may submit a notarized statement from an insurance company authorized to conduct business in the State of Texas guaranteeing that Respondent has such insurance. Provided however, that successful Respondent(s) shall be required to provide a current certificate of insurance to the Galveston County Purchasing Agent's Office before Respondent commences any work hereunder. Insurance shall be placed with insurers having an A.M. Best's rating of no less than A. Such insurance must be issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from loss or damage that may arise to any person or property by reason of services rendered by Contractor.

Galveston County shall be listed as an additional insured on each policy and all certificates of insurance and Contractor shall provide Galveston County with no less than thirty (30) calendar days prior notice of any changes to the policy during the contractual period.

Certificates of Insurance, fully executed by a licensed representative of the insurance company written or countersigned by an authorized Texas state agency, shall be filed with the County Purchasing Agent within ten (10) calendar days of the execution of this Agreement as written proof of such insurance and further provided that Contractor shall not commence work under this Agreement until Contractor has obtained all insurance required herein, provided written proof as required herein, and received written notice to proceed issued from the County Purchasing Agent. Failure to provide such evidence of insurance within the ten (10) calendar day period shall constitute an event of default.

Workers' Compensation Insurance. Respondent shall carry in full force Workers' Compensation Insurance Policy(ies), if there is more than one employee, for all its employees, including but not limited to full time, part time, and emergency employees employed by the Contractor.

Commercial General Liability. Respondent shall carry in full force commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the aggregate. The Policy shall, minimally, cover liability for bodily injury, personal injury, and property damage.

Business Automobile Liability. Respondent shall carry in full force business automobile liability coverage with a combined bodily injury/property damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.

Professional Liability. Respondent shall carry in full force professional liability insurance with limits of not less than \$1,000,000.00.

Subrogation Waiver. Contractor and Contractor's insurance carrier shall waive any and all rights to subrogation against Galveston County in regard to any suit or claim arising out of personal injury or property damage resulting from Contractor's performance under this Agreement.

N. EXCEPTIONS

Any exceptions to Bid conditions should be listed on a separated sheet of paper, attached to Bid submittals and submitted with Bid at the specified date and time of Bid opening.

End of Special Provisions Section

EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

PROCUREMENT STANDARDS

2 C.F.R. §§ 200.317 – 200.326 & 2 C.F.R. PART 200, APPENDIX II

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EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

PROCUREMENT STANDARDS

2 C.F.R. §§ 200.317 – 200.326 & 2 C.F.R. PART 200, APPENDIX II

2 C.F.R. § 200.317. Procurements by states.

When procuring property and services under a Federal award, a state must follow the same policies and procedures it uses for procurements from its non-Federal funds. The state will comply with §200.322 Procurement of recovered materials and ensure that every purchase order or other contract includes any clauses required by section §200.326 Contract provisions. All other non-Federal entities, including subrecipients of a state, will follow §§ 200.318 General procurement standards through 200.326 Contract provisions.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 20313

2 C.F.R. § 200.318. General procurement standards.

- (a) The non-Federal entity must use its own documented procurement procedures which reflect applicable State, local and tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in this part.
- (b) Non-Federal entities must maintain oversight to ensure that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(c)

- (1) The non-Federal entity must maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents of the non-Federal entity may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. However, non-Federal entities may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the non-Federal entity.
- (2) If the non-Federal entity has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, the non-Federal entity must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest means that because of

EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

relationships with a parent company, affiliate, or subsidiary organization, the non-Federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

- (d) The non-Federal entity's procedures must avoid acquisition of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.
- (e) To foster greater economy and efficiency, and in accordance with efforts to promote cost-effective use of shared services across the Federal Government, the non-Federal entity is encouraged to enter into state and local intergovernmental agreements or inter-entity agreements where appropriate for procurement or use of common or shared goods and services.
- (f) The non-Federal entity is encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.
- (g) The non-Federal entity is encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.
- (h) The non-Federal entity must award contracts only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources. See also § 200.213 Suspension and debarment.
- (i) The non-Federal entity must maintain records sufficient to detail the history of procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.

(j)

- (1) The non-Federal entity may use a time and materials type contract only after a determination that no other contract is suitable and if the contract includes a ceiling price that the contractor exceeds at its own risk. Time and materials type contract means a contract whose cost to a non-Federal entity is the sum of:
 - (i) The actual cost of materials; and
 - (ii) Direct labor hours charged at fixed hourly rates that reflect wages, general and administrative expenses, and profit.
- (2) Since this formula generates an open-ended contract price, a time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, each contract must set a ceiling price that the contractor exceeds at its own risk. Further, the non-Federal entity awarding such a contract must assert a high degree of oversight in order to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.

EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

(k) The non-Federal entity alone must be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the non-Federal entity of any contractual responsibilities under its contracts. The Federal awarding agency will not substitute its judgment for that of the non-Federal entity unless the matter is primarily a Federal concern. Violations of law will be referred to the local, state, or Federal authority having proper jurisdiction.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 43309, July 22, 2015; 80 FR 45395, July 30, 2015

2 C.F.R. § 200.319. Competition.

- (a) All procurement transactions must be conducted in a manner providing full and open competition consistent with the standards of this section. In order to ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for proposals must be excluded from competing for such procurements. Some of the situations considered to be restrictive of competition include but are not limited to:
- (1) Placing unreasonable requirements on firms in order for them to qualify to do business;
- (2) Requiring unnecessary experience and excessive bonding;
- (3) Noncompetitive pricing practices between firms or between affiliated companies;
- (4) Noncompetitive contracts to consultants that are on retainer contracts;
- (5) Organizational conflicts of interest;
- (6) Specifying only a "brand name" product instead of allowing "an equal" product to be offered and describing the performance or other relevant requirements of the procurement; and
- (7) Any arbitrary action in the procurement process.
- (b) The non-Federal entity must conduct procurements in a manner that prohibits the use of statutorily or administratively imposed state, local, or tribal geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts state licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criterion provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.
- (c) The non-Federal entity must have written procedures for procurement transactions. These procedures must ensure that all solicitations:
- (1) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description must not, in competitive procurements, contain features which unduly

EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured and, when necessary, must set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a "brand name or equivalent" description may be used as a means to define the performance or other salient requirements of procurement. The specific features of the named brand which must be met by offers must be clearly stated; and

- (2) Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals.
- (d) The non-Federal entity must ensure that all prequalified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough qualified sources to ensure maximum open and free competition. Also, the non-Federal entity must not preclude potential bidders from qualifying during the solicitation period.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014

2 C.F.R. § 200.320. Methods of procurement to be followed.

The non-Federal entity must use one of the following methods of procurement.

- (a) Procurement by micro-purchases. Procurement by micro-purchase is the acquisition of supplies or services, the aggregate dollar amount of which does not exceed the micro-purchase threshold (§200.67 Micro-purchase). To the extent practicable, the non-Federal entity must distribute micro-purchases equitably among qualified suppliers. Micro-purchases may be awarded without soliciting competitive quotations if the non-Federal entity considers the price to be reasonable.
- (b) Procurement by small purchase procedures. Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not cost more than the Simplified Acquisition Threshold. If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources.
- (c) Procurement by sealed bids (formal advertising). Bids are publicly solicited and a firm fixed price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in paragraph (c)(1) of this section apply.
- (1) In order for sealed bidding to be feasible, the following conditions should be present:
 - (i) A complete, adequate, and realistic specification or purchase description is available;
 - (ii) Two or more responsible bidders are willing and able to compete effectively for the business; and
 - (iii) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

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- (2) If sealed bids are used, the following requirements apply:
 - (i) Bids must be solicited from an adequate number of known suppliers, providing them sufficient response time prior to the date set for opening the bids, for local, and tribal governments, the invitation for bids must be publicly advertised;
 - (ii) The invitation for bids, which will include any specifications and pertinent attachments, must define the items or services in order for the bidder to properly respond;
 - (iii) All bids will be opened at the time and place prescribed in the invitation for bids, and for local and tribal governments, the bids must be opened publicly;
 - (iv) A firm fixed price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs must be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and
 - (v) Any or all bids may be rejected if there is a sound documented reason.
- (d) Procurement by competitive proposals. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:
- (1) Requests for proposals must be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals must be considered to the maximum extent practical;
- (2) Proposals must be solicited from an adequate number of qualified sources;
- (3) The non-Federal entity must have a written method for conducting technical evaluations of the proposals received and for selecting recipients;
- (4) Contracts must be awarded to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and
- (5) The non-Federal entity may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.
- (e) [Reserved]

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- (f) Procurement by noncompetitive proposals. Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source and may be used only when one or more of the following circumstances apply:
- (1) The item is available only from a single source;
- (2) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation:
- (3) The Federal awarding agency or pass-through entity expressly authorizes noncompetitive proposals in response to a written request from the non-Federal entity; or
- (4) After solicitation of a number of sources, competition is determined inadequate.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 54409, Sept. 10, 2015

2 C.F.R. § 200.321. Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms.

- (a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.
- (b) Affirmative steps must include:
- (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
- (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
- (6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs
- (1) through (5) of this section.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise noted

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2 C.F.R. § 200.322. Procurement of recovered materials.

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014

2 C.F.R. § 200.323. Contract cost and price.

- (a) The non-Federal entity must perform a cost or price analysis in connection with every procurement action in excess of the Simplified Acquisition Threshold including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, the non-Federal entity must make independent estimates before receiving bids or proposals.
- (b) The non-Federal entity must negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration must be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.
- (c) Costs or prices based on estimated costs for contracts under the Federal award are allowable only to the extent that costs incurred or cost estimates included in negotiated prices would be allowable for the non-Federal entity under Subpart E—Cost Principles of this part. The non-Federal entity may reference its own cost principles that comply with the Federal cost principles.
- (d) The cost plus a percentage of cost and percentage of construction cost methods of contracting must not be used.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise noted

2 C.F.R. § 200.324. Federal awarding agency or pass-through entity review.

(a) The non-Federal entity must make available, upon request of the Federal awarding agency or pass-through entity, technical specifications on proposed procurements where the Federal awarding agency or pass-through entity believes such review is needed to ensure that the item or service specified is the one being proposed for acquisition. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the non-Federal entity desires to have the review accomplished after a solicitation has been developed, the Federal awarding agency or pass-through entity may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

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- (b) The non-Federal entity must make available upon request, for the Federal awarding agency or pass-through entity pre-procurement review, procurement documents, such as requests for proposals or invitations for bids, or independent cost estimates, when:
- (1) The non-Federal entity's procurement procedures or operation fails to comply with the procurement standards in this part;
- (2) The procurement is expected to exceed the Simplified Acquisition Threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation;
- (3) The procurement, which is expected to exceed the Simplified Acquisition Threshold, specifies a "brand name" product;
- (4) The proposed contract is more than the Simplified Acquisition Threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or
- (5) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the Simplified Acquisition Threshold.
- (c) The non-Federal entity is exempt from the pre-procurement review in paragraph (b) of this section if the Federal awarding agency or pass-through entity determines that its procurement systems comply with the standards of this part.
- (1) The non-Federal entity may request that its procurement system be reviewed by the Federal awarding agency or pass-through entity to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews must occur where there is continuous high-dollar funding, and third party contracts are awarded on a regular basis:
- (2) The non-Federal entity may self-certify its procurement system. Such self-certification must not limit the Federal awarding agency's right to survey the system. Under a self-certification procedure, the Federal awarding agency may rely on written assurances from the non-Federal entity that it is complying with these standards. The non-Federal entity must cite specific policies, procedures, regulations, or standards as being in compliance with these requirements and have its system available for review.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise noted

2 C.F.R. § 200.325. Bonding requirements.

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

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- (b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
- (c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

69 FR 26280, May 11, 2004; 78FR 78608, Dec. 26, 2013, unless otherwise noted

2 C.F.R. § 200.326. Contract provisions.

The non-Federal entity's contracts must contain the applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards.

69 FR 26280, May 11, 2004; 78 FR 78608, Dec. 26, 2013, unless otherwise note

EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

2 C.F.R. Part, 200, Appendix II

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

- (A) Contracts for more than the simplified acquisition threshold currently set at \$150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.
- (B) All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.
- (C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
- (D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3. "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.
- (E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or

EXHIBIT A PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

- (F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.
- (G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
- (H) Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
- (I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- (J) See §200.322 Procurement of recovered materials.

78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75888, Dec. 19, 2014

BID FORM PAUL HOPKINS PARK PEDESTRIAN BRIDGE COUNTY OF GALVESTON, TEXAS

By signing here, the firm does hereby attest that it has fully read the instructions, conditions and general and special provisions and understands them.

THE COMPANY OF:					
ADDRESS:					
FEIN (TAX ID):					
The following shall be returned with responsive. It is the responsibility of the					
Items: 1. References (if required)		Confir	med (X):		
2. Addenda, if any		#1	#2	#3	#4
3. One (1) original and three (3) co	pies of submittal				
4. Bid Form					
5. Vendor Qualification Packet			_		
6. Debarment Certification Form			_		
7. Non-Collusion Affidavit			_		
8. Payment Terms:			_net 30		_Other
9. Lobbyist Certification					
Person to contact regarding this bid:					
Title:	Phone:			_Fax:	
E-mail address:					
Name of person authorized to bind the	e Firm:				
Signature:					_Date:
Title:	Phone:			_Fax:	
E-mail address:					

BID FORM PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

Bidder shall use this form to provide the information for notice.

	Contact information for notice:						
	Name:						
	Address:						
	Telephone Number: Facsimile	number:					
2.	If a copy of notice is requested, please complete below:						
	Name:Address:						
	Telephone Number: Facsimile						
	If second or more copies are requested for notice, please supplement as "Supplementary Notice Information."						
	Bidder to submit reference information. Bidder shall use reference information. If Bidder wishes to provide more to this form and should clearly mark the supplement as "Supplement as".	than the minimum, Bidder should supple					
	References who can attest to the Bidder's capability to carry out the requirements set forth in this b						
	Business Name of Organization:						
	Title of Individual within Organization, if applicableBusiness address:						
	Telephone number:	Facsimile number:					
	Business Name of Organization:Name of Person:						
	Title of Individual within Organization, if applicableBusiness address:						
	Telephone number:	Facsimile number:					
	Business Name of Organization: Name of Person:						
	Title of Individual within Organization, if applicableBusiness address:						
	Telephone number						

BID FORM PAUL HOPKINS PARK PEDESTRIAN BRIDGE GALVESTON COUNTY, TEXAS

References of major supplier of Bidder who can speak to the financial capability of the Bidder to carry out the requirements set forth in this bid:

Business Name of Supplier				
Name of Person:				
Title of Individual within business:				
Business address:				
Telephone number:	Facsimile number:			
Business Name of Supplier				
Name of Person:				
Title of Individual within business:				
Telephone number:	Facsimile number:			
Business Name of Supplier_				
Name of Person:				
Title of Individual within business:				
Telephone number:	Facsimile number:			

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CERTIFICATION REGARDING LOBBYING (31 U.S.C.A. § 1352)

This Certification must be completed, signed, dated and returned to the Galveston County Purchasing Agent

Pr	Procurement Number and Description:							
	BID #B191052, Paul Hopkins Park Pedestrian Bridge							
Pro	oposer CERTIFIES, to the best of its knowledge and belief, that:							
1.	No Federal appropriated funds have been paid or will be paid, by or on behalf of the proposer, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.							
2.	If any funds other than Federal appropriated funds have been paid or will be paid to any person							

- 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the proposer shall complete and submit **Standard Form LLL**, "Disclosure Form to Report Lobbying", in accordance with its instructions.
- 3. Proposer shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Name of Organization/Corporation:							
Address:							
City:	State:	Zip Code:					
Signature of Authorized		Date					
Signatory for Proposer:		Signed:					
Title of Authorized Signatory of	f Proposer:						

State of Texas	8
	8
County of Galveston	8

NON-COLLUSION AFFIDAVIT

	NON-C	OLLUSION AFFID	AVII						
	fore me, the undersigned notary, on this day perso st duly sworn, deposes and certifies that:	onally appeared		(Affiant), whom being					
	Affiant is the	of		, that					
	Affiant is the (Individual, Partner, Corporate O	Officer)	(Name of Qualifier)	,					
	submitted the attached Qualification in Bid No.								
•	Affiant is a duly authorized representative of Qu	nalifier and is authorized	to make this Non-Collusi	ion Affidavit;					
•	The attached Qualification is genuine and is not	a collusive or sham Qua	lification;						
•	The attached Qualification has been independently arrived at without collusion with any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor;								
•	Qualifier has not colluded, conspired, connived operson, firm, competitor, or potential competitor bidder, proposer, person, firm, competitor, or po	r, to submit a collusive o	r sham qualification or th						
•	Qualifier has not in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other qualifier, bidder, proposer, person, firm, competitor, or potential competitor to fix the price or prices in the attached Qualification or of the qualification any other qualifier;								
•	Qualifier has not in any manner, directly or indirectly or indirectly any other qualifier bidder, proposer, person cost element of the Qualification price or prices connivance, or unlawful agreement any advantage contract;	n, firm, competitor, or po of any other qualifier, or	tential competitor to fix the to secure through any co	he overhead, profit or llusion, conspiracy,					
•	Affiant has not in any manner, directly or indirectly with any other qualifier, bidder, proposer, person qualifier, bidder, proposer, person, firm, compet assistance in procuring or attempting to procure Qualification or the qualification of any other Qualification of the qualifica	n, firm, competitor, or potitor, or potential compet a contract or in return for	otential competitor, paid of itor any money or anythir	or agreed to pay any otheng of value in return for					
•	Affiant certifies that Affiant is fully informed repenalties of perjury, certifies and affirms the true as well as to Affiant signing on its behalf.								
		Sign	ature of Affiant						
SV	VORN TO and SUBSCRIBED before me this	day of)19.					
		Notary Public							
		My Commission Expir	es.						



County of Galveston Purchasing Department Vendor Qualification Packet

(rev. 1.4, September 28, 2017)

All interested parties seeking consideration for qualified vendor status with the County of Galveston should complete and return only the following forms to:

Galveston County Purchasing Department 722 Moody Avenue, (21st Street), 5th Floor Galveston, Texas 77550 (409) 770-5371 office (409) 621-7987 fax

PEID Form:

Person /Entity Information Data

W -9 Form:

Request for Taxpayer Identification Number and Certification

(please note that the included form may not be the latest revised form issued by the Internal Revenue Service. Please check the IRS website at http://www.irs.govlpublirs-rdflfw9.pdf for the

latest revision of this form.)

CIO Form:

Conflict of Interest Questionnaire

(please note that the included form may not be the latest revised form issued by the State of

Texas Ethics Commission. Please check the Texas Ethics Commission website at

http://www.ethics.state.tx.us/whatsnew/conflict_forms.htm for the latest revision of this form. Please note that Galveston County Purchasing Agent is not responsible for the filing of this form with the Galveston County Clerk per instructions of the State of Texas Ethics Commission).

Debarment:

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS & REQUIREMENT TO REGISTER IN SAM

Vendors/contractor certifies that neither it, nor any of its Principals, are presently debarred, suspended, proposed for debarment, disqualified, excluded, or in any way declared ineligible for the award of contracts by any Federal agency. Vendor agrees that it shall refund Galveston County for any payments made to Contractor while ineligible. Vendor acknowledges that Contractor's uncured failure to perform under any agreement with the County of Galveston, if such should occur, may result in Contractor being debarred from performing additional work for the County, the respecting State Agency administering the grant funding the contract, if applicable, the State, FEMA or HUD (as applicable), and other Federal and State entities. Further, Vendor has executed the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters and returned the fully completed and executed original certification with the submission of this Vendor Qualification Packet. The truthful and fully completed and executed original of the Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters must be included with the submission of this Vendor Qualification Packet and is a mandatory requirement to become a vendor of Galveston County. Vendor's failure to include the fully completed and executed original of this Certification shall be considered non-compliant with the requirements of this vendor qualification request and grounds for the rejection of vendor's request. Vendor shall immediately notify the County Purchasing Agent if it becomes debarred or suspended, placed on the Consolidated List of Debarred Contractors, or in any other way becomes ineligible for award of contract by any Federal agency. This Certification is a material fact relied upon by Galveston County; if it is later determined that the vendor did not comply with 2 C.F.R. Part 180 and 2 C.F.R. Part 3000, in additional to the remedies available to Galveston County and the State agency administering a grant, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment of contractor. If the contract to be awarded pursuant to a Galveston County procurement effort involves the use of Federal funds, then vendor must also be registered in the Federal Contractor Registry through the System for Award Management (SAM) to be eligible for award of contract pursuant to the procurement.

Information regarding the SAM is available at:

 $\underline{http://www.federal contractorregistry.com/?gclid=CIG1hf2rr8wCFYkCaQoducANZw} \ or \ at \ \underline{https://www.sam.gov/portal/SAM/\#1}.$

No contract involving the use of Federal funds may be awarded to any vendor unless and until such registration is current and in good standing under SAM. Successful vendors must maintain SAM registration throughout the entire term of any contractual agreement with the County. If a contract involves the use of Federal funds, then vendor must enclose proof of such SAM registration within its response, which is also a mandatory requirement of County procurement policy; failure to enclose such proof shall be considered non-compliant with the requirements of any procurement effort and grounds for the rejection of vendor's response to any procurement efforts (i.e., bid, proposal, or qualifications statement, as applicable).

Certificate(s) of Insurance: <u>If the person or entity seeking qualified vendor status with the County will be performing work at or on any County owned facility and/or property, Certificate(s) of Insurance are required to be submitted prior to performing any work.</u>

Insurance requirements are as follows:

Public Liability and Property Damage Insurance:

Successful vendor agrees to keep in full force and effect, a policy of public liability and property damage insurance issued by a casualty company authorized to do business in the State of Texas, and in standard form approved by the Board of Insurance Commissioners of the State of Texas, with coverage provisions insuring the public from any loss or damage that may arise to any person or property by reason of services rendered by vendor. Vendor shall at its own expense be required to carry the following minimum insurance coverages:

- 1. For damages arising out of bodily injury to or death of one person in anyone occurrence one hundred thousand and no/100 dollars (\$100,000.00);
- 2. For damages arising out of bodily injury to or death of two or more persons in anyone occurrence three hundred thousand and no/100 dollars (\$300,000.00); and
- 3. For injury to or destruction of property in anyone occurrence one hundred thousand and no/100 dollars (\$100,000.00).

This insurance shall be either on an occurrence basis or on a claims made basis. Provided however, that if the coverage is on a claims made basis, then the vendor shall be required to purchase, at the termination of this agreement, tail coverage for the County for the period of the County's relationship with the vendor under this agreement. Such coverage shall be in the amounts set forth in subparagraphs (1), (2), and (3) above.

Worker's Compensation Insurance:

Successful vendor shall also carry in full force Workers' Compensation Insurance policy(ies), if there is more than one employee, for all employees, including but not limited to full time, part time, and emergency employees employed by the vendor. Current insurance certificates certifying that such policies as specified above are in full force and effect shall be furnished by the vendor to the County.

The County of Galveston shall be named as additional insured on policies listed in subparagraphs above and shall be notified of any changes to the policy(ies) during the contractual period.

Insurance is to be placed with insurers having a Best rating of no less than A. The vendor shall furnish the County with certificates of insurance and original endorsements affecting coverage required by these insurance clauses. The certificates and endorsements for each insurance policy are to be signed by a person authorized by the insurer to bind coverage on its behalf. The vendor shall be required to submit annual renewals for the term of any contractual agreement, purchase order or term contract, with Galveston County prior to expiration of any policy.

In addition to the remedies stated herein, the County has the right to pursue other remedies permitted by law or in equity.

The County agrees to provide vendor with reasonable and timely notice of any claim, demand, or cause of action made or brought against the County arising out of or related to utilization of the property. Vendor shall have the right to defend any such claim, demand, or cause of action at its sole cost and expense and within its sole and exclusive discretion. The County agrees not to compromise or settle any claim or cause of action arising out of or related to the utilization of the property without the prior written consent of the vendor.

In no event shall the County be liable for any damage to or destruction of any property belonging to the vendor unless specified in writing and agreed upon by both parties.

Procurement Policy - Special Note:

Understand that it is, according to Texas Local Government Code, Section 262.011, Purchasing Agents, subsections (d), (e), and (f), the sole responsibility of the Purchasing Agent to supervise all procurement transactions.

Therefore, be advised that all procurement transactions require proper authorization in the form of a Galveston County purchase order from the Purchasing Agent's office prior to commitment to deliver supplies, materials, equipment, including contracts for repair, service, and maintenance agreements. Any commitments made without proper authorization from the Purchasing Agent's office, pending Commissioners' Court approval, may become the sole responsibility of the individual making the commitment including the obligation of payment.

Code of Ethics - Statement of Purchasing Policy:

Public employment is a public trust. It is the policy of Galveston County to promote and balance the objective of protecting the County's integrity and the objective of facilitating the recruitment and retention of personnel needed by Galveston County. Such policy is implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public office.

Public employees must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the Galveston County procurement organization.

To achieve the purpose of these instructions, it is essential that those doing business with Galveston County also observe the ethical standards prescribed here.

General Ethical Standards: It shall be a breach of ethics to attempt to realize personal gain through public employment with Galveston County by any conduct inconsistent with the proper discharge of the employee's duties.

It shall be a breach of ethics to attempt to influence any public employee of Galveston County to breach the standards of ethical conduct set forth in this code.

It shall be a breach of ethics for any employee of Galveston County to participate directly or indirectly in procurement when the employee knows that:

- The employee or any member of the employee's immediate family has a financial interest pertaining to the procurement.
- A business or organization in which the employee, or any member of the employee's immediate family, has a financial interest pertaining to the procurement.
- Any other person, business or organization with which the employee or any member of the
 employee's immediate family is negotiating or has an arrangement concerning prospective
 employment is involved in the procurement.

Gratuities: It shall be a breach of ethics to offer, give or agree to give any employee of Galveston County, or for any employee or former employee of Galveston County to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any program requirement or a contract or subcontract, or to any solicitation or proposal therefore pending before this government.

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

Contract Clause: The prohibition against gratuities and kickbacks prescribed above shall be conspicuously set forth in every contract and solicitation by Galveston County.

Confidential Information: It shall be a breach of ethics for any employee or former employee of Galveston County to knowingly use confidential information for actual or anticipated personal gain, or for the actual or anticipated gain of any person.

Questions/Concerns:

If you have any questions or concerns regarding the information or instructions contained within this packet, please contact any member of the Purchasing Department staff at (409) 770-5371.

CONFLICT OF INTEREST DISCLOSURE REPORTING

Proposer may be required under Chapter 176 of the Texas Local Government Code to complete and file a conflict of interest questionnaire (CIQ Form). If so, the completed CIQ Form must be filed with the County Clerk of Galveston County, Texas.

If Proposer has an employment or other business relationship with an officer of Galveston County or with a family member of an officer of Galveston County that results in the officer or family member of the officer receiving taxable income that exceeds \$2,500.00 during the preceding 12-month period, then Proposer MUST complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

If Proposer has given an officer of Galveston County or a family member of an officer of Galveston County one or more gifts with an aggregate value of more than \$250.00 during the preceding 12-months, then Proposer MUST complete a CIQ Form and file the original of the CIQ Form with the County Clerk of Galveston County.

The Galveston County Clerk has offices at the following locations:

Galveston County Clerk
Galveston County Justice Center, Suite 2001
600 59th Street
Galveston, Texas 77551

Galveston County Clerk North County Annex, 1st Floor 174 Calder Road League City, Texas 77573

Again, if Proposer is required to file a CIQ Form, the original completed form is filed with the Galveston County Clerk (not the Purchasing Agent).

For Proposer's convenience, a blank CIQ Form is enclosed with this proposal. Blank CIQ Forms may also be obtained by visiting the Galveston County Clerk's website and/or the Purchasing Agent's website - both of these web sites are linked to the Galveston County homepage, at http://www.co.galveston.tx.us.

As well, blank CIQ Forms may be obtained by visiting the Texas Ethics Commission website, specifically at http://www.ethics.state.tx.us/whatsnew/conflictforms.htm.

Chapter 176 specifies deadlines for the filing of CIQ Forms (both initial filings and updated filings).

It is Proposer's sole responsibility to file a true and complete CIQ Form with the Galveston County Clerk if Proposer is required to file by the requirements of Chapter 176. Proposer is advised that it is an offense to fail to comply with the disclosure reporting requirements dictated under Chapter 176 of the Texas Local Government Code.

If you have questions about compliance with Chapter 176, please consult your own legal counsel. Compliance is the individual responsibility of each person, business, and agent who is subject to Chapter 176 of the Texas Local Government Code.



COUNTY of GALVESTON

Purchasing Department rev. 1.3, March 29, 2010

FORM PEID: Request for Person-Entity Identification Data

Instructions: Please type or print clearly when completing sections 1 thru 4 and return completed form to:

Galveston County Purchasing Agent 722 Moody Avenue (21 st. Street), 5th Floor Galveston, Texas 77550 (409) 770-5371 prodoc@co.galveston.tx.us

Business Name:				
Attention Line:				
Physical Address:				
		T		
City:			State:	Zip+4:
Billing / Remit Address:				
Dinnig / Reinit Address.				
City:		;	State:	Zip+4
Main Contact Days				
Main Contact Person:				
Main Phone Number:				
Fax Number:				
E-mail Address:				
Are	eas below are for Coun	itv use only.		
Requested By:		Phone I		
			EXL. #	
Department:		Date:		
Action Requested - Check One:	IFAS PEID Vendor N	lumber		
() Add New	() Change Data	idiliber.	()Re-	-activate
() Inactivate	() Employee		() Atto	
() Landlord	() Foster Parent		()Re	•
() OneTime	() Foster Child			

Form W-9 (Rev. December 2014) Department of the Treasury

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

- Torrial	1 Name (as about a service)												
	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.												
page 2.	2 Business name/disregarded entity name, if different from above												
e e	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: ☐ Individual/sole proprietor or ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate ☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶							Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any)					
Print or type Instructions	Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the tax classification of the single-member owner.		bove f		Exemption from FATCA reporting code (if any)								
4 2	Uther (see instructions) ►			0	oplies to	o accounts	maint	ained o	utside ti	ie U.S.)	_		
pecifi	5 Address (number, street, and apt. or suite no.)	Request	er's nar	ne an	d addr	ress (op	tiona	ıl)					
See S	6 City, state, and ZIP code												
	7 List account number(s) here (optional)					***************************************					_		
Pari	Taxpayer Identification Number (TIN)												
Enter y	our TIN in the appropriate box. The TIN provided must match the name given on line 1 to avo	hic	Social	secu	rity nu	ımber					\neg		
backu) withholding. For individuals, this is generally your social security number (SSN). However, to	ara Î	- T	1		11111111	1				닉		
entities	it allen, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other , it is your employer identification number (EIN). If you do not have a number, see <i>How to get</i>				-		-						
	page 3.		or										
Note.	f the account is in more than one name, see the instructions for line 1 and the chart on page	4 for	Emplo	yer id	entific	cation r	numb	er					
guideli	nes on whose number to enter.			ī ī		 				╡			
				-									
Part					1	l		L			_		
Under	penalties of perjury, I certify that:								-				
1. The	number shown on this form is my correct taxpayer identification number (or I am waiting for	a numbe	r to be	e issu	ed to	me); a	and						
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and													
3. I am a U.S. citizen or other U.S. person (defined below); and													
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.													
interes genera instruc	Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.												
Sign Here	Signature of U.S. person ► Dat	te ▶						*****			_		

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- \bullet Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

- 1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- 2. Certify that you are not subject to backup withholding, or
- 3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- 4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See What is FATCA reporting? on page 2 for further information.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- · An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- · An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

- - 2. The treaty article addressing the income.
- 3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
- The type and amount of income that qualifies for the exemption from tax.
- $\,$ 5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident allen or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

- 1. You do not furnish your TIN to the requester,
- 2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

- 3. The IRS tells the requester that you furnished an incorrect TIN,
- The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
- You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See Exempt payee code on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see Special rules for partnerships above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See Exemption from FATCA reporting code on page 3 and the Instructions for the Requester of Form W-9 for more Information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; do not leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. Individual. Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note. ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

- b. Sole proprietor or single-member LLC. Enter your individual name as shown оп your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.
- c. Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation. Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.
- d. Other entities. Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.
- e. Disregarded entity. For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys'
 fees or gross proceeds paid to attorneys, and corporations that provide medical or
 health care services are not exempt with respect to payments reportable on Form
 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
 - 2-The United States or any of its agencies or instrumentalities
- 3-A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5-A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8-A real estate investment trust
- 10-A common trust fund operated by a bank under section 584(a)
- 11-A financial institution
- 12-A middleman known in the investment community as a nominee or custodian
- 13-A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for	THEN the payment is exempt for
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

- A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)
 - B-The United States or any of its agencies or instrumentalities
- C-A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)
- E-A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)
- F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state
 - G-A real estate investment trust
- H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the investment Company Act of
- I-A common trust fund as defined in section 584(a)
- J-A bank as defined in section 581
- K-A broker
- L-A trust exempt from tax under section 664 or described in section 4947(a)(1)
- M-A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.ssa.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/businesses and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see Exempt payee code earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

- 1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.
- 2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.
- 3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.
- 4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).
- 5. Mortgage Interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
Individual Two or more individuals (joint account)	The individual The actual owner of the account or, if combined funds, the first individual on the account'
 Custodian account of a minor (Uniform Gift to Minors Act) 	The minor ²
a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee' The actual owner'
Sole proprietorship or disregarded entity owned by an individual	The owner ³
 Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i) (A)) 	The grantor*
For this type of account:	Give name and EIN of:
Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity ⁴
Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
Association, club, religious, charitable, educational, or other tax- exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i) (B))	The trust

List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

- ³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.
- List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity Itself is not designated in the account title.) Also see Special rules for partnerships on page 2.

 *Note. Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identify thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spam@uce.gov or contact them at www.ftc.gov/idtheft or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

 $^{^2}$ Circle the minor's name and furnish the minor's SSN.

CONFLICT OF INTEREST QUESTIONNAIRE For vendor or other person doing business with local governmental entity FOR		
This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.	OFFICE USE ONLY	
This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001 (1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).	Date Received	
By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.		
A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.		
Name of person who has a business relationship with local governmental entity.		
Check this box if you are filing an update to a previously filed questionnaire.		
(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)		
Name of local government officer with whom filer has employment or business relationship.		
Name of Officer		
This section (item 3 including subparts A, B, C & D) must be completed for each <i>officer</i> with whom the filer has an employment or other business relationship as defined by Section 176.001 (1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.		
A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?		
Yes NO		
B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?		
Yes NO		
C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an <i>officer</i> or director, or holds an ownership of 10 percent or more?		
Yes NO		
D. Describe each employment or business relationship with the local government officer named in this section.		
4		
Signature of person doing business with the governmental entity	Date	



County of Galveston

Solicitation Number: BID #B191052

ACKNOWLEDGMENT AND CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER INELGIBILITY

Executive Orders 12549 & 12689 Certification, Debarment and Suspension

Solicitation Title: Paul Hopkins Park Pedestrian Bridge						
Contractor hereby CERTIFIES that:						
Contractor, and all of its principals, is not presently debarred, suspended, proposed for debarment, proposed for suspension, or declared ineligible under Executive Order 12549 or Executive Order 12689, Debarment and Suspension, and is not in any other way ineligible for participation in Federal or State assistance programs;						
Contractor, and all of its principals, were not and have not been debarred, suspended, proposed for debarment, proposed for suspension, or declared ineligible under Executive Order 12549 or Executive Order 12689, Debarment and Suspension, and were not and have not been in any other way ineligible for participation in Federal or State assistance programs at the time its' proposal was submitted in the procurement identified herein and at any time since submission of its' proposal;						
Contractor has included, and shall continue to it itself and any sub-contractors in connection wit	nclude, this certification in all contracts between h services performed under this contract; and					
the Galveston County Purchasing Agent, if Cor	Contractor shall notify Galveston County in writing immediately, through written notification to the Galveston County Purchasing Agent, if Contractor is not in compliance with Executive Order 12549 or 12689 during the term of its contract with Galveston County.					
Contractor Represents and Warrants that the individual Certification on its behalf has the full power and author hereto.	-					
Name of Business	Date					
By:						
Signature Printed Name & Title						

SPECIAL PROVISIONS FOR CONSTRUCTION

1. Contract and Contract Documents

- (a) The project to be constructed pursuant to this contract will be financed with assistance from FEMA and is subject to all applicable Federal and State laws and regulations.
- (b) The Plans, Specifications and Addenda, General Provisions shall form part of this contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth.

2. Definitions

Whenever used in any of the contract Documents, the following meanings shall be given to the terms here in defined:

- (b) The term "Project Area" means the area within which are the specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this contract.
- (c) The term "Engineer" means Huitt-Zollars, Inc., Engineer in charge, serving the Owner with architectural or engineering services, his successor, or any other person or persons, employed by the Owner for the purpose of directing or having in charge the work embraced in this Contract.
- (d) The term "Contract Documents" means and shall include the following: Invitation to Bid, , Signed Copy of Bid, General Conditions, Special Provisions For Construction, Acknowledgement and Certification Regarding Debarment, Non-Collusion Affidavit, Vendor Qualification Packet, Payment and Performance Bonds, Contract Award, Addenda (if any), Technical Specifications, and Drawings (as listed in the Schedule of Drawings).
- (e) The term "Substantially Complete" shall mean that the work is fully completed with the exception of minor miscellaneous work and adjustments.

3. Supervision By Contractor

- (a) Except where the Contractor is an individual and gives his personal supervision to the work, the Contractor shall provide a competent superintendent, satisfactory to the Local Public Agency and the Engineer, on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.
- (b) The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

4. Subcontracts

- (a) The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this contract until he has verified the subcontractor as eligible to participate in federally funded contracts.
- (b) No proposed subcontractor shall be disapproved by the city/county except for cause.
- (c) The Contractor shall be as fully responsible to the city/county for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work and required compliance by each subcontractor with the applicable provisions of the Contract.
- (e) Nothing contained in the Contract shall create any contractual relation between any subcontractor and the Owner.

5. Fitting and Coordination of Work

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material suppliers engaged upon this Contract.

6. Payments to Contractor

- (a) Partial Payments
 - 1) The Contractor shall prepare his requisition for partial payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for his approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) Five percent (5%) of the total amount, to be retained until final payment and (2) the amount of all previous payments. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices contained in the agreement. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection of the Engineer.
 - 2) Monthly or partial payments made by the Owner to the Contractor are moneys advanced for the purpose of assisting the contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the Owner. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Owner in all details.

(b) Final Payment

1) After final inspection and acceptance by the Owner of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the careful inspection of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this contract shall be the amount computed as described above less all previous payments.

- 2) The Owner before paying the final estimate, shall require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the Owner deems it necessary in order to protect its interest. The Owner may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments made shall in no way impair the obligations of any surety or sureties furnished under this Contract.
- 3) Any amount due the Owner under Liquidated Damages shall be deducted from the final payment due the contractor.
- (c) Payments Subject to Submission of Certificates

Each payment to the Contractor by the Owner shall be made subject to submission by the Contractor of all written certifications required of him and his subcontractors.

(d) Withholding Payments

The Owner may withhold from any payment due the Contractor whatever is deemed necessary to protect the Owner, and if so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any moneys for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

7. Changes in the Work

- (a) The Owner may make changes in the scope of work required to be performed by the Contractor under the Contract without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.
- (b) Except for the purpose of affording protection against any emergency endangering health, life, limb or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- (c) If applicable unit prices are contained in the Agreement, the Owner may order the Contractor to proceed with desired unit prices specified in the Contract; provided that in case of a unit price contract the net value of all changes does not increase the original total amount of the agreement by more than twenty-five percent (25%) or decrease the original the total amount by eighteen percent (18%).
- (d) Each change order shall include in its final form:
 - 1) A detailed description of the change in the work.

- 2) The Contractor's proposal (if any) or a confirmed copy thereof.
- 3) A definite statement as to the resulting change in the contract price and/or time.
- 4) The statement that all work involved in the change shall be performed in accordance with contract requirements except as modified by the change order.
- 5) The procedures as outlined in this Section for a unit price contract also apply in any lump sum contract.

8. Estimated Quantities

This Contract, including the specifications, plans and estimates, is intended to show clearly all the work to be done and material to be furnished hereunder. The estimated quantities of the various classes of work to be done and material to be furnished under this contract are approximate and are to be used as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this contract may differ somewhat from these estimates, and that the basis for payment under this contract shall be the plan quantity or actual amount of such work done whichever is specified. It is further understood that the County does not guarantee any minimum amount of work under this Contract.

Contractor agrees that it will make no claim for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this Contract and the estimated quantities contemplated and contained in the proposals.

9. Claims for Extra Cost

- (a) If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Owner, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.
- (b) Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.
- (c) Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall be reported at once to the Owner and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Owner.
- (d) If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or time is justifiable, a change order shall be executed.

10. Time

The Contractor is advised that time for completion will consist of the number of calendar days set out in the Contract Award. The time for completion will begin to run on the day after the issuance of a notice to proceed by the County. The Contractor is required to start work no later than ten (10) working days after the issuance of the written notice to proceed. Failure to timely commence operations may be deemed by the County to be a default. The Contractor will complete the work at that site within the time period specified. If there is more than one site listed on the notice to proceed, work for all sites must be completed not later than is specified for each site.

11. Termination, Delays, and Liquidated Damages

(a) Right of the Owner to Terminate Contract.

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract.

The notices shall contain the reasons for such intention to terminate the contract, and unless such violation or delay shall cease and satisfactory arrangement of correction be made within ten days, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor. The Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and complete the project by bid/contract or by force account at the expense of the Contractor and his Surety shall be liable to the Owner for any excess cost incurred. In such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

(b) Liquidated Damages for Delays.

Contractor agrees that time is of the essence of this contract and that for each day of a delay of a day beyond the number of working days or calendar days herein agreed upon the completion of the work herein specified and contracted for (after due allowance for such extension of time as is provided for under Extension of Time hereinabove) County may withhold permanently from Contractor's total compensation the sum of \$1,000.00 for each calendar day of delay, until the work is completed, as liquidated damages for such delay. The Contractor and his sureties shall be liable to the Owner for the amount thereof.

(c) Excusable Delays.

- 1) The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:
 - a. Any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, national defense, or any other national emergency;
 - b. Any acts of the Owner;
 - c. Causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions.

2) Provided, however, that the Contractor promptly notifies the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

12. Assignment or Novation

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the Owner; provided, however, that assignments to banks or other financial institutions may be made without the consent of the Owner. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

13. Disputes

- (a) All disputes arising under this Contract or its interpretation except those disputes covered by FEDERAL LABOR STANDARDS PROVISIONS whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall, within ten (10) days of commencement of the dispute, be presented by the Contractor to the Owner for decision. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt of the Owner.
- (b) The Contractor shall submit in detail his claim and his proof thereof.
- (c) If the Contractor does not agree with any decision of the Owner, he shall in no case allow the dispute to delay the work but shall notify the Owner promptly that he is proceeding with the work under protest.

14. Technical Specifications and Drawings

Anything mentioned in the Technical Specifications and not shown on the Drawings, or vice versa, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the Owner, without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

15. Shop Drawings

(a) All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Engineer in copies for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the contract time shall be granted by reason of his failure in this respect.

- (b) Any drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.
- (c) If a shop drawing is in accordance with the contract or involves only a minor adjustment in the interest of the owner not involving a change in contract price or time; the engineer may approve the drawing. The approval shall not relieve the Contractor from his responsibility for adherence to the contract or for any error in the drawing.

16. Requests for Supplementary Information

It shall be the responsibility of the Contractor to make timely requests of the Owner for any additional information not already in his possession which should be furnished by the Owner under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provision of this section.

17. Materials and Workmanship

- (a) Unless otherwise specifically provided for in the technical specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the technical specifications as "equal to" any particular standard, the Engineer shall decide the question of equality.
- (b) The Contractor shall furnish to the Owner for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval full information concerning all other materials or articles which he proposes to incorporate.
- (c) Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- (d) Materials specified by reference to the number or symbol of a specific standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in the technical specifications shall have full force and effect as though printed therein.
- (e) The Owner may require the Contractor to dismiss from the work such employee or employees as the Owner or the Engineer may deem incompetent, or careless, or insubordinate.

18. Samples, Certificates and Tests

- (a) The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer, promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.
- (b) Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in making a prompt decision regarding the acceptability of the sample. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.
- (c) Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.
- (d) Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:
 - 1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
 - 2) The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;
 - 3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient:
 - 4) The Owner will pay all other expenses.

19. Permits and Codes

(a) The Contractor shall give all notices required by and comply with all applicable laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the drawings and technical specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the Owner. Where the requirements of the drawings and technical specifications fail to comply with such applicable ordinances or codes, the Owner will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

- (b) Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the drawings and technical specifications), the Contractor shall remove such work without cost to the Owner.
- (c) The Contractor shall at his own expense, secure and pay for all permits for street pavement, sidewalks, shed, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.
- (d) The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements contained in this Contract.
- (e) The Contractor will be required to make arrangements for and pay the water. electrical power, or any other utilities required during construction.
- (f) During construction of this project, the Contractor shall use every means possible to control the amount of dust created by construction. Prior to the close of a day's work, the Contractor, if directed by the Owner, shall moisten the bank and surrounding area to prevent a dusty condition.

20. Care of Work

- (a) The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance.
- (b) The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- (c) In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the Owner is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Owner.
- (d) The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.
- (e) The Contractor shall shore up, brace, underpin, secure, and protect as maybe necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements included in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

21. Accident Prevention

- (a) No laborer or mechanic employed in the performance of this Contract shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards promulgated by the Secretary of Labor.
- (b) The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work.
- (c) The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner with reports concerning these matters.
- (d) The Contractor shall indemnify and save harmless the Owner from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.
- (e) The Contractor shall provide trench safety for all excavations more than five feet deep prior to excavation. All OSHA Standards for trench safety must be adhered to by the Contractor.
- (f) The contractor shall at all times conduct his work in such a manner as to insure the least possible inconvenience to vehicular and pedestrian traffic. At the close of the work each day, all streets where possible in the opinion of the Owner, shall be opened to the public in order that persons living in the area may have access to their homes or businesses by the use of the streets. Barricades, warning signs, and necessary lighting shall be provided to the satisfaction of the Owner at the expense of the Contractor.

22. Sanitary Facilities

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

23. Use of Premises

- (a) The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the drawings and as prescribed by ordinances or permits, or as may be desired by the Owner, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- (b) The Contractor shall comply with all reasonable instructions of the Owner and all existing state and local regulations regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

24. Removal of Debris, Cleaning, Etc.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear.

Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for work, and put the whole site of the work and public rights of way in a neat and clean condition.

25. Inspection

- (a) All materials and workmanship shall be subject to inspection, examination, or test by the Owner and Engineer at any and all times during manufacture or construction and at any and all places where such manufacture or construction occurs. The Owner shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected.
 - Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the Owner may by contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any Monies which may be due the Contractor, without prejudice to any other rights or remedies of the Owner.
- (b) The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the Owner will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the technical specifications.
- (c) The Contractor shall notify the Owner sufficiently in advance of back filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the Owner, the Contractor shall uncover for inspection and recover such facilities at his own expense, when so requested by the Owner.
- (d) Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, shall be allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.
- (e) Inspection of materials and appurtenances to be incorporated in the improvements included in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the technical specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.
- (f) Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the Owner or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

26. Review by Owner

The Owner and its authorized representatives and agents shall have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

27. Final Inspection

When the Improvements included in this Contract are substantially completed, the Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The Owner will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable.

28. Deduction for Uncorrected Work

If the Owner deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner and subject to settlement, in case of dispute, as herein provided.

29. Warranty of Title

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed by him to the Owner free from any claims, liens, or charges. Neither the Contractor nor any person, firm, or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

30. Warranty of Workmanship and Materials

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements included in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of 12 months from the date of final acceptance of the work.

31. Job Offices

(a) The Contractor and his subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. The Owner shall be consulted with regard to locations.

(b) Upon completion of the improvements, or as directed by the Owner, the Contractors shall remove all such temporary structures and facilities from the site, and leave the site of the work in the condition required by the contract.

32. Partial Use of Site Improvements

The Owner may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

- (a) The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.
- (b) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
- (c) The period of guarantee stipulated in the Section 29 hereof shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

33. Contract Period

The work to be performed under this contract shall commence within the time stipulated by the Owner in the Notice to Proceed, and shall be fully completed within 90 calendar days thereafter.

34. Keeping Of Plans And Specifications Accessible

The Contractor shall keep one (1) copy of all Plans and Specifications constantly accessible at the work site and available for inspection at all times.

35. Utilities

Contractor shall be responsible for any charges which may be made by any city or utility companies for the work to be performed by Contractor.

36. Parking

Contractor shall be responsible for the expense of parking the Contractor's vehicle(s) in a legal manner and at no expense or inconvenience to the County.

37. Fire And Safety

Contractor is completely responsible for fire protection at the job site as well as the safety of its own employees as well as those entering onto the job site.

38. Contractor's Buildings

The building of structures for housing men, or the erection of tents or other forms of protection will be permitted only at such places as the County shall permit, and the sanitary conditions of the grounds in or about such structures shall at all times be maintained in the manner satisfactory to the County.

39. Worksite Security

Contractor shall maintain the security of the worksite.

Contractor shall provide adequate protection to persons on the worksite, adjacent properties, and utilities as is necessary to keep each free of damage or injury. Contractor shall furnish all barricades, warning lights and other safety devices necessary for the safety and protection of the public and shall remove them upon completion of the work performed on those premises under the terms of this contract.

Contractor will have complete control over the work site and shall be fully responsible for any loss of or damage to any County property from any cause and will reimburse County in the event of any loss or damage to County's property from any cause.

Contractor shall take proper means to protect adjacent or adjoining properties which might be injured or seriously affected by construction undertaken under this Agreement from any damage or injury by reason of said process of construction. Contractor shall be liable for any and all claims for such damage on account of its failure to fully protect all adjoining properties.

40. Final Grading

If grading is required, when work is complete, Contractor shall grade the site to fill in holes and make a presentable appearance without disturbing trees and add fill dirt if needed. Contractor may not leave voids in the grading and compaction of the property. The land shall have a smooth appearance without concrete, bricks, building materials, and other debris on the surface.

41. Changes And Alterations

Contractor further agrees that County may make such changes and alterations as County may see fit, in the line, grade, form dimensions, plans or materials for the work herein contemplated, or any part thereof, either before or after the beginning of the contract construction, without affecting the validity of this Contract and the accompanying bonds.

If such changes or alterations diminish the quantity of the work to be done, they shall not constitute the basis for a claim for damages, or anticipated profits on the work that may be dispensed with. If they increase the amount of the work, and the increased work can fairly be classified under the specifications, such increase shall be paid for according to the quantity actually done and at the unit price established for such work under this contract; otherwise such additional work shall be paid for as provided under the paragraph entitled "EXTRA WORK". In case the County shall make such changes or alterations as shall make useless any work already done or material already furnished or used in said work, then County shall recompense Contractor for any material or labor so used, and for any actual loss occasioned by such change due to actual expenses incurred in preparation for the work as originally planned.

42. Extra Work

The term "Extra Work" as used in this contract shall be understood to mean and include all work that may be required by the County to be done by Contractor to accomplish any change, alteration or addition to the work shown in the plans and specifications.

It is agreed that Contractor shall perform all Extra Work under the direction of the County when presented with a Written Work Order signed by the County. It is also agreed that the compensation to be paid Contractor for performing said Extra Work shall be determined by one or more of the following methods:

Method (a) - By agreed unit prices; or

Method (b) - By agreed lump sum: or

Method (c) - If Neither Method (a) nor Method (b) can be agreed upon before the Extra Work is commenced, then Contractor shall be paid the "Actual field cost" of the work plus fifteen (15) percent.

In the event said Extra Work be performed and paid for under Method (c), then the provisions of this paragraph shall apply and the "actual field cost" is hereby defined to include the cost of all workmen, such as foremen, timekeepers, merchants, and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment for time actually employed or used on such Extra Work plus actual transportation charges necessarily incurred, if the kind of equipment or machinery is not already on the job, together with all power, fuel, lubricants, water and similar operating expenses, also all necessary incidental expenses incurred directly on account of such Extra Work including Social Security, Old Age Benefits and other payroll taxes, and a ratable proportion of premiums on Construction and Maintenance Bonds, Public Liability and Property Damage and Workmen's Compensation, and all other insurance as may be required by any law or ordinance. The County may direct the form in which accounts of the "actual field cost" shall be kept and may also specify in writing, before the work commences, the method of doing the work and the type and kind of machinery and equipment to be used, otherwise these matters shall be determined by Contractor. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using the one hundred (100) percent of the actual hourly or daily rate (for the time used plus time in moving to and from Job) of the latest schedule of Equipment Ownership Expense adopted by the Association General Contractors of America. Where practicable the terms and prices for the use of Machinery and Equipment shall be incorporated in the Written Extra Work Order. The fifteen (15) percent of the "Actual Field Cost" to be paid Contractor shall cover and compensate him for his profit, overhead, general superintendence and field office expense, and all other elements of cost and expense not embraced within the 'actual field cost" as herein defined, save that where the Contractor's Camp or Field Office must be maintained primarily on account of such extra work, then the cost to maintain and operate same shall be included in the "actual field cost".

No claim for extra work of any kind will be allowed unless ordered in writing by the County. In case any orders or instructions, either oral or written appear to Contractor to involve extra work for which he should receive compensation, it shall make written request to the County for written order authorizing Extra Work. Should a difference of opinion arise as to what does or does not constitute extra work, or as to the payment therefor, and the County insists upon its performance, Contractor shall proceed with the work after making written order and shall keep an accurate account of the "actual field cost" thereof, as provided under Method (c) and by this action Contractor will thereby preserve the right to submit the matter of payment to litigation.

43. Salvage

Any materials, equipment and fixtures specifically ordered to be salvaged under these specifications shall remain the property of County and will be delivered to the site designated by the County. All other items shall be disposed of by Contractor in compliance with all applicable laws and regulations.

44. Compliance With Codes

Contractor shall comply with all city, county, and state codes, laws, and ordinances in force at the time of award of contract and applicable to such work. Contractor shall obtain, at Contractor's own expense such permits, certificates, and licenses as may be required in the performance of the specified work.

45. Laws And Ordinances

Contractor shall at all times observe and comply with all Federal, State and Local Laws, ordinances and regulations which in any manner effect the contract or the work, and shall indemnify and save harmless the County against any claim arising from the violation of any such laws and ordinances, whether by Contractor or its employees.

46. Permits And Licenses

Contractor shall be responsible for obtaining and furnishing all necessary permits and licenses, City, County, State or Federal as are required for the performance of this contract.

47. Lines And Grades

The Engineer will furnish points for horizontal and vertical control. Any additional stakes required by the Contractor shall be set at his expense. Whenever necessary, work shall be suspended to permit this work, but such suspension will be as brief as practicable and the Contractor shall be allowed no extra compensation therefor. The Contractor shall give the Engineer ample notice of the time and place where control lines and bench marks will be needed. All control stakes, marks, etc. shall be carefully preserved by the Contractor, and in case of careless destruction or removal by him or his employees, such control stakes, marks, etc. shall be replaced by the Engineer at the Contractor's expense.

48. Excess, Waste Material And Debris

All excess material, waste material and debris shall become the property of the Contractor and shall be properly disposed of off-site. No separate payment shall be made for same.

49. Material Hauling

Hauling of materials will not be paid for directly, but shall be considered as subsidiary work pertaining to the respective bid items. Haul routes for full and empty loads shall be restricted to State Highways. Hauling of equipment is also restricted to State Highways.

50. Abatement And Mitigation Of Excessive Or Unnecessary Construction Noise

Throughout all phases of the construction of this project, including the moving, unloading, operating and handling of construction equipment prior to commencement of work, during the project and after the work is complete, the contractor shall make every reasonable effort to minimize the noise imposed upon the immediate neighborhood surrounding the area of construction. Particular and special efforts shall be exercised by the Contractor to avoid the creation of unnecessary noise impacts on adjacent sensitive receptors in the placement of non-mobile equipment such as air compressors, generators, pumps, etc. The placement of temporary parked mobile equipment with the engine running shall be such as to cause the least disruption of normal adjacent activities not associated with the work to be performed by the contractor.

All equipment associated with the work shall be equipped with components designed by the manufacturer wholly or in part to suppress excessive noise and these components shall be maintained in their original operating condition considering normal depreciation. Noise-attenuation devices installed by the manufacturer such as mufflers, engine covers, insulation, etc., shall not be removed nor rendered ineffectual nor be permitted to remain off the equipment while the equipment is in use.

51. Working Hours

Work shall not be commenced by the contractor before sunrise and shall be so conducted that all equipment is off the road and safely stored by sunset. Specific permission shall be obtained by the contractor from the Engineer for work during those hours between 7:00 P.M. and 6:00 A.M. of the following day.

52. Pipeline, Utility Locations And Contractor Responsibility

An effort to determine all pipelines and utilities which may impact the project has been made. All known pipelines and utilities have been approximately located and shown on the plans. The Contractor shall notify all utility and pipeline owners before beginning the work. Additional unknown utilities and pipelines may be found. Adjustments of these utilities or pipelines shall be done by others at no expense to the contractor. However, the Contractor shall cooperate and coordinate his work with the adjustment

The Contractor will anticipate this in making his bid. The contractor will not be allowed claims for damages or delays for these adjustments should they be necessary. However, additional time will be considered for the contract period.

This action, however, shall in no way be interpreted as relieving the Contractor of his responsibilities under the terms of the contract as set out in the plans and specifications. The Contractor shall repair any damage to the facilities caused by his operations at the Contractor's expense and shall restore facilities to service in a timely manner.

53. Incidentals

All items of work required under this contract not specifically called for in the proposal as pay items shall be considered incidental to the various bid items and no separate payment shall be made for same.

54. Flagmen

During certain phases of construction flagmen will be required to direct and control traffic. This work will not be paid for directly, but shall be considered incidental the various bid items and no separate payment shall be made for same.

55. Field Office

For this project the Contractor will not have to provide a field office.

56. Wage Rates:

The attached schedule of wages per hour for this Contract follows.

BID PROPOSAL PAUL HOPKINS PARK PEDESTRIAN BRIDGE

BASE BID

ITEM	SPEC.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE IN WORDS	UNIT	TOTAL
NO.	NO.					PRICE	PRICE
1	010260	MOBILIZATION (5%)	LS	1			
			DC	DLLARS	AND	CENTS	
2	010260	SITE PREPARATION &	LS	1			
		DEMOLITION OF EXISTING FACILITIES	DC	DLLARS	AND	CENTS	
3	033000	CONCRETE ABUTMENT & TWO PILINGS	EA	2			
	Item 409		DC	DLLARS	AND	CENTS	
4	028900	SINGLE SPAN PRE-FABRICATED STEEL	LS	1			
		BRIDGE, 120' LONG X 8' WIDE	DC	DLLARS	AND	CENTS	
5	061323	WOOD STAIRS, RAMPS, LANDINGS,	LS	1			
		RAILINGS & CONCRETE FOUNDATIONS	DC	DLLARS	AND	CENTS	
6	025140	REINFORCED 4-1/2" THICK CONCRETE	SY	85			
		SIDEWALK	DC	DLLARS	AND	CENTS	
					TOTAL -	BASE BID	

ALTERNATE #1

ITEM	SPEC.	DESCRIPTION	UNIT	QUAN.	UNIT PRICE IN WORDS	UNIT	TOTAL
NO.	NO.					PRICE	PRICE
A1	010300	CANOPY CONSISTING OF VERTICAL	LS	1			
		STEEL TUBES AND WOOD CANOPY	DC	DLLARS	AND	CENTS	
TOTAL - ALTERNATE #1							

BID PROPOSAL

PAUL HOPKINS PARK PEDESTRIAN BRIDGE

BID SUMMARY

TOTAL - BASE BID:	
TOTAL BASE BID PLUS ALTERNATE #1:	

This Proposal consists of a Base Bid and one (1) Alternate Bid Item. For a bid to be considered responsive all sections must be completed. The award of the contract may be based on only the Base Bid or on the Base Bid plus Alternate #1 at the sole discretion of Galveston County.

CONTRACT AWARD

CONTRACT FOR: PAUL HOPKINS PARK PEDESTRIAN BRIDGE

THIS CONTRACT IS ENTERED INTO BETWEEN GALVESTON COUNTY AND THE CONTRACTOR NAMED BELOW PURSUANT TO SUBCHAPTER B, CHAPTER 271, TEXAS LOCAL GOVERNMENT CODE, AND THE REFERENCED INVITATION TO BID.

Contract No:	19-1103	
Bid No:	B191052	
Contractor:		
The Specifications and D	Drawings are enumerated as follows:	
Standard Specifications:	Huitt-Zollars, Inc.'s Specifications	
Special Provisions:	None	
Special Items:	Standard Specifications for Construction And of Highways, Streets and Bridges; adopted by Department of Transportation, 2014; Item 40 Item 409 – Prestressed Concrete Piling Hydraulic Cement Concrete	the Texas 04 – Driving Piling,
DRAWINGS: ADDENDA:	Sheets 1 – 16	

Contract Award (continued)

Invitation to Bid, General Provisions, Special Provisions, Bid Forms, Non-Collusion Affidavit, Vendor Qualification Packet, Debarment Form, Special Provisions for Construction, Bid Proposal, Affidavit and Surety Forms, Wage Rates, Specifications and Plans attached to this Contract Award are all made a part of this Contract and collectively evidence and constitute the entire contract. Contractor shall furnish all materials, perform all of the work required to be done and do everything else required by these documents.

Time of Completion: The Contractor shall complete the work within 90 Calendar Days of the issuance of the Notice to Proceed. The time set forth for completion of the work is an essential element of the Contract.

The Contract Sum: The County shall pathe sum of	ay the Contractor for performance of the Contract,
Dollars and/100 (\$ herein.), payments to be made as described
Performance Bond required: Payment Bond required:	(x) yes () no (x) yes () no
This Contract is issued pursuant to awa 20	rd made by Commissioners' Court on,
EXECUTED this day of	, 20
	COUNTY OF GALVESTON, TEXAS
BY: ATTEST:	MARK HENRY, County Judge
DWIGHT SULLIVAN, County Clerk	
	CONTRACTOR
BY:	Signature - Title
	Printed Name

CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIEN

TO (Ow	vner):	PROJECT NO:	
		CONTRACT FOR:	
PROJEO (name, a		CONTRACT DATE:	
State of:			
County of:			
Releas equip	ndersigned, hereby certifies that, to the best of ses or Waivers of Lien attached hereto include ment, and all performers of Work, labor or ser g in any manner out of the performance of the	e the Contractor, all Subcontractors, all vices who have or may have liens again	ll suppliers of materials and
EXCEPTIONS each exception	: (If none, write "None". If required by the C.)	Owner, the Contractor shall furnish bo	and satisfactory to the Owner for
SUPPORTING D	OOCUMENTS ATTACHED HERETO:	CONTRACTOR:	
condi 2. Separ	actor's Release or Waiver of Liens, tional upon receipt of final payment. ate Releases or Waivers of Liens from ontractors and material and equipment	Address:	
	iers, to the extent required by the r, accompanied by a list thereof.	BY:	
Owne	Owner, accompanied by a list thereof.	Subscribed and sworr	n to before me this
		day of	20
		Notary Public:	
		My Commission Expir	res:

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

TO (Owner):	PROJECT NO:
	CONTRACT FOR:
PROJECT: (name, address)	CONTRACT DATE:
State of:	
County of:	
all materials and equipment furnished, for all work, labo	elow, he has paid in full or has otherwise satisfied all obligations for, and services performed, and for all known indebtedness and claim in connection with the performance of the Contract referenced way be held responsible.
EXCEPTIONS: (If none, write "None". If required by the Owne each exception.)	r, the Contractor shall furnish bond satisfactory to the Owner for
SUPPORTING DOCUMENTS ATTACHED HERETO:	CONTRACTOR:
Consent of Surety to Final Payment. When your Construction is a local payment of	
Whenever Surety is involved, consent of Surety is required. CONSENT OF SURETY, may	Address:
be used for this purpose. Indicate attachment: yes no	
	ву:
The following supporting documents should be attached hereto if required by the Owner:	Subscribed and sworn to before me this
 Contractor's Release or Waiver of Liens, 	day of 20
conditional upon receipt of final payment.	uay 01 20
2. Separate Releases or Waivers of Liens from	Notary Public:
Subcontractors and material and equipment	
suppliers to the extent required by the Owner,	
accompanied by a list thereof.	My Commission Expires:
3. Contractor's Affidavit of Release of Liens.	The commission expired.

CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE

TO (Owner):	PRO	OJECT NO:	
	COI	NTRACT FOR:	
PROJECT: (name, address)	COI	NTRACT DATE:	
In accordance with the provisions of the Contract betw (here insert name and address of Surety as it appears in the bond).	ween the Owner and the	e Contractor as indicated al	pove, the
			, SURETY,
on bond of (here insert name and address of Contractor as it app	pears in the bond)		
			, CONTRACTOR,
hereby approves the reduction in or partial release of	retainage to the contrac	tor as follows:	
The Surety agrees that such reduction in or partial releasely obligations to (here insert name and address of Owner)	ease of retainage to the	Contractor shall not relieve	e the Surety of any of its , OWNER,
as set forth in the said Surety's bond.			
IN WITNESS WHEREOF, the Surety has hereunto set its had this	day of		20 .
		Surety	
		Signature of Authorize	ed Representative
		Title	
ATTEST: (Seal):			

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

TO (Owner):	PROJE	ECT NO:	
	CONT	RACT FOR:	
PROJECT: (name, address)	CONT	RACT DATE:	
CONTRACTOR:			
In accordance with the provisions of the Contract between the Owner a (here insert name and address of Surety as it appears in the bond).	and the Co	ontractor as indicated above	e, the
			, SURETY COMPANY,
on bond of (here insert name and address of Contractor)			
			, CONTRACTOR,
hereby approves of the final payment to the Contractor, and agrees that Company of any of its obligations to (here insert name and address of Owner)	t final pay	ment to the Contractor shall	ll not relieve the Surety
as set forth in the said Surety Company's bond.			, OWNER,
IN WITNESS WHEREOF, the Surety Company has hereunto set its had this	day of		20 .
		Surety Company	
		Signature of Authorized R	epresentative
		Title	
ATTEST: (Seal):			

NOTE: This form is to be use as a companion document to Contractor's Affidavit of Payment of Debts and Claims.

"General Decision Number: TX20190248 03/15/2019

Superseded General Decision Number: TX20180298

State: Texas

Construction Type: Building

County: Galveston County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

1 01	./18/2019		
2 03	3/15/2019		
* ASBE0022-009 12/	01/2018		
	Rates	Fringes	
ASBESTOS WORKER	/HEAT & FRO	ST	
INSULATOR (Duct, F	•		
Mechanical System I	-		13.30
BOIL0074-003 01/0	1/2017		
	Rates	Fringes	
BOILERMAKER	\$ 28	3.00	22.35
CARP0551-011 04/0)1/2016		
	Rates	Fringes	
CARPENTER (Exclude Acoustical Ceiling Installation, Drywall Finishing/Taping, Dr Hanging, Form Work Stud Installation)	ywall cand Metal \$ 23.0		78
ELEC0527-002 10/2	9/2018		
	Rates	Fringes	
ELECTRICIAN (Exclu Voltage Wiring and Installation of Alarms		83 3% -	+ 10.50
ELEV0031-003 01/0	1/2019		
	Rates	Fringes	
ELEVATOR MECHAN	IC	\$ 42.60	33.705
FOOTNOTES: A. 6% under 5 yea	rs based on re	egular hourly	rate for all

0

01/04/2019

for all hours worked. B. Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day. ENGI0450-002 04/01/2014 Rates Fringes POWER EQUIPMENT OPERATOR Cranes.....\$ 34.85 9.85 IRON0084-011 06/01/2018 Rates Fringes IRONWORKER, ORNAMENTAL.....\$ 23.77 7.12 PAIN0130-002 06/01/2018 Rates Fringes PAINTER (Brush, Roller, and Drywall Finishing/Taping)......\$ 17.88 9.50 PLAS0079-004 01/01/2015 Rates Fringes PLASTERER..... \$ 19.92 1.00 PLUM0068-002 10/01/2018 Fringes Rates PLUMBER.....\$ 35.60 11.04 PLUM0211-010 10/01/2018

hours worked. 8% over 5 years based on regular hourly rate

PIPEFITTER (Including HVAC

Rates

Fringes

Pipe Installation)	\$ 33.30	1	2.26	
SHEE0054-012 07/01/				
	Rates	Fringes		
SHEET METAL WORKE Excludes HVAC Duc Unit Installation HVAC Duct Installat	ct and \$ 27.72			0
SUTX2014-024 07/21	/2014			
	Rates	Fringes		
ACOUSTICAL CEILING	MECHANIC	\$ 16.4	1	3.98
BRICKLAYER	\$ 19.86	5	0.00	
CAULKER	\$ 15.36	(0.00	
CEMENT MASON/CONG	CRETE FINIS	HER\$ 1	3.82	0.00
DRYWALL HANGER AN			5.24	
ELECTRICIAN (Alarm Installation Only)	\$ 17.97		3.37	
ELECTRICIAN (Low Vo	_	3	3.55	
FLOOR LAYER: Carpet	:\$ 20	0.00	0.00)
FORM WORKER	\$ 12	.07	0.00	
GLAZIER	\$ 17.09	3	3.41	
HVAC MECHANIC (Inst of HVAC Unit Only)		10	0.00	
IRONWORKER, REINFO	ORCING	\$ 12.10)	0.00
IRONWORKER, STRUC	TURAL	\$ 25.37	,	6.00

LABORER: Common or General\$ 11.4	7 0.00
LABORER: Mason Tender - Brick\$ 13.37	0.00
LABORER: Mason Tender - Cement/Concrete\$ 10.50	0.00
LABORER: Pipelayer\$ 12.94	0.00
LABORER: Roof Tearoff \$ 11.28	0.00
LABORER: Landscape and Irrigation	0.00
LATHER\$ 20.11	0.00
OPERATOR: Backhoe/Excavator/Trackhoe\$ 14.10	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader\$ 13.93	0.00
OPERATOR: Bulldozer\$ 20.77	0.00
OPERATOR: Drill\$ 16.22	0.34
OPERATOR: Forklift\$ 15.64	0.00
OPERATOR: Grader/Blade \$13.37	0.00
OPERATOR: Loader\$ 13.55	0.94
OPERATOR: Mechanic\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)\$ 16.03	0.00
OPERATOR: Roller\$ 16.00	0.00
PAINTER: Spray (Excludes Drywall Finishing/Taping)\$ 17.43	4.43
ROOFER\$ 15.40	0.00
SPRINKLER FITTER (Fire	

3.03

TILE FINISHER..... \$ 12.00 0.00

TILE SETTER.....\$ 16.17 0.00

TRUCK DRIVER: 1/Single Axle

Sprinklers)...... \$ 18.62

Truck......\$ 14.95 5.23

TRUCK DRIVER: Dump Truck......\$ 12.39 1.18

TRUCK DRIVER: Flatbed Truck.....\$ 19.65 8.57

TRUCK DRIVER: Semi-Trailer

Truck...... \$ 12.50 0.00

TRUCK DRIVER: Water Truck......\$ 12.00 4.11

WELDERS - Receive rate prescribed for craft performing

operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and

non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests

for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

GALVESTON COUNTY

PAUL HOPKINS PARK PEDESTRIAN BRIDGE

TECHNICAL SPECIFICATIONS

June 2019



Huitt-Zollars, Inc.
TBPE Firm Registration #F-761
10350 Richmond Avenue, Suite 300
Houston, Texas 77042
291-496-0066
HZ Project No. R308586.01

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^{*} See Standard Specifications For Construction And Maintenance Of Highways, Streets And Bridges; adopted by the Texas Department Of Transportation, November 2014

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SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Project consists of demolishing the existing pedestrian bridge and sidewalk; constructing a new single span prefabricated steel pedestrian bridge including concrete abutments and piling timber stairs, walkway, ramp and railings; and concrete sidewalk as shown in the plans over Magnolia Bayou at Paul Hopkins Park in Galveston County. A bid includes an Alternate Bid Item, see Specification Section 010300 Alternates.
- B. The Owner for the Project is Galveston County, 722 Moody Avenue, Galveston, Texas 77550. Phone Number is 409-934-8101.
- C. Contract Documents were prepared for the Project by the Engineer, Huitt-Zollars, Inc., 10350 Richmond Avenue, Suite 300, Houston, Texas 77042-4248.

1.3 WORK SEQUENCE

- A. Contractor shall secure all applicable permits at no cost to the Owner. This project is located within the boundaries of the Paul Hopkins Park, Dickinson, Texas and is within the jurisdiction of Galveston County, Texas.
- B. Contractor shall notify Owner at 409-934-8101 at least 48 hours prior to any construction commencing.
- C. Contact Huitt-Zollars, Inc. at 281-496-0066 at least 48 hours prior to construction.
- D. All construction activities shall be coordinated with the Owner.

1.4 CONTRACTOR USE OF PREMISES

- A. General: Contractor shall be responsible for application, payment, and receipt of all permits required to conduct activities involved with the project.
- B. Use of the Site: Contractor shall confine construction operations to areas within contract limits indicated or as coordinated with the Owner. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 - 1. Owner Occupancy: Allow for Owner accessibility and maintain traffic as required by the sequence of construction. Keep driveways, entrances and streets near the project area clear and available to traffic at all times. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

SUMMARY OF WORK

2. Contractor shall provide temporary construction fencing around the construction site. Contractor shall be fully responsible for security at the site.

1.5 ALTERNATES

A. The bid documents consist of one (1) Alternate. See Specification 010300 – Alternates.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

MEASUREMENT AND PAYMENT

SECTION 010260

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 MEASUREMENT AND PAYMENT

- A. It is intent of the Contract that the aggregate amount of unit prices times units of work actually installed shall cover all work required by the Contract Documents, in place, complete, and ready for use.
- B. Prices in the Contract Documents include all compensation for full completion of all work items in place, and include providing all labor, materials, tools, equipment, services, supplies, incidentals, and all necessary operations.
- C. Work to protect items to remain by installation of temporary construction; including posting of warning signs, placement of protective fencing, barriers, barricades and covers, and restoration of damaged items to remain; will be considered incidental to the various pay items and no separate payment for this work will be made.
- D. Work necessary to haul materials from original positions to points of disposition, including excavation of earth materials and utilization in construction or other disposition, will be considered incidental to the various pay items and no separate payment for this work will be made.
- E. Work necessary to provide proper drainage during construction; including maintaining sections, existing ditches, channels, culverts, and sewers and including temporary construction and maintenance of ditches and drainage ways, will be considered incidental to the various pay items and no separate payment for this work will be made.
- F. No costs in connection with work required by the Contract Documents for proper and successful completion of the Contract will be paid outside of or in addition to prices named in the Contract Documents.
- G. Work not specifically set forth in the Contract Documents as pay items shall be considered subsidiary obligations of Contractor and costs shall be included in prices named in the Contract Documents.
- H. Method of measurement and basis of payment for unit price work items shall be as stipulated in following paragraphs.

1.2 CONSTRUCTION FACILITIES

- A. Mobilization costs shall not exceed 5% of the contract bid amount. Seventy percent (70%) of the mobilization bid amount will be paid upon issuance of the notice to proceed for the contract. The balance of mobilization shall be paid 30 days after the notice to proceed.
- B. Site Preparation and Demolition of Existing Facilities:
 - 1. Site preparation shall be paid per one lump sum for the project. Partial payment shall be made as follows: Seventy (70%) percent of lump sum for completion of site preparation activities excluding cleaning, and contract closeout. The remaining thirty (30%) percent of lump sum shall be paid upon completion of demobilization, hydromulch seeding, cleaning of site, and contract closeout activities.

MEASUREMENT AND PAYMENT

- 2. Site preparation includes providing labor, materials, tools, equipment and operations necessary to complete work identified below.
- 3. Site preparation work includes:
 - a. Providing, installing and maintaining Reinforced Filter Fabric Barrier and other Storm Water Pollution Control Measures
 - b. Providing, installing and maintaining orange plastic construction fencing as shown on the drawings
 - c. Demolition and removal of bridge components including pilings, decking, support, abutments and canopy.
 - d. Removal and disposal of above and below ground obstructions and timber piling within one (1') foot of bottom of channel to construction as specified within construction area.
 - e. Clearing and grubbing and hydromulch seeding of disturbed areas.
 - f. Removal and disposal of grasses, vegetation, trees, logs, roots, stumps, brush, rocks, rubbish, debris and other objectionable materials.
 - g. Removal and relocation of palm trees as shown on drawings.
 - h. Protection of existing facilities to include drainage, sanitary sewer, sidewalk areas, and utilities.
 - i. Construction surveying
 - j. Activities required in Division 1 specification sections
 - k. Control of water and dewatering
- C. Concrete Abutment and Two (2) Piling shall be paid by each complete in place including:
 - 1. Providing and installing two (2) 16" square Prestressed Concrete Piles to an elevation of -22.0
 - 2. Excavation
 - Steel reinforcement and connections.
 - Concrete formwork
 - 5. Placement, finishing and curing of concrete abutments and wing walls
 - 6. Bridge mounting bolts
- D. Single Span Pre-fabricated Steel 120' bridge, 120' long x 8' wide will be paid for as a lump sum and includes self weathering steel, 120' in length, 8' wide, pre-fabricated pedestrian bridge complete in place in accordance with Specification Section 028900 and drawings.
- E. Wood Stairs, Ramps, Landings, Railings and Concrete Foundations will be paid for as a lump sum and includes concrete foundations, framing, decking and railing for wooden stairs and ADA accessible wooden ramps and landing on both sides of the bridge complete in-place.
- F. Reinforced 4-1/2" Thick Concrete Sidewalk:
 - 1. This item will be measured by the one unit for each square yard of 4 1/2" thick, reinforced concrete sidewalk placed in accordance with the plans and Section 025140.
 - 2. Measurement will be made after curing operations have begun.
 - 3. This item will be paid for by the unit price.
 - 4. Includes tools, labor, materials, equipment, and incidentals to place reinforced concrete sidewalk and doweling new sidewalk into existing sidewalk.
 - 5. This shall be full compensation for the grading, forming, doweling and dowels, placement and compaction of bedding and reinforced concrete sidewalk constructed in accordance with plans and Section 025140.

APPLICATION FOR PAYMENT

SECTION 010270

APPLICATION FOR PAYMENT

PART 1 - GENERAL

1.1RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Specification Sections, apply to this Section.

1.2SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. This Section specifies administrative and procedural requirements governing each Application for Payment.
 - 1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, Submittal Schedule, and List of Subcontracts.
- C. Related Sections: The following Sections contain requirements that relate to this Section.
 - Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in Division 1 Section 01300 - "Submittals."

1.3APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and paid for by the Owner.
- B. Payment-Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends the last calendar day of the preceding month for each progress payment.
- C. Payment-Application Forms: Use forms provided by the Owner for Applications for Payment.
- D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Engineer will return incomplete applications without action.
 - 1. Entries shall match data on the Bid Proposal and the Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to the Engineer by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.

APPLICATION FOR PAYMENT

- 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Engineer.
- F. Certification: Engineer shall field certify the quantities of work completed monthly.
- G. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics liens from subcontractors, sub-subcontractors and suppliers for the construction period covered by the previous application.
 - 1. Submit partial waivers on each item for the amount requested, prior to deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. The Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Waiver Delays: Submit each Application for Payment with the Contractor's waiver of mechanics lien for the period of construction covered by the application.
 - a. Submit final Applications for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to the Owner.
- H. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
 - 1. List of subcontractors.
 - List of principal suppliers and fabricators.
 - 3. Contractor's Construction Schedule (one for each bridge).
 - Schedule of principal products.
 - Schedule of unit prices.
 - 6. Submittal Schedule (preliminary if not final).
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of building permits.
 - 10. Copies of authorizations and licenses from governing authorities for performance of the Work.
 - 11. Initial progress report.
 - 12. Report of preconstruction meeting.
 - 13. Certificates of insurance and insurance policies.
 - 14. Performance and payment bonds.
 - 15. Initial settlement survey and damage report, if required.
- I. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.
 - 1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
 - Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Warranties (guarantees) and maintenance agreements.
 - b. Startup performance reports.

APPLICATION FOR PAYMENT

- c. Changeover information related to Owner's occupancy, use, operation, and maintenance.
- d. Final cleaning.
- e. Application for reduction of retainage and consent of surety.
- f. Advice on shifting insurance coverages.
- g. Final progress photographs.
- h. List of incomplete Work, recognized as exceptions to Engineer's Certificate of Substantial Completion.
- J. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
 - 1. Completion of Project closeout requirements.
 - 2. Completion of items specified for completion after Substantial Completion.
 - 3. Ensure that unsettled claims will be settled.
 - 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 - 5. Transmittal of required Project construction records to the Owner.
 - 6. Proof that taxes, fees, and similar obligations were paid.
 - 7. Removal of temporary facilities and services.
 - 8. Removal of surplus materials, rubbish, and similar elements.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing Alternates.

1.3 DEFINITIONS

- A. Definition: An alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The bid amount for an alternate is the net addition to the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent Work as necessary to completely and fully integrate that Work into the Project.
 - Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- B. Notification: Immediately following the award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other Work of this Contract.
- D. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES:

- A. This project has one (1) Alternate Bid Items.
- B. Alternate No. 1 is the shop connection of four (4) vertical steel tubes with drilled bolt holes (2 in one direction and one in the other direction) by the pre-fabricated bridge manufacturer and construction of a timber canopy as shown in the drawings.

MODIFICATION PROCEDURES

SECTION 010350

MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section 01300 "Submittals" for requirements for the Contractor's Construction Schedule.
 - 2. Division 1 Section 01027 "Applications for Payment" for administrative procedures governing Applications for Payment.

1.3 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal requests issued by the Engineer are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
 - 2. Within 20 days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Engineer for the Owner's approval.
 - Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- B. Contractor-Initiated Proposals: When latent or unforseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Engineer.
 - Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
 - 2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- C. Proposal Request Form: Use forms provided by the Owner for Change Order Proposals.

MODIFICATION PROCEDURES

1.4 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Owner may issue a Construction Change Directive. The Construction Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - The Construction Change Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.5 CHANGE ORDER PROCEDURES

A. Upon the Owner's approval of a Proposal Request, the Engineer will issue a Change Order for signatures of the Owner and the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination Drawings.
 - 4. Administrative and supervisory personnel.
 - 5. Cleaning and protection.

1.3 COORDINATION

- A. Contact the following at least 48 hours prior to construction:
 - Owner: 281-634-5550.
 Engineer: 281-496-0066.
- B. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.
- C. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

- 1. Preparation of schedules.
- 2. Installation and removal of temporary facilities.
- 3. Delivery and processing of submittals.
- 4. Progress meetings.
- 5. Project closeout activities.
- E. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.
 - Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show the relationship of components shown on separate Shop Drawings.
 - 2. Indicate required installation sequences.
 - 3. Comply with requirements contained in Section 01300 "Submittals".
- B. Staff Names: Within 15 days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses, telephone numbers (home and work), pager numbers, and mobile numbers, as applicable.
 - 1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION

A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.

COORDINATION

- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for cutting and patching.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Contractor shall submit a proposal describing procedures well in advance of the time cutting and patching will be performed. Request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 - Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform Work.
 - 4. Indicate dates when cutting and patching will be performed.
 - 5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
 - Where cutting and patching involves adding reinforcement to structural elements, submit
 details and engineering calculations showing integration of reinforcement with the original
 structure.
 - 7. Approval by the Owner to proceed with cutting and patching does not waive the Owner's right to later require complete removal and replacement of unsatisfactory work.

1.4 WARRANTY

A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - 1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- B. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
 - 1. Comply with requirements of applicable Specification Sections where cutting and patching requires excavating and backfilling.
 - Where services are required to be removed, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

CUTTING AND PATCHING

3.4 CLEANING

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

SUBMITTALS

PART 1 - GENERAL

1.1 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Complete all submittals within 15 days after the Notice to Proceed date.
 - 2. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 3. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - 4. Coordinate all submittals requiring finish and/or color selections so that they are submitted close together and early. The Owner cannot make color/finish selections until all selection samples are provided for proper color/finish coordination. All color/finish selections will be made at the same time on a single list of selections and/or color board.
 - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
 - 5. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow 2 weeks for initial review. Allow additional time if the Engineer must delay processing to permit coordination with subsequent submittals or if several large submittals are submitted at or close to the same time.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - Allow 2 weeks for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the Work to permit processing.
 - e. The Contractor may indicate on his transmittal any preferred sequence of review or if a later submittal should supersede an earlier submittal.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
 - 1. Provide a space approximately 4 by 5 inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 - 2. The Engineer will return submittals without review if the Contractor has not previously reviewed the submittal and included his review stamp and comments.

- 3. When a submitting entity requests specific information on the submittal concerning site and project conditions, or field measurements, the Contractor shall provide that information prior to submitting to the Engineer. If it pertains to information, such as field dimensions, which are not available at the time of the submittal, the added information must be copied to the Engineer when available.
- 4. Include the following information on the label for processing and recording action taken.
 - a. Project name.
 - b. Date.
 - c. Name, address and telephone/fax number of the Engineer.
 - d. Name, address and telephone/fax number of the Contractor.
 - e. Name address and telephone/fax number of the subcontractor.
 - f. Name, address and telephone/fax number of the supplier.
 - g. Name of the manufacturer.
 - h. Submittal identification number.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Engineer using a transmittal form. The Engineer will not accept submittals received from sources other than the Contractor.
 - On the transmittal, record relevant information and requests for data. Identify submittal by I.D. number and specification section number and name. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.
 - 2. Note on the transmittal and specifically flag on drawings or data sheets any proposed substitution to manufacturers or products listed in the contract documents.
 - 3. Transmittal Form: Use a form which includes the same data and information.

1.2 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule. Submit within 14 days after the Notice to Proceed date.
 - 1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week.
 - 2. Within each time bar, indicate estimated completion percentage. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
 - 3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
 - 4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
 - 5. Coordinate the Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other schedules.
 - 6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Engineer's procedures necessary for certification of Substantial Completion.
 - 7. Incorporate into the time base an allowance for normal or average rainfall for each month if the activity would be affected by rainfall.

- B. Work Stages: Indicate important stages of construction for each major portion of the Work, including submittal review, testing, and installation.
- C. Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.
- D. Distribution: Following response to the submittal, print and distribute copies to the Engineer, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
 - When revisions are made, distribute to the same parties and post in the same locations.
 Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- E. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.3 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's Construction Schedule, prepare a complete schedule of submittals. Contractor shall submit the schedule to the Engineer within 21 calendar days of the Notice to Proceed date.
 - Coordinate Submittal Schedule with the List of Subcontracts and the Contractor's Construction Schedule.
 - 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Submittal identification number.
 - b. Scheduled date for the first submittal.
 - c. Related Section number.
 - d. Submittal category (Shop Drawings, Product Data, or Samples).
 - e. Name of the subcontractor.
 - f. Description of the part of the Work covered.
 - 3. Allow time for resubmittals and reviews.
- B. Distribution: Following response to the initial submittal, print and distribute copies to the Engineer, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
 - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after substantial impact revisions have been recognized or made. Issue the updated schedule within 3 days following a revision.

1.4 SHOP DRAWINGS

A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents or listed acceptable manufacturers/products. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
 - 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
 - 7. Submittal: Submit one correctable, translucent, reproducible print and three blue- or black-line prints for the Engineer's review. The Engineer will return the reproducible print.
 - 8. Do not use Shop Drawings without Engineer's review stamp indicating "No Exceptions Taken" or "Make Corrections Noted".
- C. Distribution: Furnish one set of prints of final submittal to Owner, installer, subcontractor, supplier, manufacturer, fabricator, and others required for performance of construction activities. Show distribution on transmittal forms. Retain one copy for each Operations and Maintenance Manual where required. Include Engineer Review Stamp and any comment made.
 - 1. Do not proceed with installation until a set of prints is in the Installer's possession.
 - 2. Do not permit use of unmarked prints of Shop Drawings in connection with construction.

1.5 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color samples, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
 - 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with contract documents.
 - c. Compliance with trade association standards.
 - d. Compliance with recognized testing agency standards.
 - e. Application of testing agency labels and seals.
 - f. Notation of dimensions verified or to be verified by field measurement.
 - g. Notation of coordination requirements.
 - 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed by Contractor.
 - Failure to mark applicable information as noted above, will be cause for rejection. Only marked items will be considered and reviewed.
- B. Submittals: Contractor shall submit 4 copies of each required submittal. The Engineer will retain three and will return one copy marked with action taken and corrections or modifications required.
 - 1. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal, if properly marked.
- C. Distribution: Furnish one photocopy of final submittal to Owner, installer, subcontractor, supplier, manufacturer, fabricator, and others required for performance of construction activities. Show distribution on transmittal forms.

Copy only the applicable pages. Retain one copy for each Operations and Maintenance Manual where required. Include Engineer Review Stamp and any comment made.

- 1. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
- Do not permit use of unmarked copies of Product Data in connection with construction.

1.6 SAMPLES

- A. Submit actual, fully fabricated Samples cured and finished as specified and physically identical with the brick pavers and other material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern. Printed color representations will not be acceptable.
 - 1. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a check of these characteristics with other elements and a comparison of these characteristics between the submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
 - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
 - 2. Submittals: Submit one set. The Engineer will return a copy of the Contractor's transmittal marked with the action taken. In the case of color selections, Engineer will issue a list of colors and finishes selected from all of the samples.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

1.7 ENGINEER'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Engineer will review each submittal, mark to indicate action taken, and return it to the Contractor.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Engineer will stamp each submittal with a uniform, action stamp. The Engineer will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. If returned "Contractor Has Not Approved", Contractor shall review the submittal, mark or make notation as applicable, affix the Contractor's review stamp, sign and date the stamp and then resubmit.
 - 2. If returned "No Exceptions Taken", Contractor shall distribute copies as required for Final Submittal and proceed with the work.
 - 3. If returned "Make Corrections Noted", Contractor shall distribute copies as required for Final Submittal and proceed with the work based upon the noted corrections or comments.
 - 4. If returned "Revise and Resubmit", Contractor shall have the submittal corrected according to the marks and comments and then resubmit in the same manner as the initial submittal, following Contractor's review. Add "(R-1)" to the submittal identification number for the first resubmittal, "(R-2)" for the second resubmittal, etc.

5. If returned "Rejected", Contractor shall resubmit after making adjustments or changes, responding to the reason for the rejection.

C. Final Submittal:

- 1. Final Submittal will be returned "No Exceptions Taken" or "Make Corrections Noted". Contractor may proceed with the work (based on noted corrections or comments, if provided) and distribute prints of the reproducibles submittal as follows:
 - a. Distribute one set of prints to each entity that will be affected by the submittal data or must coordinate with that submitting entity.
 - b. Retain one set of prints where required for each Operations and Maintenance Manual.
 - c. Retain one set of prints as a "Record Document".
 - d. Retain construction and record sets as required for Contractor's use.
 - e. Return the reproducible to the entity which prepared the submittal. Engineer will forward one copy to the Owner.
 - f. Do not use, or allow others to use, submittals marked "Contractor has Not Approved", "Revise and Resubmit", or "Rejected" at the Project Site or elsewhere where Work is in progress.
- D. Unsolicited Submittals: The Engineer will return unsolicited submittals to the sender without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

QUALITY CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Engineer.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Section 01045 "Cutting and Patching" specifies requirements for repair and restoration of construction disturbed by inspection and testing activities.
 - 2. Section 01300 "Submittals" specifies requirements for development of a schedule of required tests and inspections.

1.3 RESPONSIBILITIES

- A. Responsibilities: The Owner shall employ and pay a qualified independent testing agency to provide inspections, tests, and other quality-control services.
- B. Retesting: The Contractor is responsible for the cost of retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.
 - 1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.
- C. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

QUALITY CONTROL

1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

1.4 SUBMITTALS

A. The Owner's independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Engineer.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Section 01045 "Cutting and Patching".
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Security and protection facilities include, but are not limited to, the following:
 - 1. Barricades, warning signs, and lights.
 - 2. Environmental protection.

1.3 SUBMITTALS

- A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within 15 days of the Notice to Proceed date, submit a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, fire department, and rescue squad rules.
 - 5. Environmental protection regulations.
 - 6. Texas Manual of Uniform Traffic Control Devices.
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to the Engineer, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Open-Mesh Fencing: Provide 0.120-inch- (3-mm-) thick, galvanized 2-inch (50-mm) chainlink fabric fencing 6 feet (2 m) high with galvanized barbed-wire top strand and galvanized steel pipe posts, 1-1/2 inches (38 mm) I.D. for line posts and 2-1/2 inches (64 mm) I.D. for corner posts.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
- B. Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
 - 1. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.
- C. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

- 1. Provide separate facilities for male and female personnel.
- D. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.
 - 1. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.
- E. Drinking-Water Facilities: Provide containerized, tap-dispenser, bottled-water drinking-water units, including paper supply.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.
 - 1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion.
- B. Temporary Signs: Prepare and install signs to provide directional information to the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
- C. Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when Work is being performed.
- D. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Contractor shall remove all waste. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Engineer.
- B. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- C. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Cover all excavations during periods of non-construction.
- D. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
- C. Termination and Removal: Unless the Engineer requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

TRENCH EXCAVATION SAFETY SYSTEMS

SECTION 015010

TRENCH EXCAVATION SAFETY SYSTEMS

PART 1 - GENERAL

A. American Society for Testing and Materials (ASTM):

A 307, Carbon Steel Bolts and Studs 60,000 psi Tensile Strength

A 328, Steel Sheet Piling

A 36, Structural Steel

A 572, High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality

A 588, High-Strength Low-Alloy Structural Steel with 50 ksi (345 MPa) Minimum Yield Point to 4-In. (100 mm) Thick

A 690, High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine En Environments

B. American Welding Society, Inc. (AWS):

D1.1, Structural Welding Code - Steel

C. Code of Federal Regulations (CFR):

29CFR1926, Safety and Health Regulations for Construction; Subpart P-Excavations, Trenching, and Shoring

1.1 DESCRIPTION

A. Trench excavation safety systems shall be employed to accomplish safety from trench collapses where trench excavation is more than 5 ft. in depth and trench material is other than solid rock.

1.2 SUBMITTALS

- A. When trench safety system as detailed in Contract Documents is used, submit Certificate of Compliance stating evidence or basis of compliance.
- B. When trench safety system other than that detailed in Contract Documents is used:
 - Submit certificate signed and sealed by registered professional engineer licensed in State of Texas.
 - 2. Certificate shall state that system is designed in compliance with Occupational Safety and Health Administration (OSHA) standards and this Section.
 - 3. Submit certificate prior to commencing work.
 - Drawings, and specifications if deemed necessary by registered professional engineer, signed and sealed, as responsible engineer, by registered professional engineer referred to above.
 - a. Drawings shall illustrate system and locations where system will be installed.
 - b. Submit drawings and specifications for review prior to commencing work.
 - c. Review by A-E will be for sole purpose of verifying that required certificate and drawings and specifications have been signed and sealed by registered professional engineer.
- C. If portable trench box other than specified is used, submit certification of design by registered professional engineer, licensed in State of Texas, prior to use on project.
- D. When trench jacks are used for crossbracing or stringers, provide certification by registered professional engineer that trench jacks provide necessary protection.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements: Meet requirements of 29CFR1926, OSHA Safety and Health Regulations For Construction, Subpart P-Excavations, Trenching, and Shoring.

TRENCH EXCAVATION SAFETY SYSTEMS

B. Supervision: Provide competent supervisory personnel at each trench while work is in progress to ensure that Contractor's means, methods, techniques, sequences, procedures, equipment, and materials pertaining to trench safety systems are sufficient to meet State of Texas' and OSHA Standards and Regulations requirements and to determine which systems shown on Drawings or prepared by Contractor's registered professional engineer should be used for site soil conditions including any ground water.

PART 2 - PRODUCTS

2.1 STEEL

- A. Sheet Piling:
 - 1. ASTM A 328.
 - 2. ASTM A 572, Grade 50.
 - ASTM A 690.
- B. Stringers and Crossbracing: ASTM A 588.
- C. Portable Trench Boxes:
 - 1. ASTM A 36.
 - 2. Acceptable product: "LHD Series Trench Box", Griswold Machine and Engineering, Inc., M-60 East, Union City, Michigan (800-248-2054).
- D. Connecting Bolts: ASTM A 307.
- E. Welds: AWS D1.1.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Make daily, periodic, or full time inspections as necessary to ensure that trench excavation safety systems meet requirements.
- B. If evidence of possible cave-ins or slides is apparent, cease work in trench until necessary precautions have been taken to safeguard personnel entering trench.
- C. Maintain records of inspections.
- D. Observations or inspections by Owner or A-E are for benefit of Owner only and are not to be relied upon for purposes of construction operations.

3.2 CONSTRUCTION

- A. Construct, install, and maintain trench excavation safety system in accordance with Contract Documents or design prepared by Contractor's registered professional engineer.
- B. Portable Trench Boxes:
 - In cases where top of portable trench box will be below top of trench, trench sides above top
 of trench box shall be sloped outward at angle of repose of material being excavated.
 - 2. Portable trench box shall be operated on bottom of trench at all times.
- C. Sloping is prohibited in areas where sloped trench will affect integrity of existing structures.

3.3 MAINTENANCE

A. Maintain trench safety system in safe working condition.

TRENCH EXCAVATION SAFETY SYSTEMS

- B. Take necessary precautions to ensure that trench safety system is not damaged during use.
- C. If trench safety system is damaged during use, remove personnel from trench or excavated area immediately and repair trench safety system.
- D. Take necessary precautions to ensure that no loads, except those included in trench safety system design, are imposed on excavation.

3.4 REMOVAL

- A. Bed and backfill pipe or box culvert to be installed in trench to point at least 1 ft. above top of pipe or box culvert prior to removal of any portion of trench safety system.
- B. Bedding and Backfill: As specified or as shown on Drawings.
- C. Backfilling and removal of trench supports shall progress together from bottom of trench upwards.
- D. Do not remove braces or trench supports or trench safety system until all personnel have evacuated trench.
- E. Backfill trench to within 5 ft. of natural ground prior to removal of entire trench safety system.
- F. None of trench safety system shall remain in place after backfilling.

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
 - b. "Foreign Products," as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.
 - 2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
 - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 SUBMITTALS

- A. Product List: Contractor shall prepare a list showing products specified in tabular form acceptable to the Engineer. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.
 - Coordinate product list with the Contractor's Construction Schedule and the Schedule of Submittals.
 - 2. Form: Prepare product list with information on each item tabulated under the following column headings:
 - a. Related Specification Section number.
 - b. Generic name used in Contract Documents.

MATERIALS AND EQUIPMENT

- c. Proprietary name, model number, and similar designations.
- d. Manufacturer's name and address.
- e. Supplier's name and address.
- f. Installer's name and address.
- g. Projected delivery date or time span of delivery period.
- Initial Submittal: Within 15 days after Notice to Proceed date, submit 3 copies of an initial product list. Provide a written explanation for omissions of data and for known variations from Contract requirements.
- Completed List: Within 45 days after Notice to Proceed date, submit 3 copies of the completed product list. Provide a written explanation for omissions of data and for known variations from Contract requirements.
- 5. Engineer's Action: The Engineer will respond in writing to Contractor within 2 weeks of receipt of the completed product list. No response within this period constitutes no objection to listed manufacturers or products but does not constitute a waiver of the requirement that products comply with Contract Documents. The Engineer's response will include a list of unacceptable product selections, containing a brief explanation of reasons for this action.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Engineer to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing products that possess these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion in the Work:
 - 1. No available domestic product complies with the Contract Documents.
 - 2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
 - Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of product and manufacturer.
 - b. Model and serial number.
 - c. Capacity.
 - d. Speed.

e. Ratings.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 - 6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
 - 7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 - 1. Proprietary Specification Requirements: Where Specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 - 2. Semiproprietary Specification Requirements: Where Specifications name 2 or more products or manufacturers, provide 1 of the products indicated. No substitutions will be permitted.
 - a. Where Specifications specify products or manufacturers by name, accompanied by the term "or equal" or "or approved equal," comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 - 3. Nonproprietary Specifications: When Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions of Section 01631 "Substitutions" to obtain approval for use of an unnamed product.
 - 4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.

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- 5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
- 6. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
- 7. Visual Matching: Where Specifications require matching an established Sample, the Engineer's decision will be final on whether a proposed product matches satisfactorily.
 - a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category.
- 8. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Owner will select the color, pattern, and texture from the product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Per manufacturer's requirements, anchor each product securely in place, accurately located and aligned with other Work.
 - Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

SUBSTITUTIONS

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Substitution Request Submittal: The Engineer will consider requests for substitution if received within 10 days after Notice to Proceed. Requests received more than 10 days after commencement of the Work will be rejected.
 - 1. Submit 3 copies of each request for substitution for consideration. Submit requests in the form and according to procedures required for normal submittals, except accompanied by a written request for substitution.
 - 2. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
 - 3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors, that will be necessary to accommodate the proposed substitution.
 - b. A detailed comparison of specified and other significant qualities of the proposed substitution with those of the Work and products or products of manufacturers specified. Significant qualities may include elements, such as performance, weight, size, durability, visual effect, test results, warranty, and suitability. Where there are differences, data must show how the substituted product is either equivalent to or better than those listed in the specifications.
 - c. Product Data, including Drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - f. Cost information, including a proposal of the net change, if any in the Contract Sum.
 - g. The Contractor's certification that the proposed substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated, or clearly state differences and show how the substitution is equivalent or better.
 - h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Engineer will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Engineer. If one or more of the following conditions are not satisfied, the Engineer will return the requests without action except to record noncompliance with these requirements.
 - 1. Revisions to the Contract Documents are not required.
 - 2. Proposed changes are in keeping with the general intent of the Contract Documents.

- 3. The request is timely, fully documented, and properly submitted.
- 4. The request is directly related to an "or-equal" clause or similar language in the Contract Documents.
- 5. The requested substitution offers the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. The Owner's additional responsibilities may include compensation to the Engineer for redesign and evaluation services, increased cost of other construction by the Owner, and similar considerations.
- 6. The specified product or method of construction cannot meet the requirements of a governing authority, and the requested substitution can.
- The specified product or method of construction cannot be provided in a manner that is compatible with other materials and where the Contractor certifies that the substitution will overcome the incompatibility.
- 8. The specified product or method of construction cannot be coordinated with other materials and where the Contractor certifies that the proposed substitution can be coordinated.
- 9. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provides the required warranty.
- B. The Contractor's submittal and the Engineer's acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with the Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute acceptance of the Product, Method, or process.

PART 3 - EXECUTION (Not Applicable)

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all other Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - Final cleaning.
- B. Closeout requirements for specific construction activities are also included in the appropriate Sections in Divisions 2 and 3.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise the Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.
 - 7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
 - 9. Complete final cleanup requirements, including touchup painting.
 - 10. Touch up and otherwise repair and restore marred, exposed finishes.

- B. Inspection Procedures: On receipt of a request for inspection, the Engineer will either proceed with inspection or advise the Contractor of unfilled requirements. The Engineer will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - 1. The Engineer will repeat inspection when requested and assured that the Work is substantially complete.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
 - Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Engineer's final inspection list of items to be completed or corrected, endorsed and dated by the Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Engineer.
 - 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
 - 5. Submit consent of surety to final payment.
 - 6. Submit a final liquidated damages settlement statement.
 - 7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Engineer.
 - Upon completion of reinspection, the Engineer will prepare a certificate of final acceptance. If the Work is incomplete, the Engineer will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 - 2. If necessary, reinspection will be repeated.

1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Engineer's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
 - Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
 - 3. Note related change-order numbers where applicable.

- Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.
 - 1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 - 2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
 - 3. Note related record drawing information and Product Data.
 - Upon completion of the Work, submit record Specifications to the Engineer for the Owner's records.
- D. Record Product Data: Maintain one copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.
 - 1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
 - Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
 - Upon completion of markup, submit complete set of record Product Data to the Engineer for the Owner's records.
- E. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Engineer for the Owner's records.
- F. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch (51-mm), 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
 - 1. Emergency instructions.
 - 2. Copies of warranties.
 - 3. Inspection procedures.
 - 4. Shop Drawings and Product Data.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
 - 1. Maintenance manuals.
 - Record documents.
 - 3. Spare parts and materials.
 - 4. Tools.

CONTRACT CLOSEOUT

- 5. Lubricants.
- 6. Identification systems.
- 7. Control sequences.
- 8. Hazards.
- 9. Cleaning.
- 10. Warranties and bonds.
- 11. Maintenance agreements and similar continuing commitments.

3.2 FINAL CLEANING

- A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Section 01500 "Construction Facilities and Temporary Controls".
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore surfaces to their original condition.
 - c. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, eventextured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

WARRANTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties.
 - Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section 01300 "Submittals" specifies procedures for submitting warranties.
 - 2. Division 1 Section 01700 "Contract Closeout" specifies contract closeout procedures.
 - 3. Divisions 2 through 3 Sections for specific requirements for warranties on products and installations specified to be warranted.
 - 4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 DEFINITIONS

- A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.4 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents.

The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

- D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

- A. Submit written warranties to the Engineer prior to the date certified for Substantial Completion. If the Engineer's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Engineer.
 - When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Engineer within 15 days of completion of that designated portion of the Work.
- B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Engineer, for approval prior to final execution.
- C. Forms for special warranties are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Engineer, for approval prior to final execution.
 - 1. Refer to Divisions 2 through 3 Sections for specific content requirements and particular requirements for submitting special warranties.
- D. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- E. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (115-by-280-mm) paper.
 - 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
 - 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

SITE CLEARING

PART 1 - GENERAL

1.1 RELATED SECTIONS

A. Section 02200: Earthwork

1.2 SUMMARY

- A. This Section includes the following:
 - Removing above- and below-grade items as identified on the drawings.

1.3 PROJECT CONDITIONS

- A. Traffic: Conduct site-clearing operations to ensure minimum interference with traffic, adjacent roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.
- B. Protection of Existing Improvements: Provide protections necessary to prevent damage to existing improvements indicated to remain in place.
 - 1. Restore damaged improvements to their original condition, as acceptable to property owners.

1.4 EXISTING SERVICES

- A. General: Indicated locations are approximate; determine exact locations before commencing Work.
- B. Arrange and pay for disconnecting, removing, capping, and plugging utility services if necessary. Notify affected utility companies in advance and obtain approval before starting this Work.
- C. Place markers to indicate location of disconnected services. Identify service lines and capping locations on Project Record Documents.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SITE CLEARING

A. General: Remove grass and other vegetation, improvements, or obstructions, as required, to permit installation of new construction. Remove items elsewhere on site or premises as specifically indicated.

3.2 FILLING AND ROUGH GRADING

- A. Depressions and areas below grade in site area shall be filled to original rough grade elevations. Hydromulch seed disturbed areas.
- B. Fill to rough grade elevations with select fill as defined in Section 02200, when fill obtained from high areas is exhausted.

- C. Compact fill to preclude further consolidation.
- D. Rough Grading:
 - 1. Site shall be rough-graded to eliminate holes and sharp breaks in grade and to fit into area drainage pattern.
 - 2. Maintain existing system or establish temporary drainage system to prevent flooding, sedimentation, or erosion damage to project site.

3.3 DISPOSAL OF WASTE MATERIALS

- A. Burning on Owner's Property: Burning is not permitted on Owner's property.
- B. Removal from Owner's Property: Waste materials shall be property of the Contractor and shall be removed from Owner's property. Contractor shall properly and legally dispose of waster materials.

EARTHWORK

PART 1 - GENERAL

RELATED SECTIONS

- A. Section 02100: Site Clearing
- B. Section 02243: Lime Stabilized Subgrade.

REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM):

D 1556, Density of Soil in Place by the Sand-Cone Method

D 2922, Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

D 698, Moisture-Density Relations of Soils and Soil- Aggregate Mixtures Using 5.5 lb. (2.49-kg) Rammer and 12 in. (305-mm) Drop

1.1 DEFINITIONS

A. Soil Compaction to Percentage of Maximum Density: 1. Compaction to density not less than stated percentage of oven-dry maximum density at optimum moisture content as determined by standard method of test ASTM D 698 (Method A) shall be abbreviated "percent maximum density ASTM D 698 (Standard Proctor)".

1.2 DESCRIPTION

- A. Major Operations:
 - Complete preparation of rights-of-way and lots, including:
 - a. Removal and disposal of vegetation, trash, debris, and deleterious and objectionable materials.
 - b. Protection of items to remain.
 - c. Removal and disposal of minor structures, clearing and grubbing, and backfilling of depressions.
 - Stripping and stockpiling of topsoil.
 - Excavate materials in areas of cut to established lines, grades, cross sections, and slopes and utilize excavated materials and borrow materials of specified characteristics to place fills and to spread on adjacent lots stripped and prepared to receive fill.
 - 3. Process and compact subgrades including lime and cement subgrade stabilization as required.
 - 4. Finish subgrades and entire rights-of-way ready for subsequent construction including construction of roadway paving.

1.3 SUBMITTALS

A. Submit to Owner certified copies of laboratory test results made to determine optimum moisture content, plasticity index (P.I.), liquid limit, gradation, and other characteristics of soils necessary for field quality control of subgrade compaction.

1.4 PROTECTION

A. Refer to "Protection" article in General Requirements.

PART 2 - EXECUTION

2.1 CLASSIFICATION OF EXCAVATED MATERIALS

- Excavated materials will be unclassified.
- B. Excavate materials encountered without exception.
- C. No separate or extra compensation will be made or any special consideration given based on types of materials encountered.

2.2 BLASTING

A. Use of explosives will not be permitted.

2.3 SITE PREPARATION

A. Earthwork includes clearing and grubbing, removing and disposing of vegetation, debris, rubbish, objectionable materials and minor obstacles to construction within construction areas as work incidental to earthwork.

2.4 STRIPPING

- Before excavation or placement of embankments or fills, strip surface of topsoil to depths encountered.
- B. Stockpile topsoil free of grasses and vegetation at locations as directed.

2.5 EXCAVATION

- A. Perform excavation of materials encountered within grading limits of project to lines and grades indicated.
- B. No extra payment will be made because of subsurface soil conditions requiring removal of rock, boulders, hard-pan or other classes of excavation; materials encountered shall be excavated as required by construction without claim for extra compensation because of subsurface soil conditions.
- C. Transport suitable excavated material to and place in fill areas as required within limits of roadway and freehaul and spread excess excavated materials on adjacent lots at locations selected by the Owner.
- D. Excavated materials shall not be treated as excess or waste materials unless specifically designated.
- E. Stripped materials containing organic and objectionable materials shall be treated as waste material.
- F. Maintain existing sections and ditches to ensure proper drainage.

G. Construct and maintain ditches and channels to avoid damage to sections.

2.6 FILLS

A. Ground Surface Preparation:

- 1. Remove and dispose of, as waste material, top layer of soil containing roots, grasses, and other vegetable and organic materials.
- 2. Backfill stump holes or other small excavations with fill material and compact to density of adjacent in situ soils.
- 3. Scarify roadbed areas to 6 in. depth minimum.
- 4. Scarify or plow areas outside roadbed areas to depth of 4 in. minimum.
- 5. Recompact loosened natural ground material with new material.

B. Formation of Embankments and Fills:

- 1. Construct at locations and to lines and grades, typical sections, detailed sections, and slopes indicated within limits of work.
- 2. Use earth free from roots or other organic material, trash, frozen material, and rock, stones, or clods of hard earth having maximum dimension greater than 2 in.
- Utilize materials excavated from within project limits for fill and to construct embankments and fills.
- Construct in layers approximately parallel to finished grade surface and compact.
- 5. Construct in successive layers for full width of individual cross section and in lengths as best suited to sprinkling and compaction methods utilized.
- Form layers by utilizing equipment which will spread material as it is dumped or spread by blading or other acceptable methods from piles or windrows dumped from excavating or hauling equipment in amounts such that material is evenly distributed.
- 7. Where layers of unlike materials abut each other, mix each material to prevent abrupt changes in soil.
- 8. No material placed by dumping in a pile or windrow shall be incorporated in a layer in that position, but such piles or windrows shall be moved by blading or similar methods.
- 9. Break clods or lumps of material and mix material by blading, harrowing, disking or similar methods to obtain material of uniform consistency in each layer.
- 10. In order to facilitate uniform wetting of material, water may be applied at material source.
- 11. At cut and fill sections, scarify earth cuts in hill side to subgrade 6 in. depth, mix material, reshape by blading, adjust moisture content of soil, and compact to same density as that required for adjacent embankment.
- 12. Depth for compaction for each lift shall not exceed loose measurement depth specified in "Compaction".
- 13. Prior to and in conjunction with compaction operation, bring each layer to moisture content as specified in "Compaction", and keep leveled with suitable equipment to insure uniform compaction over entire layer.
- 14. In conjunction with formation of embankments and fills, compact fill material as specified in "Compaction".
- 15. Seal exposed fill surface with smooth roller when rainfall occurs to prevent infiltration of runoff.
- 16. Grade fill to prevent ponding of runoff.

2.7 SUBGRADE PREPARATION FOR PAVEMENT

- A. Subgrade Stabilization Requirements:
 - Lime stabilize clay subgrade to depth of 6 in.: Refer to Section 02243.
- B. Construction Requirements:
 - 1. Construct subgrade to lines, grades, and typical sections indicated allowing for full thickness of pavement section.

2. Beneath subgrade lime stabilized depth, compact to 95 percent maximum density, ASTM D698, Standard Proctor.

C. Subgrade Protection:

- 1. Keep subgrade shaped and drained during construction.
- 2. Maintain ditches and drains along subgrade to drain effectively.
- 3. Bring subgrade to grade when ruts of 2 in. or more in depth occur in subgrade, reshape if required, and recompact prior to placing of paving or base.
- 4. Storage or stockpiling of materials on subgrade will not be permitted.
- 5. Do not place subsequent construction until subgrade has been properly prepared and in no case shall subsequent construction be placed on muddy or soft subgrade.
- 6. Should subgrade lose required stability, density, or finish before subbase or base course is placed, recompact and refinish subgrade.
- 7. Prevent excessive loss of moisture in subgrade by sprinkling, sealing, or covering with subsequent layer or granular material.
- 8. Excessive loss of moisture shall be construed to exist when subgrade soil moisture content is more than two percent below optimum.

2.8 COMPACTION

- A. Compact in uniform layers, not exceeding required loose thickness, dry or moisten as necessary to obtain moisture content not more than one percent below or more than two percent above optimum moisture content and compact to density as follows:
 - 1. Roadways subgrade: not less than 95 percent of Standard Proctor (ASTM D698).
 - 2. Lot fill: 86 to 92 percent of Standard Proctor (ASTM D698).
- B. Each layer shall be uniform as to material, density, and moisture content before compaction.
- C. Conduct density tests after each layer has been compacted.
- D. If material fails to meet density specified or moisture content is outside required range, rework layer to obtain specified results and alter compaction methods on subsequent work.
- E. Maximum thickness of uniform layers, loose measurement, shall be as follows:
 - 1. Mechanical hand tamper and hand compaction equipment and procedures: 4 in.
 - 2. Pneumatic tired roller: 6 in.
 - 3. Tamping rollers: 12 in.
- F. Compacting equipment and method of compaction shall ensure uniform density will be obtained over entire area and depth of material being compacted.
- G. Break up and spread fill material deposited in place by means of dumping in pile before grading into uniform layers.
- H. Start rolling longitudinally at sides and proceed toward center of crowned sections, or start longitudinally at low side and proceed toward high side of sloped areas, overlapping on successive trips by at least half width of roller unit.
- I. Mechanical Hand Tampers: Use in areas inaccessible to roller equipment.

2.9 FINISHING

- A. Description: Finishing shall consist of shaping and finishing entire right-of-way.
- B. Construction Methods:
 - 1. Smoothly shape roadway shoulders, slopes and ditches after other work has been completed, except for exactness of finish as required.

- 2. Clear ditches and channels within right-of-way of debris and obstructions.
- 3. Level excess earth or other waste material adjacent to structures, poles, trees, or other objects or dispose of, as required.
- 4. Remove loose stones, rocks and boulders within construction areas that would fail to pass 2 in. ring; dispose of as required.
- 5. Remove roots, trash and other debris from Owner's controlled land; place entire construction area in neat and presentable condition.
- 6. Dragging, pushing or scraping of material along or across surface of completed pavement will not be permitted.
- 7. Continuously maintain sections until acceptance of work.
- 8. Finish surface not more than 0.10 ft. above or below established grade or cross section.
- 9. Finish ditches and gutters to drain readily.
- Regrade disturbed area to original grade where existing grade is disturbed in areas not marked to be graded.

2.10 FIELD QUALITY CONTROL

- A. Frequency and Types of Tests:
 - Laboratory shall test compacted general fill, embankment, and backfill as follows:
 - a. Take one field density test minimum for every 1000 cu. yds. of material placed, ASTM D 1556 or ASTM D 2922.
 - 2. Laboratory shall test subgrade:
 - Take one field density test for every 1000 sq. yds. of compacted layer in compliance with ASTM D 1556 or ASTM D 2922.

2.11 EXCESS MATERIAL

A. Excavated and topsoil materials in excess of that used to construct required fills, embankments, stockpiles and topsoiled areas shall remain property of Owner and shall be freehauled, stockpiled or spread on Owner's property at locations selected by Owner.

2.12 DISPOSAL OF WASTE MATERIALS

- A. Waste materials such as trash, debris, cleared and grubbed materials, grasses and vegetation and topsoil contaminated with vegetation, and unsuitable, unusable, and undesirable materials necessary to be removed from construction area or designated by Owner to be removed as waste materials shall be classified as follows:
 - 1. Combustible waste materials: Materials feasible, practical and non-toxic to dispose of by burning, including cleared and grubbed materials.
 - 2. Incombustible waste materials: Materials not burnable, not feasible, and not practical to dispose of by burning.
- B. Combustible waste materials and incombustible waste materials shall become property of Contractor and legally disposed of outside limits of Owner's controlled property.

2.13 TOPSOIL

- A. Distribute suitable topsoil on areas indicated to minimum depth of 4 in.
- B. Suitable topsoil from stripping operations may be used.

2.14 EXISTING FENCING

A. Mend damage to existing fencing to remain and provide temporary fencing to maintain function of fencing that is damaged until damage to existing fencing is restored or replaced.

DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Demolishing and removing pavement, curbs, concrete, wooden bridge components and other items identified in the plans.
- B. Disposing of demolished materials.

1.2 MEASUREMENT AND PAYMENT

A. Work under this specification shall be incidental to the other project work.

1.3 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01300 Submittals.
- B. Submit proposed methods, equipment, materials and sequence of operations for demolition. Describe coordination for shutting off, capping, and removing temporary utilities. Plan operations to minimize temporary disruption of utilities to existing facilities or adjacent property.
- C. Submit proposed demolition and removal schedule for approval. Notify Owner and the local municipality having jurisdiction in writing at least 48 hours before starting demolition.
- D. Obtain a permit for demolition, as required.

1.4 OWNERSHIP OF MATERIAL AND EQUIPMENT

A. Demolished materials become the property of the Contractor.

1.5 ENVIRONMENTAL CONTROLS

- A. Minimize spread of dust and flying particles. If required by governing regulations, use temporary enclosures and other suitable methods to prevent the spread of dust, dirt and debris.
- B. Use appropriate controls to limit noise from demolition to levels designated in City ordinances.
- C. Do not use water where it can create dangerous or objectionable conditions, such as localized flooding, erosion, or sedimentation of nearby ditches or streams.
- D. Dispose of removed equipment, materials, waste and debris in a manner conforming to applicable laws and regulations.

PART 2 PRODUCTS

2.1 EQUIPMENT AND MATERIALS FOR DEMOLITION

A. Use equipment and materials approved under Paragraph 1.03, Submittals.

- B. Fires are not permitted.
- C. Do not use a "drop hammer" where the potential exists for damage to underground utilities, structures, or adjacent improvements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Prior to demolition, make an inspection with Owner to determine the condition of existing structures and features adjacent to items designated for demolition.
- B. Do not proceed with demolition or removal operations until after the joint inspection and subsequent authorization by Owner.

3.2 PROTECTION OF PERSONS AND PROPERTY

- A. Provide safe working conditions for employees throughout demolition and removal operations. Observe safety requirements for work below grade.
- B. Maintain safe access to adjacent property and buildings. Do not obstruct roadways, sidewalks or passageways adjacent to the work.
- C. Perform demolition in a manner to prevent damage to adjacent property. Repair damage to Owner's property or adjacent property and facilities.
- D. The Contractor shall be responsible for safety and integrity of adjacent structures and shall be liable for any damage due to movement or settlement. Provide proper framing and shoring necessary for support. Cease operations if an adjacent structure appears to be endangered. Resume demolition only after proper protective measures have been taken.
- E. Erect and maintain enclosures, barriers, warning lights, and other required protective devices.

3.3 UTILITY SERVICES

- A. Follow rules and regulations of authorities or companies having jurisdiction over communications, pipelines, and electrical distribution services.
- B. Notify and coordinate with utility company and adjacent building occupants when temporary interruption of utility service is necessary.

3.4 PAVEMENT DEMOLITION

- A. Demolish pavement to depth necessary to meet requirements of plans and specifications. Where no limits are shown, the limits shall be 4 inches outside new items to be installed. Removals beyond these limits shall be at the Contractor's expense; satisfactorily reconstruct excess removals.
- B. Where existing concrete and/or asphalt must be removed, but will be replaced subsequently:
 - 1. Make initial cut with a concrete saw; do not cut reinforcement.

2. After removing concrete, cut cross bars at center of breakout and protect for subsequent concrete work.

3.5 DISPOSAL

A. Remove from the site all items contained in or upon the structure not designated for reuse or salvage. Follow method of disposal as required by regulatory agencies.

3.6 BACKFILL

- A. Backfill holes in accordance with specification sections governing materials indicated on Drawings. Where no material is indicated, backfill with approved borrow and compact to a density of 90 percent standard Proctor.
- B. Do not backfill with material from demolition unless approved by Owner.

CONCRETE WALKS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements for reinforced concrete sidewalks and curbs.

1.2 MEASUREMENT AND PAYMENT

- A. Measurement and payment is as noted on the Unit Price Schedule.
- B. Refer to Section 01026 Measurement and Payment for unit price procedures.

1.3 SITE CONDITIONS

A. Guard newly poured concrete walks from defacement until concrete sets up to hard condition.

1.4 SUBMITTALS

- A. Concrete mix design. See Section 033000.
- B. Product data on fiberboard, joint sealant, and curing compound.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete: Refer to Section 033000.
- B. Concrete Reinforcement: Refer to Section 032000.
- C. Expansion Joint: Asphalt impregnated fiberboard conforming to ASTM D1751, 3/4-in. thick.
- D. Joint Sealant: Two component self-leveling, polyurethane sealant, gray color. C 920, Type M, Grade P.
 - 1. Acceptable Manufacturers:
 - a. Tremco "THC 900"
 - b. Sonneborn Building Products "Sonolastic Paving Joint Sealant"
 - c. Pecora "Urexpan NR-200
- E. Water: Potable
- F. Curing compound: Refer to Section 033000.

2.2 MIXES

- A. Compressive Strength at 28 days: 3000 psi minimum.
- B. Slump: 4-inch maximum.
- C. Entrained Air Content: Four percent minimum; eight percent maximum.
- D Maintain water content as constant as possible.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify subgrade is constructed true to grade and cross section.
- B. Verify subgrade materials are undisturbed earth or compacted so no further consolidation takes place underfoot.

3.2 SURFACE PREPARATION

- A. Excavate at least 6" beyond outside lines of sidewalk. Shape to the line, grade and cross-section.
- B. Compact subgrade to minimum of 90% maximum dry density at optimum to 3 percent above optimum moisture content as determined by ASTM D 698.
- C. Maintain underlying course in smooth, firm condition, in conformity with required section and established grade until concrete is in place.
- D. Recompact loose material on subgrade surface immediately before placing concrete.
- E. Fill with thoroughly compacted bank sand or cement stabilized sand as specified on Drawings.

3.3 FORM CONSTRUCTION

- A. Set forms to required grades and lines, rigidly braced and secured.
- B. Install sufficient quantity of forms to allow continuous progress of work and so forms can remain in place at least 72 hr. after concrete placement.
- C. Clean forms after each use; coat with form release agent to ensure separation from concrete without damage.

3.4 PLACING REINFORCEMENT

- A. Anchor reinforcement securely.
- B. Dowel into adjacent concrete walks as shown on drawings.

3.5 CONCRETE PLACEMENT

- A. Do not place concrete until subgrade and forms have been checked and approved by Owner.
- B. Do not place concrete around structures or frames, until brought to required grade and alignment.
- C. Place concrete in one course, monolithic construction, for full width and depth of walks.
- D. Spread concrete as soon as deposited on subgrade using methods to prevent segregation of mix.
- E. Consolidate with care to prevent dislocation of reinforcing and joint materials.

3.6 JOINTS

A. General:

- Construct expansion and contraction joints true-to-line and face perpendicular to surface of walks.
- 2. Construct transverse joints at right angles to centerline and match joints with joints in adjacent pavement.

B. Tooled Contraction Joints:

- 1. Provide tooled contraction joints at intervals equal to width of walk.
- 2. Match as nearly as possible adjacent joints in curb or pavement.
 - a. Tooled joints:
 - (1) Form in fresh concrete by grooving top portion of slabs.
 - (2) Finish 1/4 in. wide at surface.
 - (3) Finish edges with 1/4 in. edger.

C. Expansion Joints:

- 1. Provide joint filler abutting concrete paving, curbs, catch basins, manholes, inlets, structures, walks, and other fixed objects.
- 2. Locate expansion joints at intervals shown on Drawings
- 3. Extend joint fillers full width and depth of joint, not less than 1/2 in. below finished pavement surface of joints to be sealed.
- 4. Where joint is not to be sealed, place top of joint filler flush with finished concrete.
- 5. Furnish joint fillers in one piece lengths for full width being placed.
- 6. Protect top edge of joint filler during concrete placement with cap.
- 7. Remove protection after both sides of joint are placed.

D. Sealing Joints:

- 1. Seal tops of expansion joints with joint sealer.
- 2. Apply sealer in strict accordance with manufacturer's recommendations.
- 3. Concrete at joint shall be surface dry, and atmospheric and pavement temperatures shall be above 50 deg. F. at time of application of sealing materials.
- 4. Thoroughly clean contact faces at joint opening of foreign or loose materials before sealing material is placed.
- 5. Remove material spilled on exposed concrete surfaces; clean surface immediately.

3.7 CONCRETE FINISHING

- A. Do not sprinkle water or dry cement on surface to facilitate finishing.
- B. Perform concrete finishing using machine or hand methods.

C. Float Finish:

- 1. After striking off and consolidating concrete, smooth surface by screeding and floating.
- 2. Use hand methods where mechanical floating is not possible.
- 3. Adjust floating to compact surface and produce uniform texture.
- 4. After floating, test surface for trueness with 10 ft. straightedge.
- 5. Distribute concrete to remove surface irregularities.
- 6. Refloat repaired areas to provide continuous, smooth finish.
- D. Work edges of slabs and joints with radius edging tool with 1/4 in. radius.

- E. Complete surface finishing after completion of floating and when excess moisture or surface sheen has disappeared.
- F. Broom Finish: Draw fine hair broom across concrete surface perpendicular to line of traffic.
- G. Form Removal:
 - 1. Do not remove forms until 24 hr. after placing concrete.
 - After form removal, clean ends of joints and point honeycombed areas with stiff consistency cement mortar.
 - 3. Remove and replace areas or section containing major honeycombing.

H. Tolerances:

- 1. Top of forms: No more than 1/8 in. in 10 ft.
- 2. Vertical face on longitudinal axis: Not more than 1/4 in. in 10 ft.

3.8 CURING

- A. Cure concrete so moist conditions are maintained for minimum of 72 hr.
- B. Cure by application of cotton mats, waterproof paper, or suitable membrane curing compound.
- C. Buried concrete may be cured by wet earth.

3.9 ADJUSTING AND CLEANING

- A. Repair or replace broken or defective walks.
- B. Sweep concrete walks and wash free of stains, discolorations, dirt, and other foreign material just prior to final inspection.

3.10 PROTECTION

- A. Protect walks from damage until acceptance of work.
- B. Exclude construction traffic from walks for at least 14 days after placement.
- C. When construction traffic is permitted, maintain walks as clean as possible by removing surface stains and spillage of materials as they occur.

END SECTION 025140

CONCRETE PAVEMENTS

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- A. A 615, Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
 - C 31, Making and Curing Concrete Test Specimens in the Field
 - C 33, Concrete Aggregates
 - C 42, Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
 - C 94, Ready-Mix Concrete
 - C 131, Test for Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine
 - C 138, Test for Unit Weight, Yield and Air Content (Gravimetric) of Concrete
 - C 143, Test for Slump of Portland Cement Concrete
 - C 150, Portland Cement
 - C 171, Sheet Materials for Curing Concrete
 - C 231, Test for Air Content of Freshly Mixed Concrete by the Pressure Method
 - C 260, Air-Entraining Admixtures for Concrete
 - C 309, Liquid Membrane-Forming compounds for Curing Concrete
 - C 494, Chemical Admixtures for Concrete

1.2 HANDLING AND STORAGE

- A. Do not mix different classes of aggregate without written permission of the Owner.
- B. Segregated aggregate will be rejected. Before using aggregate whose particles are separated by size, mix them uniformly to grading requirements.
- C. Aggregates mixed with dirt, weeds or foreign matter will be rejected.

1.3 SUBMITTALS

- A. Submittals shall be made under provisions of Section 01300.
 - Design Mix: Submit the design mix and test data on the proposed design mix for each type and strength of concrete in the project. The design mixes shall be prepared by a certified independent testing laboratory employed and paid by the Contractor.
 - 2. Joint Layout: The Contractor shall submit a concrete pavement joint layout to the Owner for review and approval prior to construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
- B. Water: Furnish clean, drinkable water free from injurious amount of oils, acids, alkalis or other deleterious substances.
- C. Coarse Aggregate: ASTM C 33.

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- D. Fine Aggregate: ASTM C 33.
- E. Reinforcing Steel: ASTM A 615, Grade 60.
- F. Air Entraining Agent: ASTM C 260.
- G. Water Reducer: ASTM C 494 Chemical Admixture for Concrete Type A may be used if required to improve the workability of concrete. The amount and type of such admixture shall be subject to approval by the Owner.
- H. Expansion Joint Material: Clear all heart Redwood board with density after oven dried to constant weight of 30 lb. per cu. ft. maximum or asphalt impregnated fiberboard conforming to ASTM D1751.
- I. Joint Sealing Compound: Two component self-leveling, polyurethane sealant, gray color. C 920, Type M, Grade P.
- J. Load Transmission Devices: Provide smooth steel bar dowel, as shown. Steel bars must conform to standards of ASTM A 615 Deformed and plain Billet-Steel Bars for Concrete Reinforcement, Grade 60.
- K. Metal Supports for Reinforcing Steel and Joint Assembly: Employ metal of approved shape and size as required to maintain clear distances.
- L. Cover Materials for Curing: Curing materials shall conform to one of the following:
 - 1. Polyethylene Film: Polyethylene film shall be opaque pigmented white in color and shall conform to the requirements of ASTM C 171 Sheet Materials for Curing Concrete.
 - 2. Waterproofed Paper: Waterproofed paper used for curing shall conform to the requirements of ASTM C 171.

2.2 PROPORTIONING

- A. Responsibility: Prior to the start of paving operations and after approval of all material to be used in the concrete, the Contractor shall submit test data showing the proportions and actual compressive strength obtained from the concrete for all required compressive strengths, at all test ages, identified in the specifications. Compressive strength shall be as specified using test specimens prepared in accordance with ASTM C 31 Making and Curing Concrete Test specimens in the Field and tested in accordance with ASTM C 42 Obtaining and Testing Drilled Cores and Sawed Beams of Concrete. It shall also be the responsibility of the Contractor to determine and measure the batch quantity of each ingredient, including all water, not only for batch designs but for all concrete produced for the project, so that the mix conforms to these specifications.
- B. Concrete Mix: Provide a concrete mix that is uniform and workable. Design the mix to produce concrete which will have a minimum compressive strength of 3,500 psi at 28 days. Slump of concrete must be at least 1-1/2-in., but no more than 3-in. for curbs and 4-inches, plus or minus 1-inch, for pavement when tested in accordance with ASTM C 143 Slump of Portland Cement Concrete.

Pavement mix designs shall meet flexural requirements of at least 500 pounds per square inch at 28 days using ASTM C78.

 Concrete pavement must contain at least 5-1/2 sacks of cement per cubic yard, with not more than 6.5 gallons of water, net, per sack of cement. The cement content shall be determined in accordance with ASTM C 138 Unit Weight, Yield and Air Content (Gravimetric) of Concrete.

- 2. Coarse dry aggregate shall not exceed 85 percent of the loose volume of concrete.
- 3. Air-entraining admixture shall be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trail mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air entrainment in the mix shall be 5-1/2 percent plus or minus 1-1/2 percentage points. Air content shall be determined by testing in accordance with ASTM C 231 Air Content of Freshly Mixed Concrete by the Pressure Method.

2.3 MIXING AND MIXING EQUIPMENT

A. Mixing and mixing equipment shall be in accordance with ASTM C94 - Ready-Mixed Concrete for Mixing Equipment.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

A. Construct subgrade true to grade and cross section as required to achieve the final grades as shown in the in drawings.

3.2 WEATHER CONDITIONS

A. Place concrete only when the air temperature is above 40 degrees F. The Contractor is responsible for the quality and strength of concrete placed under any weather conditions.

3.3 FORMS

A. Side Forms: Use metal forms of approved shape and section. A form as deep as the pavement edge thickness is preferred. Forms with depth up to 1-in. greater or less than pavement thickness may be used. Forms with less depth than pavement thickness shall be brought to required depth by securely attaching wooden planks of approved section and size to the bottom of the form. Use a form section at least 10 feet in length, and staked in position with at least three pins. Form shall have adequate strength to withstand machine loads without visible springing or settlement. Use forms free from warps, bends and kinks and sufficiently true to provide a straight edge on the concrete. Test the top of each form section with a straight edge and verify that it conforms with requirements for the surface of completed pavement. Use flexible or curbed forms of wood or metal to set the proper radius on curves of 100 feet radius or less.

B. Form Setting

- 1. Rest forms directly on subgrade. Do not shim with pebbles or dirt. Remove subgrade that will not support the load form. Replace and compact subgrade to required density. Accurately set forms to required grade and alignment and, during the entire operation of placing, vibrating and finishing of concrete, do not deviate from this grade and alignment more than 1/8-in. in 10 feet of length. Do not remove forms for at least 24 hours after the completion of finishing operations. Provide a supply of forms that will be adequate to comply with this requirement and for orderly and continuous placing of concrete.
- 2. Adjacent slabs may be used instead of the forms, provided that the concrete is well protected from possible damage by finishing equipment. These adjacent slabs shall not be used for forms until the concrete has aged at least 7 days. For short radius curves, forms less than 10 feet in length or curved forms may be used. Do not use any material which, in the opinion of the Engineer, is unsuitable for forms.

C. Ensure requirements for accessibility per Texas Department of Licensing and Regulation are met.

3.4 REINFORCING STEEL

- A. Accurately place reinforcing steel in accordance with details shown. Wire reinforcing bars securely together at intersections and splices. Bars and coatings shall be free of rust, dirt or other foreign matter when the concrete is installed. Reinforcement shall be as detailed on the drawings.
- B. Place all reinforcing steel and secure to chairs.

3.5 JOINT ASSEMBLIES

- A. Placement: Place joints of the same type shown on the Drawings.
- B. Construction Joints: Place transverse construction joint at end of day's paving operation or where concrete placement must be stopped for more than 30 minutes.
- C. Expansion Joints: Place transverse expansion joints at same locations as in adjacent pavement, abutting against other structures (grease traps), and at radius ends, but no further than 60 feet apart. Shape board filler accurately to the cross section of the concrete slab. Use load transmission devices of the type and size shown on Drawings.
- D. Contraction Joints: Place contraction joints at the same locations as in adjacent pavement but no further than 10 feet apart. Tool the edges of the groove and seal the groove with joint sealing compounds.
- E. Sawing Joints: When joints in concrete pavements are sawed, the joints shall be cut as shown on the plans. The concrete saw shall be capable of cutting a groove in a straight line and shall produce a slot at least 1/4-in. wide and to the depth shown on the plans. When shown on the plans or required by the specifications, the top portion of the slot or groove shall be widened by means of a second shallower cut or by suitable and approved beveling to provide adequate space for joint sealers. Sawing of the joints shall commence as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling or tearing and prior to the initiation of cracks. The joints shall be sawed at the required spacing consecutively in sequence of the concrete placement, unless otherwise approved by the Engineer.

3.6 PLACING

- A. Concrete batch(es) not placed as specified within 60 minutes after water or cement has been added at the batch plant shall be rejected.
- B. Deposit concrete rapidly and continuously on subgrade in successive batches. Distribute concrete to the required depth and for entire width of the pour by shoveling or by other approved methods. Do not use rakes in handling concrete. At the end of the day or in case of unavoidable interruption of more than 30 minutes, place a transverse construction joint at the point of stopping work, provided that the section on which work has been suspended is not less than 10 feet from the preceding joint. Sections less than 10 feet long shall be removed and replaced.
- C. Take special care in placing and spading concrete against forms and at longitudinal and transverse joints to prevent honeycombing. Voids in the edge of the finished pavement shall be cause for rejection.

3.7 VIBRATING

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

3.8 FINISHING

- A. Finish concrete pavement by hand finishing methods. Hand finish with a mechanical strike and tamping template as wide as the pavement to be finished. Shape the template to the pavement section. Move the strike template forward in the direction of the work, maintaining a slight excess of material in front of the cutting edge. Make at least two trips over each area. Screed the pavement surface to the required section. Work the screed with a combined transverse and longitudinal motion in the direction work is progressing. Maintain the screed in contact with the forms. Use a longitudinal float to level the surface.
- B. On narrow strips and transitions, finish concrete pavement by hand. Thoroughly work concrete around reinforcement and embedded fixtures. Strike off concrete with a strike-off screed. Move the strike-off screed forward with combined transverse and longitudinal motion in direction work is progressing, maintaining the screed in contact with the forms, and maintaining a slight excess of materials in front of the cutting edge. Tamp the concrete with a tamping template. Use a longitudinal float to level the surface.
- C. After completion of the straightedge operation, make the first pass of a burlap drag as soon as construction operations permit and before the water sheen has disappeared from the surface. Follow this by as many passes as required to produce the desired texture depth. Permit no unnecessary delays between passes. Keep the drag wet, clean and free from encrusted mortar during use.

3.9 SURFACE TEST

A. Test the entire surface before the initial set and correct irregularities or undulations. Bring surface within requirements of the following test and then finish. Place an approved 10 foot straightedge parallel to the center of the roadway to bridge any depressions and touch all high spots. Do not permit ordinates measured from the face of the straight edge to the surface to exceed 1/16-in. per foot from the nearest point of contact. In no case permit the maximum ordinate to a 10 foot straightedge to exceed 1/8-in.

3.10 CURING

- A. All concrete pavement shall be cured by protecting it against loss of moisture for a period of not less than 72 hours immediately upon the completion of finishing operations. In all cases in which curing requires the use of water, the curing shall have prior right to all water supply or supplies. Failure to provide sufficient cover material of whatever kind shall be cause of immediate suspension of concreting operations.
 - 1. Polyethylene Film Curing: Immediately after the finishing of the surface has been completed and the concrete has taken its initial set, it shall be wetted with water applied in the form of a fine spray and covered with the polyethylene film so place and weighted to remain in intimate contact with the surface.

The polyethylene film covering shall be maintained in place continuously for not less than the specified curing period. The film shall be prepared to form blankets of sufficient width to cover the entire surface and both edges of the pavement slab. All joints in the blankets caused by joining film sheets shall lap not less than 12-in. All tears or holes appearing in the polyethylene film during the curing period shall be immediately repaired by placing acceptable moisture-proof patches over such defects or by replacing the blankets.

- 2. Liquid Membrane-Forming Compounds: Immediately after the finishing of the surface has been completed and the concrete has taken its initial set, a liquid membrane-forming compound concrete shall be applied. The liquid membrane-forming compound shall be provided in accordance with ASTM C 309 Liquid Membrane-Forming Compounds for Curing Concrete and applied in accordance with the manufacturer's instructions. The membrane shall restrict the loss of water to not less than 0.55 kg/m² of surface in 72 hours.
- B. Prior to being placed in service, all concrete shall cure a sufficient amount of time. At a minimum, the concrete shall have achieved its design flexural or compressive strength, as evidenced by the testing lab reports, before any construction equipment or vehicles are permitted to use it..

3.11 JOINT SEALING

- A. Seal joints in strict accordance with the joint sealant manufacturer's printed instructions.
- B. Before work is started, the joint sealing equipment shall be in first class working condition, and be approved by the Engineer. Use a concrete grooving machine or a power-operated wire brushing and other equipment such as plow, brooms, brushes, blowers or hydro or abrasive cleaning as required to produce satisfactory joints.
- C. Clean joints of loose scale, dirt, dust and curing compound. When required, remove the joint filler to the depth shown. The term joint includes wide joint spaces, expansion joints, dummy groove joints or cracks, either performed or natural. Remove loose material from concrete surfaces adjacent to joints.
- D. Fill joints neatly with joint sealer to the depth shown. Pour sufficient joint sealer into the joints so that, upon completion, the surface of the sealer within the joint will be 1/4-in. below the level of the adjacent surface.

3.12 TESTING

- A. Laboratory Services: The Owner shall employ a commercial laboratory.
- B. Duties: Arrange for the laboratory to inspect and test materials entering the concrete and check the design of concrete mixes to meet specified strengths, uses and finishes. The lab shall analyze aggregate for quality, durability, grading and free water content. The lab shall take representative specimens of ingredients and mixes; make test specimens measure their flexural strength. The lab shall check the moisture content of aggregates and control their mix subject to approval by the Engineer.
- C. Test Procedures: The laboratory shall make tests in conformance with current standard test procedures of ASTM.
- D. Test Reports: The laboratory shall promptly furnish certified written reports covering results of tests and inspections to the Engineer and the Owner.

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- E. Quality Assurance: Sample concrete delivered to the site in accordance with ASTM method C172. Mold four beams and four cylinders for each 150 cubic yards. Each time a set of specimens is molded, the slump will be determined in accordance with ASTM C143 and the air content in accordance with ASTM C173 or C231. Two of the beams will be tested in accordance with ASTM C78 at 7 days, and the remaining two at 28 days. Two of the cylinders will be tested in accordance with ASTM C39 at 7 days, and the remaining 2 at 28 days.
- F. Core Samples: At the option of the Owner, drill core samples of concrete pavement at locations designated by the Engineer to measure thickness. At age of 28 days, each core may be tested for compressive strength according to methods of the ASTM C42 Drilled Cores and Sawed Beams of Concrete.
- G. Yield: Make a yield test in accordance with ASTM C138 for cement content per cubic yard of concrete.

PREFABRICATED BRIDGE

PART 1 - GENERAL

1.1 SCOPE

A. This specification is for a fully engineered clear span bridge of steel construction and shall be regarded as minimum standards for design and construction. These specifications as well as the design of the bridge substructure are based on products designed and manufactured by Continental Bridge, 8301 State Highway 29 North, Alexandria, MN 56308. Phone 1-800-328-2047.

1.2 MANUFACTURER

A. The inclusion of this guide specification in the Contract Documents is not to preclude in any way the submission by the Contractor of a substitution bridge by another manufacturer. However, any proposed substitution must meet or exceed the design intent and performance requirements contained herein and be submitted to the Engineer in accordance with Section 01631 – Substitutions and shall address the items identified in Part 13 of this specification. In addition, the cost associated with the redesign of the bridge's substructure due to acceptance of a Contractor's substitution shall be borne by the Contractor.

1.3 MEASUREMENT AND PAYMENT

A. Measurement and payment is as noted on the unit price Schedule.

1.4 SUBMITTALS

A. See Parts 6 – Submittals and 13 – Approval Checklist of this specification.

PART 2 - GENERAL FEATURES OF DESIGN

2.1 SPAN

A. Bridge spans shall be 120'-00" (straight 1 inc dimension) and shall be as measured from each end of the bridge structure.

2.2 WIDTH

A. Bridge widths shall be 8'-0" and shall be as measured from the inside face of structural elements at deck level.

2.3 TRUSS TYPE

- A. Bridges shall be designed as a half-through "Pratt" truss with one (1) diagonal per panel and square end vertical members. All end vertical members, unless specified otherwise, shall be plumb. Interior vertical members shall be perpendicular to the chord faces.
 - 1. Bridges shall be designed utilizing an underhung floor beam (top of floor beam welded to the bottom of the bottom chord).
 - 2. The distance from the top of the deck to the top and bottom truss members shall be determined by the bridge manufacturer based upon structural and/or shipping requirements.

PREFABRICATED BRIDGE

3. The top of the top chord shall not be less than 54 inches above the deck (measured from the high point of the riding surface).

2.4 MEMBER COMPONENTS

- A. All members of the vertical trusses (top and bottom chords, verticals, and diagonals) shall be fabricated from square and/or rectangular structural steel tubing. Other structural members and bracing shall be fabricated from structural steel shapes or square and rectangular structural steel tubing.
- B. To provide lateral support for the top flange of open shape stringers (w-shapes or channels), a minimum of one stiffener shall be provided in each stringer at every floor beam location.

2.5 ATTACHMENTS

A. Safety Rails

- 1. Vertical safety rails shall be placed on the structure up to a minimum height of 48² above the deck surface. Safety rails shall be placed so as to prevent a 4² sphere from passing through the truss. Safety rails shall be 1-1/4² x 1-1/4² x 1/8² angles, welded to the inside or outside of the structure at the bridge fabricators option. If placed inside the truss, the safety rails shall have a maximum span of 5¢8², measured from centerline to centerline of support post or truss vertical.
- 2. If placed outside the structure, this maximum span may be increased to 6¢6². Safety rails placed on the inside of the truss shall have their ends sealed and ground smooth so as to produce no sharp edges.
- 3. The safety rail system shall be designed for an infill loading of 200 pounds, applied horizontally at right angles, to a one square foot area at any point in the system.

B. Toe Plate

1. The bridge shall be supplied with a 1/42 x 62 steel toe plate mounted to the inside face of both trusses. The toe plate shall be welded to the truss members at a height adequate to provide a 22 gap between the bottom of the plate and the top of the deck or the top of the bottom chord, whichever is higher. The span of the toe plate (from center to center of supports) shall not exceed 5682.

C. Rub Rails

- 1. The bridge will be supplied with a nominal $5/4^2 \times 6^2$ naturally durable hardwood Ipe (Tabebuia Spp) Lapacho Group or Cumaru (Dipteryx Odorta) rubrail. Rubrail shall be partially air dried to a moisture content of 15% to 20%, shall be supplied S4S (surfaced four sides), E4E (eased four edges), with the edges eased to a radius of $1/8^2$. Measured at 30% moisture content, the width and thickness shall not vary from specified dimensions by more than \pm 0.04 inches. Ends of each piece shall be sealed with Mobil CER-M or an equal aqueous wax log sealer.
- 2. Rubrails shall be attached flush to the inside face of the bridge truss verticals and fastened with two carriage bolts at each support location. The span of the rubrail from centerline to centerline of support shall not exceed 6¢6².

PREFABRICATED BRIDGE

2.6 CAMBER

A. The bridge shall have a vertical camber dimension at midspan equal to 100% of the full dead load deflection plus 1% of the full length of the bridge.

2.7 ELEVATION DIFFERENCE

A. The bridge abutments shall be constructed at the same elevation on both ends of the bridge.

PART 3 - ENGINEERING

A. Structural design of the bridge structures shall be performed by or under the direct supervision of a licensed professional engineer and done in accordance with recognized engineering practices and principles. The engineer shall be licensed to practice in the State of Texas.

3.1 DESIGN LOADS

In considering design and fabrication issues, this structure shall be assumed to be statically loaded. No dynamic analysis shall be required nor shall fabrication issues typically considered for dynamically loaded structures be considered for this bridge.

3.1.1 Dead Load

The bridge structure shall be designed considering its own dead load (superstructure and original decking).

3.1.2 Uniform Live Load

3.1.2.1 Pedestrian Live Load

Main Members: Main supporting members, including girders, trusses and arches shall be designed for a pedestrian live load of 85 pounds per square foot of bridge walkway area. The pedestrian live load shall be applied to those areas of the walkway so as to produce maximum stress in the member being designed.

3.1.3 Vehicle Loads

The bridge superstructure, floor system and decking shall be designed for each of the following point load conditions:

3.1.3.1 Maintenance Vehicle

Bridge shall be designed for an occasional single maintenance vehicle load of 5,000 pounds. The load shall be distributed as a four-wheel vehicle with four equal loads. The maintenance vehicle load shall not be placed in combination with the pedestrian load. A vehicle impact allowance is <u>not</u> required.

3.1.4 Wind Load

3.1.4.1 Horizontal Forces

The bridges shall be designed for a wind load of 25 pounds per square foot on the full vertical projected area of the bridge as if enclosed. The wind load shall be applied horizontally at right angles to the longitudinal axis of the structure.

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The wind loading shall be considered both in the design of the lateral load bracing system and in the design of the truss vertical members, floor beams and their connections.

3.1.4.2 Overturning Forces

The effect of forces tending to overturn structures shall be calculated assuming that the wind direction is at right angles to the longitudinal axis of the structure. In addition, an upward force shall be applied at the windward quarter point of the transverse superstructure width. This force shall be 20 pounds per square foot of deck.

3.1.5 Top Chord Railing Loads

The top chord, truss verticals, and floor beams shall be designed for lateral wind loads and for any loads required to provide top chord stability; however, in no case shall the load be less than 50 pounds per lineal foot or a 200 pound point load, whichever produces greater stresses, applied in any direction at any point along the top chord.

3.1.6 Load Combinations

The loads listed herein shall be considered to act in the following combinations, whichever produce the most unfavorable effects on the bridge superstructure or structural member concerned.

[DL=Dead Load; LL = Live Load; WL = Wind Load; VEH = Vehicle Load]

DL + LL DL + VEH DL+WL DL+LL+WL DL+VEH+.3WL

NOTE: Allowable stresses may be increased 1/3 above the values otherwise provided when produced by wind loading, acting alone or in combination with the design dead and live loads.

3.2 DESIGN LIMITATIONS

3.2.1 Deflection

3.2.1.1 Vertical Deflection

The vertical deflection of the main trusses due to service pedestrian live load shall not exceed 1/400 of the span.

The vertical deflection of cantilever spans of the structure due to service pedestrian live load shall not exceed 1/300 of the cantilever arm length.

The deflection of the floor system members (floor beams and stringers) due to service pedestrian live load shall not exceed 1/360 of their respective spans.

The service pedestrian live load shall be 65 PSF.

Deflection limits due to occasional vehicular traffic shall not be considered.

3.2.1.2 Horizontal Deflection

The horizontal deflection of the structure due to lateral wind loads shall not exceed 1/500 of the span under an 85 MPH wind load.

3.2.2 Minimum Thickness of Metal

The minimum thickness of all structural steel members shall be 3/16" nominal and be in accordance with the AISC Manual of Steel Constructions' "Standard Mill Practice Guidelines". For ASTM A500 and ASTM A847 tubing, the section properties used for design shall be per the Steel Tube Institute of North America's Hollow Structural Sections "Dimensions and Section Properties".

3.3 GOVERNING DESIGN CODES / REFERENCES

Structural members shall be designed in accordance with recognized engineering practices and principles as follows:

3.3.1 Structural Steel Allowable Stresses

American Institute of Steel Construction (AISC).

Structural steel design shall be in accordance with those sections of the "Manual of Steel Construction: Allowable Stress Design" related to design requirements and allowable stresses.

3.3.2 Welded Tubular Connections

American National Standards Institute / American Welding Society (ANSI/AWS) and the Canadian Institute of Steel Construction (CISC).

All welded tubular connections shall be checked, when within applicable limits, for the limiting failure modes outlined in the ANSI/AWS D1.1 Structural Welding Code or in accordance with the "Design Guide for Hollow Structural Section Connections" as published by the Canadian Institute of Steel Construction (CISC).

When outside the "validity range" defined in these design guidelines, the following limit

or failure modes will must be checked:

- Chord face plastification
- * Punching shear (through main member face)
- Material failure
 - Tension failure of the web member
 - Local buckling of a compression web member
- * Weld failure
 - Allowable stress based on "effective lengths"
 - "Ultimate" capacity
- Local buckling of a main member face
- * Main member failure:
 - Web or sidewall yielding
 - Web or sidewall crippling
 - Web or sidewall buckling
 - Overall shear failure

All tubular joints shall be plain unstiffened joints (made without the use of reinforcing plates) except as follows:

- 1. Floor beams hung beneath the lower chord of the structure may be constructed with or without stiffener (or gusset) plates, as required by design.
- 2. Floor beams which frame directly into the truss verticals (H-Section bridges) may be designed with or without end stiffening plates as required by design.
- 3. Where chords, end floor beams and in high profiles the top end struts weld to the end verticals, the end verticals (or connections) may require stiffening to transfer the forces from these members into the end vertical.
- 4. Truss vertical to chord connections.

3.3.3 Wood

American Institute of Timber Construction (AITC), the U.S. Forest Products Laboratory, and the American Forest & Paper Association (AF&PA).

Sawn lumber shall be designed in accordance with the ANSI/AF&PA NDS, "National Design Standard for Wood Construction", as published by the American Forest & Paper Association or the "Timber Construction Manual" as published by the American Institute of Timber Construction (AITC). Design properties for naturally durable hardwoods shall be in accordance with "Tropical Timbers of the World", as published by the U.S. Forest Products Laboratory.

3.3.4 Top Chord Stability

Structural Stability Research Council (SSRC), formerly Column Research Council.

The top chord of a half-through truss shall be considered as a column with elastic lateral supports at the panel points. The critical buckling force of the column, so determined, shall exceed the maximum force from dead load and live load (uniform or vehicular) in any panel of the top chord by not less than 50 percent for parallel chord truss bridges or 100 percent for tied arch bridges. The design approach to prevent top chord buckling shall be as outlined by E.C. Holt's research work in conjunction with the Column Research Council on the stability of the top chord of a half-through truss. See Appendix A for the calculation of the spring constant C and the determination of an appropriate K factor for out-of-plane buckling.

In addition, for the dead load plus vehicle load combination, the spring constant "C" furnished by the transverse "U-Frames" shall not be less than "C" required as defined by:

$$C required = \frac{1.46 P_c}{L}$$

where P_c is the maximum top chord compression due to dead load plus the vehicle load times the appropriate safety factor (1.5 for parallel chord truss bridges or 2.0 for tied arch truss bridges) and L is the length in inches of one truss panel or bay.

For uniformly loaded bridges, the vertical truss members, the floor beams and their connections (transverse frames) in half-through truss spans shall be proportioned to resist a lateral force of not less than 1/100k times the top chord compressive load, but not less than .004 times that top chord load, applied at the top chord panel points of each truss. The top chord load is determined by using the larger top chord axial force in the members on either side of the "U-frame" being analyzed. For end frames, the same concept applies except the transverse force is 1% of the axial load in the end post member.

For bridges with vehicle loads, the lateral force applied at the top chord elevation for design of the transverse frames shall not be less than 1% of the top chord compression due to dead load plus any vehicle loading.

The bending forces in the transverse frames, as determined above, act in conjunction with all forces produced by the actual bridge loads as determined by an appropriate analysis which assumes that the floor beams are "fixed" to the trusses at each end.

PART 4 - MATERIALS

4.1 STEEL

4.1.1 Unpainted Steel

Bridges will not be painted and shall be fabricated from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing and/or ASTM A588, or ASTM A242, ASTM A606 plate and structural steel shapes (Fy = 50,000 psi). The minimum corrosion index of atmospheric corrosion resistant steel, as determined in accordance with ASTM G101, shall be 5.8.

4.2 DECKING

4.2.1 Wood Decking

4.2.1.1. Wood decking shall be naturally durable hardwood Ipe (Tabebuia Spp) Lapacho Group or Cumaru (Dipteryx Odorta). All planks shall be partially air dried to a moisture content of 15% to 20%, and shall be supplied S4S (surfaced four sides) with one face "hit or miss" allowed up to 10% of the total length, E4E (eased four edges), with the edges eased to a radius of 1/8". Measured at 30% moisture content, the width and thickness shall not vary from specified dimensions by more than \pm 0.04 inches. All planks shall be supplied with the end sealed with "Anchorseal" Mobil CER-M or an equal aquious wax log sealer.

All planks shall be graded as FEQ-CAH (First Export Quality -Clear All Heart) or F1F (First One Face) grading rules, defined as follows:

- Lumber shall be graded both faces and both edges.
- 2. Lumber shall be straight grained and parallel cut without heart center.
- 3. Lumber shall be all heartwood.
- 4. Lumber shall be in sound condition.
- 5. Allowable Imperfections are:

All faces: Natural drying checks, Discoloration caused by weathering or chemical reaction, Maximum bow or spring of 0.08 inch per 6 ft of timbers length.

On one face only: Firm sapwood, Worm holes not going through to the other face, Closed knots with maximum of one knot per 4 foot of timber length, Rowy grain, and Tear out.

6. Imperfections Not Allowed:

Longitudinal heart cracks, Internal cracks, Soft sap wood, Splits, End splits, Ring shades, Fungi affects (blue to gray, brown to red, white to yellow, or incipient decay), Deformation (twisting or cupping) which cannot be removed using normal installation methods and tools.

All planks shall meet or exceed the following mechanical properties (based on the 2" standard) as defined by the U.S. Forest Products Laboratory publications and testing data:

MC%	Bending Strength	Modulus of Elasticity	Max. Crush
Strength	-	•	
12%	27,270 psi	3,030,000 psi	13,720 psi

Janka side hardness is 3540 lbs. at 12% moisture content Average air-dry density is 62 to 81 pcf. Basic specific gravity is 0.80 - 0.91.

All planks shall be naturally fire resistant without the use of any fire resistant preservatives to meet NFPA Class A and UBC Class I.

Planks shall be supplied that meet or exceed the Static Coefficient of Friction for both Neolite and leather shoes in accordance with ASTM Test Method C1028-89.

	FORCE IN	POUNDS
SHOE MATERIAL	DRY	<u>WET</u>
Neolite	0.73	0.69
Leather	0.55	0.79

For transverse wood decking, wheel loads shall be assumed to act on one plank only. The wheel loads shown in Section 3.1.3 shall be distributed on the plank along a length equal to the tire print width (W). The plank shall be designed for shear and bending in accordance with the support conditions and spacing. For design, the following unfactored allowable values shall be used:

Allowable Bending = 3700 psi Allowable Shear = 320 psi Modulus of Elasticity = 3,000,000 psi

4.2.1.2 Wood Decking Attachment

- * At time of installation, planks are to be placed tight together with no gaps.
- Every plank must be attached to at least one support with at least one fastener.
 - * Fasteners to be zinc plated bolts. Hex-head bolts, with a steel plank holddown, are to be used at the ends of planks. Carriage bolts are to be used as interior connection fasteners. Power actuated fasteners will not be allowed.
 - * Planks are to be drilled prior to installation of bolts.
 - * In addition to at least one fastener at either end of every plank (typical for all installations), planks for bridges with widths of 96" to 120" are to receive a minimum of one interior connection bolt at a stringer location approximately near the center of the bridge width.

Bridges wider than 120" are to have interior connection bolts located at a minimum of two interior stringer locations, approximately located at the third points of the bridge width.

* Use of the wood decking to provide lateral support for design of the stringers shall not be allowed.

PART 5 - WELDING

5.1 WELDING

Welding and weld procedure qualification tests shall conform to the provisions of ANSI/AWS D1.1 "Structural Welding Code", 1996 Edition. Filler metal shall be in accordance with the applicable AWS Filler Metal Specification (i.e. AWS A 5.28 for the GMAW Process). For exposed, bare, unpainted applications of corrosion resistant steels (i.e. ASTM A588 and A847), the filler metal shall be in accordance with AWS D1.1, Section 3.7.3.

5.2 WELDERS

Welders shall be properly accredited operators, each of whom shall submit certification of satisfactorily passing AWS standard qualification tests for all positions with unlimited thickness of base metal, have a minimum of 6 months experience in welding tubular structures and have demonstrated the ability to make uniform sound welds of the type required.

PART 6 - SUBMITTALS

6.1 SUBMITTAL DRAWINGS

Schematic drawings and diagrams shall be submitted to the OWNER for their review after receipt of order. Submittal drawings shall be unique drawings, prepared to illustrate the specific portion of the work to be done. All relative design information such as member sizes, bridge reactions, and general notes shall be clearly specified on the drawings. Drawings shall have cross referenced details and sheet numbers. All drawings shall be signed and sealed by a Professional Engineer licensed in the State of Texas.

6.2 STRUCTURAL CALCULATIONS

Structural calculations for the bridge superstructure shall be submitted by the bridge manufacturer and reviewed by the approving engineer. All calculations shall be signed and sealed by a Professional Engineer licensed in the State of Texas. The calculations shall include all design information necessary to determine the structural adequacy of the bridge. The calculations shall include the following:

- * All AISC allowable stress checks for axial, bending and shear forces in the critical member of each truss member type (i.e. top chord, bottom chord, floor beam, vertical, etc.)
- * Checks for the critical connection failure modes for each truss member type (i.e. vertical, diagonal, floor beam, etc.). Special attention shall be given to all welded tube on tube connections.
- * All bolted splice connections.
- Main truss deflection checks.

- * U-Frame stiffness checks (used to determine K factors for out-of-plane buckling of the top chord) for all half through or "pony" truss bridges.
- * Deck design.

NOTE: The analysis and design of triangulated truss bridges shall account for moments induced in members due to joint fixity where applicable. Moments due to both truss deflection and joint eccentricity must be considered.

- 6.3 Welder certifications in compliance with AWS standard qualification tests.
- 6.4 Welding procedures in compliance with Section 5.1.

PART 7 - FABRICATION

7.1 GENERAL REQUIREMENTS

7.1.1 Drain Holes

When the collection of water inside a structural tube is a possibility, either during construction or during service, the tube shall be provided with a drain hole at its lowest point to let water out.

7.1.2 Welds

Fillet weld shall be in accordance with AWS D1.1, Section 3.9. Unless determined otherwise by testing, the loss factor "Z" for heel welds shall be in accordance with AWS Table 2.8. Fillet welds which run onto the radius of a tube shall be built up to obtain the full throat thickness. The maximum root openings of fillet welds shall not exceed 3/16" in conformance with AWS D1.1, Section 5.22. Weld size or effective throat dimensions shall be increased in accordance with this same section when applicable (i.e. fit-up gaps> 1/16").

The fabricator shall have verified that the throat thickness of partial joint penetration groove welds (primarily matched edge welds or the flare-bevel-groove welds on underhung floor beams) shall be obtainable with their fit-up and weld procedures. Matched edge welds shall be "flushed" out when required to obtain the full throat or branch member wall thickness.

For full penetration butt welds of tubular members, the backing material shall be fabricated prior to installation in the tube so as to be continuous around the full tube perimeter, including corners. Backing may be of four types:

- 1. A "box" welded up from four (4) plates.
- 2. Two "channel" sections, bent to fit the inside radius of the tube, welded together with full penetration welds.
- 3. A smaller tube section which slides inside the spliced tube.
- 4. A solid plate cut to fit the inside radius of the tube.

 Corners of the "box" backing, made from four plates, shall be welded and ground to match the inside corner radii of the chords. The solid plate option shall require a weep hole either in the chord wall above the "high side" of the plate or in the plate itself. In all types of backing, the minimum fit-up tolerances for backing must be maintained at the corners of the tubes as well as across the "flats".

7.2 QUALITY CERTIFICATION

Bridges shall be fabricated by a fabricator who is currently certified by the American Institute of Steel Construction to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for the category "Simple Steel Bridges" as set forth in the AISC Certification Program. Quality control shall be in accordance with procedures outlined for AISC certification.

PART 8 - FINISHING

8.1 BLAST CLEANING

8.1.1 Bare applications of enhanced corrosion resistant steels.

To aid in providing a uniformly "weathered" appearance, all exposed surfaces of steel shall be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning, SSPC-SP7 latest edition.

Exposed surfaces of steel shall be defined as those surfaces seen from the deck and from outside of the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below deck and bottom face of the bottom chord shall not be blasted.

PART 9 - DELIVERY AND ERECTION

Delivery is made to a location nearest the site which is easily accessible to normal over-the-road tractor/trailer equipment. All trucks delivering bridge materials will need to be unloaded at the time of arrival.

The manufacturer will provide detailed, written instruction in the proper lifting procedures and splicing procedures (if required). The method and sequence of erection shall be the responsibility of others.

The bridge manufacturer shall provide written inspection and maintenance procedures to be followed by the bridge owner.

PART 10 - BEARINGS

10.1 BEARING DEVICES

Bridge bearings shall consist of a steel setting or slide plate placed on the abutment or grout pad. The bridge bearing plate which is welded to the bridge structure shall bear on this setting plate. One end of the bridge will be fixed by fully tightening the nuts on the anchor bolts at that end. The opposite end will have finger tight only nuts to allow movement under thermal expansion or contraction.

The bridge bearings shall sit in a recessed pocket on the concrete abutment. Minimum 28-day strength for the abutment concrete shall be xxxx PSI.

The bearing seat shall be a minimum of 16" wide. The step height (from bottom of bearing to top-of-deck) shall be determined by the bridge manufacturer.

Bridges in excess of 100 feet in length or bridges with dead load reactions of 15,000 pounds or more (at each bearing location) shall have Teflon on Teflon or stainless steel on Teflon slide bearings placed between the bridge bearing plate and the setting plate. The top slide plate shall be large enough to cover the lower Teflon slide surface at both temperature extremes.

PART 11 - FOUNDATIONS

The bridge manufacturer shall determine the number, size, embedment length, minimum grade and finish of all anchor bolts. The anchor bolts shall be designed to resist all horizontal and uplift forces to be transferred by the superstructure to the supporting foundations. The contractor shall provide all materials for (including anchor bolts) and construction of the bridge supporting foundations. The contractor shall install the anchor bolts in accordance with the manufacturer's requirements.

Information as to bridge support reactions and anchor bolt locations will be furnished by the bridge manufacturer after receipt of order and after the bridge design is complete.

PART 12 - WARRANTY

The bridge manufacturer shall provide a warranty against all defects in material and workmanship for a period of fifteen years from the date of delivery.

PART 13 - APPROVAL CHECKLIST

The following checklist will be used in the evaluation of all submittals to assure compliance with the Specifications for Prefabricated Bridge. This checklist is considered the minimum acceptable requirements for compliance with these specifications. Any deviations from this checklist shall be considered grounds for rejection of the submittal. Any costs associated with delays caused by the rejection of the submittal, due to non-compliance with this checklist, shall be fully borne by the contractor and bridge supplier.

SUBMITTAL DRAWINGS

Data	Rea	uired	to be	Shown:
Data	, ,,,,	anca		OI IO WIII.

r	Bridge Elevation	r	Weld Failure Checks (Ultimate)
r	Bridge Cross Section	r	Local Buckling of the Main Member Face Checks
r	All Member Sizes	r	Main Member Yielding Failure Checks
r	All Vertical Truss Members are Square	r	Main Member Crippling Failure Checks
	or Rectangular Tubing	r	Main Member Buckling Failure Checks
r	Bridge Reactions	r	Main Member Shear Failure Checks
r	All Bolted Splice Checks (if applicable)	r	Main Truss Deflection Checks
r	General Notes Indicating	r	Decking Material Checks
r	AISC Stress Conformance	r	"U-Frame" Stiffness Checks (if "Pony" Truss)
r	Material Specifications to be Followed	r	Design Live Load
r	Interior and End Portal Design Checks (if "Box" Truss)		•
r	Design Vehicle Load	r	Based on Determination of Top Chord K
r	Design Wind Load		Factor
r	Other Specified Design Loads	r	Consideration of Individual Member
r	Welding Process	Truss Deflection, Joint Fixity and Joint Electricity	
r	Blast Cleaning		
			ICATION SUBMITTALS Required to be Shown:
r	Detailed Bolted Splices		
r	Bolted Splice Location	r **	Written Installation Instructions
r	Signature and Seal of Professional Engineer,	r **	Written Splicing Instructions
	Licensed in the State of Texas	r **	Written Maintenance & Inspection
	Instructions	r **	Welder Certifications

DESIGN CALCULATIONS

Data Required to be Shown:

Welding Procedures **Material Certifications**

r

Structural Steel

Data Input for 3-D Analysis of Bridge r

Joint Coordinates & Member Incidences

Joint and Member Loads

Member Properties **Load Combinations** Decking Structural Bolts

Quality Control Section of AISC Certification Manual (if applicable) Weld Testing Reports

AISC Member Stress Checks for Each Member Type r

Critical Connection Failure Mode Checks for Each Member Type r

Chord Face Plastification Checks r

r **Punching Shear Checks**

Material Failure Checks (Truss Webs) r

Weld Failure Checks (Effective Length) r

^{**} NOTE: These items are required to be submitted along with Submittal Drawings and Design Calculations. Those Fabrication Submittal Items not marked are to be submitted prior to shipment of the bridge.

CONCRETE FORMWORK

SECTION 031000

CONCRETE FORMWORK

PART 1 - GENERAL

1.1 RELATED SECTION

A. Section 03300: Cast-in-Place Concrete for Structures.

1.2 MEASUREMENT AND PAYMENT

A. No separate payment will be made for concrete formwork under this Section. Include payment for concrete formwork in unit price for applicable cast-in-place concrete structures, sidewalks, and curbs.

1.3 REFERENCE STANDARDS

- A. American Concrete Institute (ACI): 347R, Guide to Formwork for Concrete
- B. American Society for Testing and Materials (ASTM):
 A 446, Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
 A 525, General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process

1.4 DESIGN REQUIREMENTS

A. Design formwork for loads, lateral pressure, and allowable stresses outlined in ACI 347R and for design considerations, wind loads, allowable stresses, and other applicable code requirements.

1.5 SUBMITTALS

- A. Certifications, installation instructions, samples, and catalog data for:
 - 1. Form accessories.
 - 2. Form release material.

1.6 QUALITY ASSURANCE

- A. Tolerances for Formed Surfaces:
 - 1. Variation from plumb:
 - a. In lines and surfaces of piers and walls:
 - 1) In any 10 ft. of length: 1/4-in.
 - 2) Maximum for entire length: 1-in.
 - 2. Variation in cross sectional dimensions of beams and in thickness of slabs and walls: Minus 1/4-in., plus 1/2-in.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Forms:

- Comply with ACI 347R; confine concrete and shape it to required dimensions.
- 2. Construct forms with sufficient strength to withstand pressure resulting from placement and vibration of concrete and of sufficient rigidity to maintain specified tolerances.
- B. Form Release Material: Field applied form release agent, sealer, or factory applied nonabsorptive liner, nonstaining type.
- C. Form Accessories:
 - Use only commercial manufactured type form accessories partially or wholly embedded in concrete.
 - 2. Do not use wire type manufactured for other purposes.
 - Use form ties constructed with removable ends or end fasteners to prevent spalling at face of concrete.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Preparation of Form Surfaces:
 - 1. Clean surfaces of forms and embedded materials of accumulated mortar, grout, and other foreign material before placing concrete.
 - 2. Treat surfaces of forms as follows:
 - a. Before placing reinforcing steel, cover surfaces of forms with coating material to prevent absorption of moisture and prevent bond with concrete.
 - b. Do not allow excess form coating material to stand in puddles in forms.
 - c. Do not allow coating to come in contact with hardened concrete against which fresh concrete is to be placed.
- B. Establish and maintain sufficient control points and bench marks for reference purposes to check tolerances until final completion and acceptance of project.
- C. Regardless of tolerances listed, no portion of structure shall extend beyond legal boundary of project.

3.2 INSTALLATION OF FORMWORK

- A. Maximum deflection of facing materials reflected in concrete surfaces exposed to view: 1/240 of span between structural members.
- B. Construct formwork so concrete surfaces will conform to tolerance limits listed.
- C. Construct forms sufficiently tight to prevent loss of mortar from concrete.
- Place chamfer strips in corners of forms to produce beveled edges on permanently exposed surfaces.
- E. To maintain specified tolerances, camber formwork to compensate for anticipated deflections in formwork prior to hardening of concrete.

CONCRETE FORMWORK

- F. Provide wedges or jacks to adjust shores and struts to take up settlement during concrete placing.
- G. Brace forms securely against lateral deflections.

H. Form Accessories:

- 1. Embedded portion of form ties shall terminate not less than 3/4-in. from formed faces of concrete to be permanently exposed.
- When formed surface of concrete is not to be permanently exposed, form ties may be cut off flush with formed surfaces.

I. Construction Joints:

- Contact surface of form sheathing for flush surfaces exposed to view shall overlap hardened concrete in previous placement by not more than 1-in.
- 2. Hold forms against hardened concrete to prevent offsets or loss of mortar at construction joint and to maintain true surface.
- J. Prior to concrete placement, fasten wedges used for final adjustment in position after final check.
- K. Anchor formwork to shores, other supporting surfaces, or members to prevent upward or lateral movement of any part of formwork system during concrete placement.
- L. Provide runways for moving equipment with struts or legs supported directly on formwork or structural member without resting on reinforcing steel.

3.3 REMOVAL OF FORMS

- A. Perform needed repairs or treatment required on sloping surfaces at once and follow with curing.
- B. Formwork for walls, sides of beams, and other parts not supporting weight of concrete may be removed as soon as concrete has hardened sufficiently to resist damage from removal operations.
- C. Shoring used to support weight of concrete in beams, slabs and other structural members shall remain in place until concrete has reached strength sufficient to carry weight and construction loads.
- D. Concrete strength when shores are removed shall not be less than 75 percent of 28 day strength.
- E. When shores and other vertical supports are so arranged that nonload-carrying form facing material may be removed without loosening or disturbing shores and supports, form facing material may be removed at earlier age.
- F. If forms are removed prior to seven (7) days after placement of concrete, cure concrete as specified in Section 03300.

END OF SECTION

CONCRETE REINFORCEMENT

SECTION 032000

CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- A. American Concrete Institute (ACI):
 - 315, Details and Detailing of Concrete Reinforcement
 - 318, Building Code Requirements for Reinforced Concrete
- B. American Society for Testing and Materials (ASTM):
 A 615, Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
- C. Concrete Reinforcing Steel Institute (CRSI): Placing Reinforcing Bars

1.2 MEASUREMENT AND PAYMENT

A. No payment will be made for concrete reinforcement under this Section. Include payment for concrete reinforcement in unit price for applicable cast-in-place concrete structures, sidewalks, and curbs.

1.3 SUBMITTALS

- A. Shop Drawings: Show reinforcing bar configuration, bar numbers, spacing, and location, and splicing details.
- B. Test Reports: Submit copies of mill test reports.

1.4 QUALITY ASSURANCE

- A. Tolerances:
 - 1. Fabricating tolerances:
 - a. Sheared length: Plus or minus 1-in.
 - b. Depth of truss bars: Plus 0, minus 1/2-in.
 - c. Overall dimensions of stirrups and ties: Plus or minus 1/2-in.
 - d. Other bends: Plus or minus 1-in.
 - 2. Placing tolerances:
 - a. Clear distance to formed surfaces: Plus or minus 1/4-in.
 - b. Minimum spacing between bars: Plus or minus 1/4-in.
 - c. Top bars in slabs and beams:
 - 1) Members 8-in. deep or less: Plus or minus 1/4-in.
 - 2) Members more than 8-in. but not over 2 ft. deep: Plus or minus 1-in.
 - d. Crosswise of members: Spaced evenly within 2-in.
 - e. Lengthwise of member: Plus or minus 2-in.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Reinforcing Bars:

CONCRETE REINFORCEMENT

- 1. ASTM A 615, Grade 60.
- 2. Bend test requirements: For bars size No. 3 through No. 6, base on 180 deg. bends of full size bars around pins with diameters as follows:
 - a. Bar Nos. 3, 4, and 5: 3-1/2 bar diameters.
 - b. Bar No. 6: 5 bar diameters.

2.2 FABRICATION

A. Fabricate details of concrete reinforcement and accessories complying with ACI 315.

PART 3 - EXECUTION

3.1 HANDLING AND PLACING

- A. Place reinforcing bars in accordance with CRSI "Placing Reinforcing Bars" and ACI 318, with provisions of ACI 318 governing.
- B. Move bars as necessary to avoid interference with other reinforcing steel, conduits, or embedded items.
- C. If bars are moved more than one bar diameter or enough to exceed tolerances, submit resulting arrangement of bars to Engineer for review.
- D. After fabrication, reinforcing bars shall be delivered to the Work properly identified in accordance with the approved shop drawings.
- E. Place reinforcement, at time of concrete placing, free of mud, oil, or other materials that adversely affect or reduce bond.
- F. Reinforcement with rust, mill scale, or both shall be considered satisfactory, provided minimum dimensions, including height of deformation, and weight of hand-wire-brushed test specimen are not less than ASTM A 615 requirements.
- G. Support reinforcement and fasten together to prevent displacement by construction loads of placing concrete.
- H. Use metal or plastic bar chairs and spacers to support reinforcement.
- I. Where concrete surface will be exposed to weather in finished structure, use noncorrosive or corrosion protected accessories within 1/2-in. of concrete surface.
- J. Bars having splices not shown on shop drawings will be rejected.
- K. Do not bend reinforcement after being embedded in hardened concrete.

END OF SECTION 032000

SECTION 033000

CAST-IN-PLACE CONCRETE FOR STRUCTURES

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

A. American Concrete Institute (ACI):

212.1R, Admixtures for Concrete

212.2R, Use of Admixtures in Concrete

302.1R, Concrete Floor and Slab Construction

204R, Measuring, Mixing, Transporting, and Placing Concrete

305R, Hot Weather Concreting

306R, Cold Weather Concreting

308, Standard Practice for Curing Concrete

309R, Consolidation of Concrete

B. American Society for Testing and Materials (ASTM):

A 307, Carbon Steel Bolts and Studs 60,000 psi Tensile Strength

A 36, Structural Steel

C 138, Unit Weight, Yield, and Air Content (Gravimetric) of Concrete

C 143, Slump of Portland Cement Concrete

C 150, Portland Cement

C 172, Sampling Freshly Mixed Concrete

C 173, Air Content of Freshly Mixed Concrete by the Volumetric Method

C 192, Making and Curing Concrete Test Specimens in the Laboratory

C 231, Air Content of Freshly Mixed Concrete by the Pressure Method

C 260, Air-Entraining Admixtures for Concrete

C 293, Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)

C 309, Liquid Membrane-Forming Compounds for Curing Concrete

C 31, Making and Curing Concrete Test Specimens in the Field

C 33, Concrete Aggregates

C 387, Packaged, Dry, Combined Materials for Mortar and Concrete

C 39, Compressive Strength of Cylindrical Concrete Specimens

C 494, Chemical Admixtures for Concrete

C 78, Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)

C 920, Joint Sealant

C 94, Ready-Mixed Concrete

D 1751, Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

D 1752, Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction

D 994, Preformed Expansion Joint Filler for Concrete (Bituminous Type)

C. Concrete Plant Manufacturers Bureau (CPMB):

Concrete Plant Mixer Standards of Plant Mixer Manufacturers Division

D. Corps of Engineers (COE):

CRD-C300, Handbook for Concrete and Cement

CRD-C621, Handbook for Concrete and Cement

E. Federal Specifications (FS):

FF-S-325, Shield, Expansion; Nail Expansion; and Nail, Drive Screw (Devices, Anchoring, Masonry)

1.2 MEASUREMENT AND PAYMENT

- A. Measurement and payment is as noted on the Unit Price Schedule.
- B. Refer to Section 01026 Measurement and Payment for unit price procedures.

1.3 SUBMITTALS

- A. Product Data: Submit literature of proposed materials certifying compliance with specification requirements and curing procedures.
- B. Mill Reports: Furnish mill certificate with each shipment of cement showing chemistry and physical tests for autoclave soundness, heat of hydration, normal consistency false set, and time of set.

C. Design Mix:

- 1. Submit proposed design mix from job materials prepared by approved testing laboratory when concrete proportioning Method No. 1 is used (See Paragraph 2.3, C.,1).
- Submit test records when concrete proportioning Method No. 2 is used (See Paragraph 2.3, C., 2).
- 3. Include following information in concrete mix design submittal:
 - a. Concrete supplier.
 - b. Design mix designation and location of concrete in work.
 - c. Method of proportioning.
 - d. Type and brand of cement.
 - e. Source of aggregate.
 - f. Sieve analysis of aggregate.
 - g. Type and brand of admixtures.
 - h. Strength curve relationship to water-cement ratios established by at least three points of curve with each point established by average of three cylinder breaks using job materials.
 - i. Coarse Aggregate Factor (C.A.F.)
 - j. Batch weights of ingredients.
 - k. Water-Cement ratio and cement content.
 - I. Air content.
 - m. Slump.
 - n. Seven day and 28 day strengths.
- D. Samples: Secure in accordance with ASTM C 172.

E. Shop Drawings:

- 1. Indicate location of tooled (contraction), construction, and expansion joints.
- 2. Indicate location and size of anchor bolts, anchor plates and other similar concrete-embedded items on anchor bolt setting plan.
- 3. Indicate placement sequence of concrete.

1.4 QUALITY ASSURANCE

- A. Owner's Quality Control Laboratory:
 - 1. Sample and test concrete ingredients.
 - 2. Mixes shall meet or exceed mix design strength requirements and use and finish requirements
 - Review proposed mix design or design mix to meet or exceed mix design strength and consistency requirements as specified in "Concrete Mix Requirements" and "Concrete Proportioning".
 - 4. Test production samples of materials at plants and stockpiles and at job site during course of work for compliance with specifications.
 - 5. Conduct tests of concrete during construction in compliance with following procedures:
 - a. Strength test:

- 1) Make specimens in field.
- 2) Each test shall consist of four cylinders; two tested at seven days and two tested at 28 days.
- For each class of concrete, one test for each pour of 100 cubic yards shall be made; however, not less than one test for each day of concreting shall be made.
- 4) When this schedule of testing proves less than five tests for given class of concrete, at least five randomly selected batches shall be tested; if fewer than five batches are used, each batch shall be tested.
- 5) Additional tests may be required to justify removal of formwork.
- 6) Specimens shall be secured in compliance with ASTM C 172, made and cured in compliance with ASTM C 31, and tested in compliance with ASTM C 39.
- b. Slump test: Make one test for each strength test in compliance with ASTM C 143.
- c. Air Content test: Make one test for each strength test in compliance with ASTM C 173 or ASTM C 231.
- d. Report test results: Report test results to Owner and Contractor.
- e. Maintain records: Maintain complete record of specimens; records shall include detailed location of each pour represented.
- f. Determine temperature of concrete sample for each strength test.
- g. Inspect concrete batching, mixing, and delivery operations.
- h. Sample concrete at point of placement.
- Indicate in report location specimens were taken, method stored and curing procedures.
- 6. Determine slump in accordance with ASTM C 143 of concrete sample for each strength test and when consistency of concrete appears to vary.
- 7. Determine air content of normal weight concrete for each strength test in accordance with ASTM C 138, ASTM C 173, or ASTM C 231.
- 8. Patching Core Holes:
 - Fill core holes with SikaSet Roadway Patch, Sika Corporation, as per manufacturer's specification.

1.5 HANDLING

A. Storage:

- 1. Store materials in accordance with ACI 304R.
- 2. Store admixtures to avoid contamination, evaporation, or damage.

B. Protection:

- During curing period, protect concrete from damaging mechanical disturbances, load stresses, shock, and vibration.
- 2. Protect finished concrete surfaces from damage by construction equipment or materials.
- 3. Protect from rain or running water.

PART 2 - PRODUCTS

2.1 CONCRETE AND GROUT MATERIALS

A. General:

- 1. Fly ash:
 - a. Fly ash will not be used in concrete mixtures.
- 2. Admixtures, other than air-entraining admixtures and water-reducing admixtures in compliance with ASTM C 494, shall not be used in concrete mixtures without prior review of material and proportioning by Owner.
- B. Cement: ASTM C 150, Type I.

- C. Concrete Admixtures:
 - 1. Acceptable manufacturers:
 - a. Master Builder.
 - b. Gifford-Hill and Company, Inc.
 - c. Sika Chemical Corp.
 - 2. Air-entraining admixtures: ASTM C 260.
 - 3. Water-reducing, normal set, retarding, and accelerating admixtures:
 - a. Concrete temperatures 80 deg. F. and below: ASTM C 494, Type A.
 - b. Concrete temperatures greater than 80 deg. F.: ASTM C 494, Type D.
 - c. Concrete temperatures 60 deg. F. and below: ASTM C 494, Type E, accelerating.
 - 4. Other admixtures: ASTM C 494.
- D. Water: Fresh, clean, and potable.
- E. Aggregates for Normal Weight Concrete: ASTM C 33.
- F. Anchor Bolts: ASTM A 307 coated with 2.5 mil shop primer.
- G. Anchor Plates: ASTM A 36 coated with 2.5 mil shop primer.
- H. Nonshrink Grout:
 - 1. Non-metallic, pre-mixed nonshrink grout complying with COE CRD-C621.
 - 2. Bleed-free at 25 sec. flow cone fluidity, COE CRD-C621.
 - 3. Acceptable products:
 - a. "Master Flow 713", Master Builders, Inc.
 - b. "Supreme Grout", Gifford-Hill and Co.
 - c. "Crystex", L and M Construction Chemicals, Inc.
 - d. "Sikagrout 212", Sika Corporation.
- I. Stud Anchors:
 - 1. Acceptable manufacturers:
 - a. Nelson Stud Welding Co.
 - b. Erico Products, Inc.
 - 2. Type with ceramic ferrules; compatible with arc-welding process.
- J. Expansion Bolts:
 - 1. Acceptable manufacturers:
 - a. Wej-it Corporation.
 - b. ITT Phillips Drill Company.
 - c. Hilti Fastener Company.
 - 2. Wedge type stainless steel, FS FF-S-325, Group II, Type 4, Class 1.
- K. Adhesive Type Waterstop:
 - Preformed plastic.
 - 2. Acceptable product: "Synko-Flex", Synko-Flex Products Co.
- L. Curing Compound:
 - 1. Comply with COE CRD-C300.
 - 2. Unit moisture loss, g. per sq. cm. at 72 hr. shall not exceed 0.039.
 - 3. Acceptable products:
 - a. "Sealco 309", Gifford-Hill.
 - b. "Masterseal", Master Builders.
 - c. "Dress and Seal", L and M Construction Chemicals, Inc.
- M. Joint Sealant
 - 1. Two component elastomeric chemical cure polyurethane
 - 2. ASTM C920, Type M, Grade P

2.2 CONCRETE MIX REQUIREMENTS

A. Strength: Base strength requirements on 28-day compressive strength.

B. Mixture Limits:

 Air-entrainment of normal-weight concrete shall conform to content limits of Table I, as measured by ASTM C 138, ASTM C 173, and ASTM C 231:

TABLE I TOTAL AIR CONTENT FOR VARIOUS SIZES OF COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE

Nominal Max. Size of Coarse Aggregate	Size No. (ASTM C 33)	Total Air Content Percent by Volume
3/4	67	4-8
1	57	3.5-6.5

- 2. Grading for coarse aggregate shall not exceed limits for various size number designation in compliance with ASTM C 33 for various maximum nominal sizes.
- 3. Water used for mixing concrete, including water absorbed by aggregates and admixture, shall not contain more than 150 ppm of chloride ion.

C. Slump:

- 1. Proportion concrete to produce maximum slump of 4-in. or less.
- 2. Tolerance of up to 1-in. above maximum shall be allowed for individual batches provided average for batches or most recent ten batches tested, whichever is fewer, does not exceed maximum limit.
- 3. Concrete of lower than usual slump may be used provided properly placed and consolidated.
- 4. Determine slump by ASTM C 143.

D. Admixtures:

- 1. Comply with ACI 212.1R and ACI 212.2R.
- Do not use calcium chloride.
- 3. Use admixtures in accordance with manufacturers instructions.
- 4. Use only admixtures in work used in establishing design mix.
- 5. Water-reducing admixtures, or other admixtures accepted by Owner, may be used to produce quality of concrete specified under prevailing placing conditions.

2.3 CONCRETE PROPORTIONING

A. General:

- Proportion ingredients to produce mixture which will work readily into corners and angles of forms and around reinforcement under conditions of placement to be employed without excessive segregation of materials or excessive collection of free water on surface or excessive bleeding out of free water.
- 2. Proportion ingredients to produce mixture of required workability, placeability, durability, strength, and other specified properties.

B. Required Strength:

TABLE IA

Minimum Compressive Type of Strength psi. Construction (28 days)	Total Air (Percent)	Minimum Cement Factor* (Bags/cu.yd.)	Maximum W/C Ratio* (Gals/bg)	
Sidewalks 3000 and Curbs	4.0 to 8.0	5.0	-	
Prestressed Concrete Piling Class H concrete per TxDOT Standard Specifications – Item 421, Hydraulic Cement Concrete				
Other Concrete 4000 Work	4.0 to 8.0	5.5	6.40	

- * In some instances, maximum water-cement ratios and minimum cement factors may not be compatible due to aggregate characteristics or weather conditions. Under these conditions, water reducing admixture may be introduced into mix. In hot weather, retarding admixture may be added to mix in accordance with manufacturer's recommendations.
- C. Normal Weight Concrete: Establish mixture proportions to provide required properties for each class of concrete using one of the methods described below.
 - 1. Method No. 1:
 - Using materials proposed for work, establish concrete proportions on basis of laboratory trial mixes.
 - b. Make at least three trial batches of at least three cylinders per batch at different water-cement ratios which will produce range of strengths within 1000 psi of that specified for each class of concrete for proposed work.
 - c. Make trial batches to produce maximum slump within plus or minus 0.75-in. and maximum allowable air content within plus or minus 0.5 percent.
 - d. Make and cure cylinders complying with ASTM C 192.
 - e. Test for strength at 28 days in accordance with ASTM C 39.
 - f. Use results of tests to plot curve showing relationship between water-cement ratio and compressive strength.
 - g. For each class of concrete select design water- cement ratio from this curve for average compressive strength 1200 psi greater than specified compressive strength, except that water-cement ratio shall not exceed 6.6 gallons of water per sack (94 lb.) of cement.

2. Method No. 2:

- a. Field test data for concrete made with similar ingredients in previous project may be used to establish mix design for each class of concrete.
- b. Where production facility has record based on 30 consecutive strength tests that represent similar materials and conditions to those expected for each class of concrete, average compressive strength used as basis for selecting proportions shall exceed specified compressive design strength for each class by at least:
 - 1) 400 psi if standard deviation is less than 300 psi.
 - 2) 550 psi if standard deviation is 300 to 400 psi.
 - 3) 700 psi if standard deviation is 400 to 500 psi.
 - 4) 900 psi if standard deviation is 500 to 600 psi.
 - 5) 1200 psi if standard deviation is above 600 or unknown.

- c. Strength test data used to determine standard deviation for each class for above requirement shall represent concrete produced to meet specified design compressive strengths within 1000 psi of that specified for proposed work.
- d. For each class of concrete, select water-cement ratio based on Method 2 except that design water- cement ratio shall not exceed 6.6 gallons of water per sack (94 lb.) of cement.

2.4 PRODUCTION OF CONCRETE

A. Ready Mixed Concrete: Batch mix and transport in accordance with ASTM C 94.

PART 3 - EXECUTION

3.1 INSPECTION FOR CONCRETE PLACEMENT

- A. Inspect subgrade for conditions detrimental to work and for specified compacted density.
- B. Inspect formwork and reinforcing for compliance with specified tolerances.
- C. Do not proceed with work until unsatisfactory conditions are corrected.

3.2 EMBEDDED ITEMS FOR CONCRETE

- A. Placing Miscellaneous Embedded Items:
 - 1. Place sleeves, inserts, anchors, and other embedded items prior to concreting.
 - 2. Coordinate placing of embedded items required by other trades prior to placing concrete.
 - 3. Position embedded items accurately and support against displacement.
 - 4. Temporarily fill voids in sleeves, inserts, and anchor slots with removable material to prevent entry of concrete into voids.

3.3 PREPARATION FOR PLACING CONCRETE

- A. Remove hardened concrete and foreign materials from inner surfaces of conveying equipment.
- B. Remove snow, ice, and water from completed formwork.
- C. Verify that reinforcement is secured in place.
- D. Verify that expansion joint material, anchors, sleeves, and other embedded items are in place.
- E. Notify Owner and Engineer minimum of 24 hours before pour. If notifications are not made, Owner may stop placement of concrete.

3.4 PLACING CONCRETE

A. Conveying:

- 1. Comply with ASTM C 94.
- 2. Handle concrete as rapidly as practicable by methods which will prevent segregation, loss of ingredient, or damage quality of concrete.
- 3. Do not use conveying equipment that will restrict continuous placement of concrete.
- 4. Use horizontal or sloped belt conveyors that will not cause segregation or loss of ingredients.
- 5. Protect concrete against undue drying or rise in temperature.
- 6. Do not allow mortar to adhere to return length of belt.

- 7. Discharge runs longer than 20 ft. into hopper.
- 8. Use metal or metal lined chutes with slope not exceeding 1 vertical to 2 horizontal and not less than 1 vertical to 3 horizontal.
- 9. Chute more than 20 ft. long discharging into hoppers may be used.

B. Pumping of Concrete:

- 1. Design mix to produce pumpable concrete.
- 2. Pneumatic conveying equipment shall meet requirements of ACI 304R.
- 3. Slump in pumping or pneumatic conveying equipment: 2-in. maximum.
- 4. Do not convey through pipe made of aluminum or aluminum alloy.
- 5. Obtain approval of A/E to use pumped concrete before placing pumped concrete.

C. Depositing:

- 1. Comply with ACI 304R.
- 2. Deposit concrete continuously without formation of seams or planes of weakness.
- 3. If section cannot be placed continuously, provide construction joints.
- 4. Do not start placing of concrete in supported elements until concrete previously placed is no longer plastic and has been in place two hours minimum.

D. Segregation:

- Deposit concrete as nearly as practicable in final position to prevent segregation due to rehandling or flowing.
- 2. Do not subject concrete to procedures which will cause segregation.

E. Consolidation:

- 1. Comply with ACI 309R.
- 2. Consolidate concrete by vibration, spading, rodding, or forking.
- 3. Thoroughly work around reinforcement, embedded items, and into corners of forms.
- Eliminate air or stone pockets which may cause honeycombing, pitting, or planes of weakness.
- 5. Use internal vibrators with minimum frequency of 8000 vibrations per minute and sufficient amplitude to consolidate concrete effectively.
- 6. Do not use vibrators to transport concrete within forms.
- 7. Insert and withdraw vibrators at points approximately 18-in. apart.
- 8. At each insertion, maintain duration from 5 to 15 sec. to consolidate concrete but not long enough to cause segregation.
- 9. Keep spare vibrators on job site during concrete placing operations.
- 10. Where concrete is to have as-cast finish, bring full surface of mortar against form by vibration process and supplemented by spading to work coarse aggregate back from formed surface.
- 11. Use internal vibration in beams, girders, slabs, and along bulkheads of slabs on grade.

3.5 REPAIR OF CONCRETE SURFACE DEFECTS

A. Preparation:

- 1. Repair tie holes and surface defects immediately after form removal.
- 2. Remove honeycombed and otherwise defective concrete down to sound concrete.
- 3. If chipping is necessary, place edges perpendicular to surface or slightly undercut.
- 4. No feathered edges will be permitted.
- 5. Dampen patch minimum of 6-in. of surrounding area.

B. Patching Mixture:

- 1. Mix one part cement to 2-1/2 parts sand by damp loose volume.
- 2. Match color of surrounding concrete as determined by trial patch.
- 3. Add water only as necessary for handling and placing.
- 4. Mix patching mortar in advance and allow to stand with frequent manipulation with trowel, without addition of water, until it has reached stiffest consistency that will permit placing.

- C. Patch Application:
 - 1. Apply patching mortar after bonding grout has lost sheen.
 - Thoroughly consolidate mortar into place and strike off to leave patch slightly higher than surrounding surface.
 - 3. Leave undisturbed for one hour minimum before being finally finished.
- D. Fill tie holes solid with patching mortar after cleaning and dampening.

3.6 FINISHING CONCRETE SLABS

- A. Meet requirements of ACI 302.1R.
- B. Finishing Tolerances:
 - True planes within 1/8-in. in 10 ft. as determined by 10 ft. straight edge placed on slab in any direction.
- C. Trowel Finish all Concrete Slab Surfaces:
 - Float finish surface and trowel.
 - 2. Finished surface shall be free of trowel marks, uniform in texture and appearance, and planed to finishing tolerance.
 - 3. On surfaces intended to support floor coverings, remove defects which show through floor covering by grinding.

3.7 CURING CONCRETE

- A. General:
 - 1. Comply with ACI 308.
 - 2. After placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
 - 3. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration and hardening.
- B. Preservation of Moisture for Concrete Surfaces not in Contact with Forms:
 - 1. Contractor's option:
 - a. Ponding or continuous sprinkling.
 - b. Absorptive mats or fabric kept continuously wet.
 - c. Sand kept continuously wet.
 - d. Continuous application of steam not exceeding 150 deg. F. or mist spray.
 - e. Curing compound:
 - 1) Do not use curing compound on floor slab which will receive floor covering or chemical resistant or epoxy coating.
 - 2) Apply in accordance with manufacturer's recommendations.
 - 3) Do not apply to surfaces to which additional concrete or resilient materials are to be bonded unless manufacturer certifies that compound will not prevent bond or positive means are taken to completely remove compound.
 - Use curing compound on concrete surfaces where floor hardener is shown on Drawings.
- C. Curing Period: Continue curing for seven days minimum or when average compressive strength of job-cured cylinders has reached 70 percent of specified strength, moisture retention measures may be terminated.

END OF SECTION

SECTION 061323

HEAVY TIMBER CONSTRUCTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes framing using timbers.
- B. Related Requirements:
 - 1. Section 061533 "Wood Decking and Railing."

1.3 DEFINITIONS

- A. Timbers: Lumber of 2 inches nominal or greater in least dimension.
- B. Inspection agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NHLA: National Hardwood Lumber Association.
 - 3. NLGA: National Lumber Grades Authority.
 - 4. SPIB: Southern Pine Inspection Bureau (The).
 - 5. WCLIB: West Coast Lumber Inspection Bureau.
 - 6. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A. Product Data: For preservative-treated wood products timber connectors.
 - 1. For preservative-treated wood products. Include chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 - 2. For timber connectors. Include installation instructions.
- B. Shop Drawings: For heavy timber framing. Show layout, dimensions of each member, and details of connections.
- C. Samples: Not less than 8 inches wide by 24 inches long, showing the range of variation to be expected in appearance, including surface texture, of wood products.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates:

- For timbers specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by ALSC's Board of Review.
- 2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
- B. Certificates of Inspection: Issued by lumber-grading agency for exposed timber not marked with grade stamp.

1.6 QUALITY ASSURANCE

- A. Timber Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
- B. Timber Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

1.7 DELIVERY, STORAGE, AND HANDLING

- Schedule delivery of materials to avoid extended on-site storage and to avoid delaying the Work.
- B. Store materials under cover and protected from weather and contact with damp or wet surfaces. Provide for air circulation within and around stacks and under temporary coverings.

PART 2 - PRODUCTS

2.1 WOOD MATERIALS, GENERAL

- A. Regional Materials: Timbers shall be milled within 500 miles (800 km) of Project site from wood that has been harvested within 500 miles of Project site.
- B. Certified Wood: Timbers shall be certified as "FSC Pure" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and to FSC STD-40-004, "FSC Standard for Chain of Custody Certification."

2.2 TIMBER

- A. Comply with DOC PS 20 and with grading rules of lumber-grading agencies certified by ALSC's Board of Review as applicable.
 - 1. Factory mark each item of timber with grade stamp of grading agency.

- 2. For exposed timber indicated to receive a stained or natural finish, apply grade stamps to surfaces that are not exposed to view, or omit grade stamps and provide certificates of grade compliance issued by grading agency.
- B. Timber Species and Grade: Balsam fir, Douglas fir-larch, Douglas fir-larch (North), eastern hemlock tamarack (North), hem-fir, southern pine, western hemlock, or western hemlock (North); No. 1, NeLMA, NLGA, SPIB, WCLIB, or WWPA.
- C. Timber Species and Grade: Douglas fir-larch or Douglas fir-larch (NorthNo. 1 Dense, NLGA, WCLIB, or WWPA.
- D. Structural Properties: Provide any species and grade that, for moisture content provided, complies with required structural properties.
 - 1. Allowable Stress Ratings for 12-Inch Nominal (286-mm Actual) Depth: Fb 1500 psi and E 1,500,000 psi.
- E. Moisture Content: Provide timber with 19 percent maximum moisture content at time of dressing or provide timber that is unseasoned at time of dressing but with 19 percent maximum moisture content at time of installation.
- F. Dressing: Provide dressed timber (S4S) unless otherwise indicated.

2.3 TIMBER POSTS

- A. Timber Posts: Clean-peeled wood posts complying with ASTM D 3200; with at least 80 percent of inner bark removed and with knots and limbs cut flush with the surface.
- B. Species: Southern Yellow Pine.

2.4 PRESERVATIVE TREATMENT

- A. Pressure treat materials with waterborne preservative according to AWPA U1; Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
- B. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
 - 1. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not contain colorants, bleed through, or otherwise adversely affect finishes.
- C. Use process that includes water-repellent treatment.
- D. Use process that does not include water repellents or other substances that might interfere with application of indicated finishes.
- E. After treatment, redry materials to 19 percent maximum moisture content.
- F. Mark treated materials with treatment quality mark of an inspection agency approved by ALSC's Board of Review.

- 1. For exposed items indicated to receive a stained or natural finish, omit marking and provide certificates of treatment compliance issued by inspection agency.
- G. Application: Treat all heavy timber members.

2.5 TIMBER CONNECTORS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. <u>Cleveland Steel Specialty Co.</u>
 - 2. <u>Halfen Anchoring Systems</u>.
 - 3. <u>Simpson Strong-Tie Company, Inc.</u>
 - 4. <u>USP Structural Connectors</u>.
- B. Fabricate beam seats from stainless steel with 3/16-inch bearing plates, 3/4-inch- (19-mm-) diameter-by-12-inch- (300-mm-) long deformed bar anchors, and 0.239-inch (6-mm) side plates.
- C. Fabricate beam hangers from stainless steel with 0.179-inch stirrups and 0.239-inch top plates.
- D. Fabricate strap ties from stainless steel, 2-1/2 inches wide by 0.179 inch.
- E. Fabricate tie rods from round steel bars with upset threads connected with forged-steel turnbuckles complying with ASTM A 668/A 668M.
- F. Provide stainless-steel bolts, 3/4 inch (19 mm) unless otherwise indicated, complying with ASTM F 593, Alloy Group 1 or 2 (ASTM F 738M, Grade A1 or A4); provide nuts complying with ASTM F 594, Alloy Group 1 or 2 (ASTM F 836M, Grade A1 or A4); and, where indicated, provide flat washers.
- G. Provide shear plates, 2-5/8 inches in diameter, complying with ASTM D 5933.
- H. Materials: Unless otherwise indicated, fabricate from the following materials:
 - Stainless-steel plate and flat bars complying with ASTM A 666, Type 304.
 - 2. Stainless-steel bars and shapes complying with ASTM A 276, Type 304.
 - 3. Stainless-steel sheet complying with ASTM A 666, Type 304.
- I. Finish steel assemblies and fasteners with rust-inhibitive primer, 2-mil (0.05-mm) dry film thickness.
 - 1. Primer shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- J. Hot-dip galvanize steel assemblies and fasteners after fabrication to comply with ASTM A 123/A 123M or ASTM A 153/A 153M.

2.6 MISCELLANEOUS MATERIALS

A. End Sealer: Manufacturer's standard, transparent, colorless wood sealer that is effective in retarding the transmission of moisture at cross-grain cuts and is compatible with indicated finish.

- B. Penetrating Sealer: Manufacturer's standard, transparent, penetrating wood sealer that is compatible with indicated finish.
- C. Low-Emitting Materials: Sealers shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.7 FABRICATION

- A. Camber: Fabricate horizontal members and inclined members with a slope of less than 1:1, with natural convex bow (crown) up, to provide camber.
- B. Shop fabricate members by cutting and restoring exposed surfaces to match specified surfacing. Finish exposed surfaces to remove planing or surfacing marks, and to provide a finish equivalent to that produced by machine sanding with No. 120 grit sandpaper.
- C. Predrill for fasteners and assembly of units.
- D. Where preservative-treated members are indicated, fabricate (cut, drill, surface, and sand) before treatment to greatest extent possible. Where fabrication must be done after treatment, apply a field-treatment preservative to comply with AWPA M4.
 - 1. Use inorganic boron (SBX) treatment for members not in contact with the ground and continuously protected from liquid water.
 - 2. Use copper naphthenate treatment for members in contact with the ground or not continuously protected from liquid water.
- E. Coat crosscuts with end sealer.
- F. Seal Coat: After fabricating and surfacing each unit, apply a saturation coat of penetrating sealer on surfaces of each unit except for treated wood where the treatment included a water repellent.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Erect heavy timber framing true and plumb. Provide temporary bracing to maintain lines and levels until permanent supporting members are in place.
 - 1. Install horizontal and sloping members with crown edge up, and provide not less than 4 inches (102 mm) of bearing on supports. Provide continuous members unless otherwise indicated; tie together over supports with metal strap ties if not continuous.
 - 2. Handle and temporarily support heavy timber framing to prevent surface damage, compression, and other effects that might interfere with indicated finish.
- B. Cutting: Avoid extra cutting after fabrication. Where field fitting is unavoidable, comply with requirements for shop fabrication.
- C. Fitting: Fit members by cutting and restoring exposed surfaces to match specified surfacing.
 - 1. Predrill for fasteners using timber connectors as templates.

- 2. Finish exposed surfaces to remove planing or surfacing marks, and to provide a finish equivalent to that produced by machine sanding with No. 120 grit sandpaper.
- 3. Coat crosscuts with end sealer.
- 4. Where preservative-treated members must be cut during erection, apply a field-treatment preservative to comply with AWPA M4.
 - a. Use inorganic boron (SBX) treatment for members not in contact with the ground and continuously protected from liquid water.
 - b. Use copper naphthenate treatment for members in contact with the ground or not continuously protected from liquid water.
- D. Install timber connectors as indicated.
 - 1. Unless otherwise indicated, install bolts with same orientation within each connection and in similar connections.
 - 2. Install bolts with orientation as indicated or, if not indicated, as directed by Architect.

3.2 ADJUSTING

A. Repair damaged surfaces and finishes after completing erection. Replace damaged heavy timber framing if repairs are not approved by Architect.

END OF SECTION 061323

SECTION 061340

TIMBER PILES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes round treated timber piles.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For timber piles. Show fabrication and installation details for piles, including details of driving shoes, tips or boots, and pile butt protection.
 - 1. Include arrangement of static pile reaction frame, test and anchor piles, equipment, and instrumentation. Submit structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, professional engineer, and testing agency.
- B. Round timber pile treatment data as follows, including chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material:
 - 1. For each type of preservative-treated timber product, include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
 - 2. For waterborne-treated products, include statement that moisture content of treated materials was reduced to levels indicated before shipment to Project site.
- C. Pile-Driving Equipment Data: Include type, make, and rated energy range; weight of striking part of hammer; weight of drive cap; and, type, size, and properties of hammer cushion.
- D. Static Pile Test Reports: Submit within three days of completing each test.

- E. Pile-Driving Records: Submit within three days of driving each pile.
- F. Certified Piles Survey: Submit within seven days of pile driving completion.
- G. Field quality-control reports.
- H. Material Certificates: For preservative-treated piles. Indicate type of preservative used and net amount of preservative retained.
- I. Preconstruction Photographs: Photographs or video of existing conditions of adjacent construction. Submit before the Work begins.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
 - 1. Installer's responsibility includes engaging a qualified professional engineer to prepare pile-driving records.
- B. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

1.7 PRECONSTRUCTION TESTING

- A. General: Static pile tests are used to verify driving criteria and pile lengths and to confirm allowable load of piles.
 - 1. Furnish test piles 60 inches (1524 mm) longer than production piles.
 - 2. Determination of actual length of piles is based on results of static pile tests.
- B. Pile Tests: Arrange and perform the following pile tests:
 - 1. Axial Compressive Static Load Test: ASTM D 1143/D 1143M. Procedure A, Quick Test and the following Procedures:
 - a. Procedure B, Maintained Test.
 - b. Procedure C, Loading in Excess of Maintained Test.
 - c. Procedure G, Cyclic Loading Test.
 - Axial Tension Static Load Test: ASTM D 3689.
 - 3. Lateral Load Test: ASTM D 3966.
- C. Equip each test pile with two telltale rods, according to ASTM D 1143/D 1143M, for measuring deformation during load test.
- D. Provide pile reaction frame, anchor piles, equipment, and instrumentation with enough reaction capacity to perform tests. Notify Architect at least 48 hours in advance of performing tests. On completion of testing, remove testing structure, anchor piles, equipment, and instrumentation.
 - 1. Allow a minimum of seven days to elapse after driving test piles before starting pile testing.
 - 2. Number of Test Piles: One pile.

- E. Drive test piles at locations indicated to the minimum penetration or driving resistance indicated. Use test piles identical to those required for Project, and drive with appropriate pile-driving equipment operating at rated driving energy to be used in driving permanent piles.
 - 1. Pile Design Load: As indicated.
- F. Approval Criteria: Allowable load shall be the load acting on the test pile when the lesser of the following criteria are met, divided by a factor of safety of 2:
 - Net settlement, after deducting rebound, of not more than 0.01 inch/ton (0.25 mm/907 kg) of test load.
 - 2. Total settlement exceeds the pile elastic compression by 0.15 inch (4 mm), plus 1.0 percent of the tip diagonal dimension.
 - 3. A plunging failure or sharp break in the load settlement curve.
- G. Test Pile-Driving Records: Prepare driving records for each test pile, compiled and attested to by a qualified professional engineer. Include same data as required for driving records of permanent piles.
- H. Test piles that comply with requirements, including location tolerances, may be used on Project.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piles to Project site in such quantities and at such times to ensure continuity of installation. Handle and store piles at Project site to prevent breaks, cuts, abrasions, or other physical damage and as required by AWPA M4.
 - 1. Do not drill holes or drive spikes or nails into pile below cutoff elevation.

1.9 FIELD CONDITIONS

- A. Protect structures, underground utilities, and other construction from damage caused by pile driving.
- B. Site Information: A geotechnical report has been prepared for this Project and is included referenced elsewhere in the Project Manual for information only.
- C. Preconstruction Photographs: Inventory and record the condition of adjacent structures, underground utilities, and other construction. Document conditions that might be misconstrued as damage caused by pile driving.

PART 2 - PRODUCTS

2.1 TIMBER PILES

- A. Round Timber Piles: ASTM D 25, unused, clean peeled, one piece from butt to tip; of the following species and size basis:
 - 1. Species: Coastal Douglas fir.
 - 2. Size Basis: Butt circumference Class A Tip circumference 8-inch and 12-nch tip and natural taper.

- B. Pressure-treat round timber piles according to AWPA U1 as follows:
 - 1. Service Condition: UC5C Marine Use Southern Waters.
 - 2. Treatment: Waterborne preservative.

2.2 PILE ACCESSORIES

- A. Driving Shoes: Fabricate from ASTM A 1011/A 1011M, hot-rolled carbon-steel strip to suit piletip diameter, of the following type and thickness, and secure to pile tip so as to not affect pile alignment during driving:
 - 1. Type: Flat boot.
 - 2. Thickness: 1/4 inch.

2.3 FABRICATION

- A. Pile Tips: Cut and shape pile tips to accept driving shoes. Fit and fasten driving shoes to pile tips according to manufacturer's written instructions.
- B. Pile Butt: Trim pile butt and cut perpendicular to longitudinal axis of pile. Chamfer and shape butt to fit tightly to driving cap of hammer.
- C. Field-Applied Wood Preservative: Treat field cuts, holes, and other penetrations according to AWPA M4.
 - Coal-tar roofing cement for treating drilled holes or sealing cutoffs shall be free of asbestos.
- D. Pile Splices: Splices are not permitted.
- E. Pile-Length Markings: Mark each pile with horizontal lines at 12-inch (305-mm) intervals; label the distance from pile tip at 60-inch (1524-mm) intervals. Maintain markings on piles until driven.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Conditions: Do not start pile-driving operations until earthwork fills have been completed or excavations have reached an elevation of 6 to 12 inches (152 to 305 mm) above bottom of footing or pile cap.

3.2 DRIVING EQUIPMENT

- A. Pile Hammer: Air-, steam-, hydraulic-, or diesel-powered type capable of consistently delivering adequate peak-force duration and magnitude to develop the ultimate capacity required for type and size of pile driven and character of subsurface material anticipated.
- B. Hammer Cushions and Driving Caps: Between hammer and top of pile, provide hammer cushion and steel driving cap as recommended by hammer manufacturer and as required to drive pile without damage.

C. Leads: Use fixed, semifixed, or hanging-type pile-driver leads that hold the full length of pile firmly in position and in axial alignment with hammer.

3.3 DRIVING PILES

- A. General: Continuously drive piles to elevations or penetration resistance indicated or established by static load testing of piles. Establish and maintain axial alignment of leads and piles before and during driving.
- B. Spudding: Drive spud piles through overlying highly resistant strata or obstructions and withdraw for reuse.
- C. Predrilling: Provide pre-excavated holes where indicated, to depths indicated. Drill holes with a diameter less than the largest cross-section dimension of pile.
 - 1. Firmly seat pile in predrilled hole by driving with reduced energy before starting final driving.
- D. Heaved Piles: Redrive heaved piles to tip elevation at least as deep as original tip elevation with a driving resistance at least as great as original driving resistance.
- E. Driving Tolerances: Drive piles without exceeding the following tolerances, measured at pile heads:
 - Location: 4 inches (102 mm) from location indicated after initial driving, and 6 inches (152 mm) after pile driving is completed.
 - 2. Plumb: Maintain 1 inch (25 mm) in 48 inches (1219 mm) from vertical, or a maximum of 4 inches (102 mm), measured when pile is aboveground in leads.
 - 3. Batter Angle: Maximum 1 inch (25 mm) in 48 inches (1219 mm) from required angle, measured when pile is aboveground in leads.
- F. Withdraw damaged or defective piles and piles that exceed driving tolerances, and install new piles within driving tolerances.
 - 1. Fill holes left by withdrawn piles using cohesionless soil material such as gravel, broken stone, and gravel-sand mixtures. Place and compact in lifts not exceeding 72 inches (1830 mm).
 - 2. Fill holes left by withdrawn piles as directed by Architect.
- G. Abandon and cut off rejected piles as directed by Architect. Leave rejected piles in place and install new piles in locations as directed by Architect.
- H. Cut off butts of driven piles square with pile axis and at elevations indicated.
 - 1. Cover cut-off piling surfaces with minimum three coats of preservative treatment according to AWPA M4.
- I. Pile-Driving Records: Maintain accurate driving records for each pile, compiled and attested to by a qualified professional engineer. Include the following data:
 - 1. Project name and number.
 - 2. Name of Contractor.
 - 3. Pile species.
 - 4. Pile location in pile group and designation of pile group.

- 5. Sequence of driving in pile group.
- 6. Pile dimensions.
- 7. Ground elevation.
- 8. Elevation of tips after driving.
- 9. Final tip and cutoff elevations of piles after driving pile group.
- 10. Records of redriving.
- 11. Elevation of splices.
- 12. Type, make, model, and rated energy of hammer.
- 13. Weight and stroke of hammer.
- 14. Type of pile-driving cap used.
- 15. Cushion material and thickness.
- 16. Actual stroke and blow rate of hammer.
- 17. Pile-driving start and finish times, and total driving time.
- 18. Time, pile-tip elevation, and reason for interruptions.
- 19. Number of blows for every 12 inches (305 mm) of penetration, and number of blows per 1 inch (25 mm) for the last 6 inches (152 mm) of driving.
- 20. Pile deviations from location and plumb.
- 21. Preboring, jetting, or special procedures used.
- 22. Unusual occurrences during pile driving.
- J. Certified Piles Survey: Engage a land surveyor to prepare a piles survey showing final location of piles in relation to the property survey and existing benchmarks.
 - 1. Notify Engineer when deviations from locations exceed allowable tolerances.

3.4 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:
 - 1. Pile foundations.
- B. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- C. Tests and Inspections:
 - 1. Dynamic Pile Testing: High-strain dynamic monitoring shall be performed and reported according to ASTM D 4945 during initial driving and during restriking on five single piles.

3.5 DISPOSAL

A. Remove withdrawn piles and cutoff sections of piles from site and legally dispose of them off Owner's property.

END OF SECTION 061340

SECTION 061533

WOOD DECKING AND RAILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Wood decking.
 - 2. Railings for elevated decks.
 - 3. Support framing for elevated decks.
- B. Related Requirements:
 - 1. Specification Section 061323 Heavy Timber Construction.

1.3 DEFINITIONS

- A. Boards: Lumber of less than 2 inches nominal in thickness and 2 inches nominal or greater in width.
- B. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- C. Timber: Lumber of 5 inches nominal or greater in least dimension.
- D. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NLGA: National Lumber Grades Authority.
 - 3. RIS: Redwood Inspection Service.
 - 4. SPIB: The Southern Pine Inspection Bureau.
 - 5. WCLIB: West Coast Lumber Inspection Bureau.
 - 6. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A. Product Data: For preservative-treated wood products and metal framing anchors.
 - 1. For preservative-treated wood products. Include chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 - 2. For metal framing anchors. Include installation instructions.

B. Samples: For plastic decking, not less than 24 inches long, showing the range of variation to be expected in appearance of decking, including surface texture.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates:

- For lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by ALSC's Board of Review.
- 2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
- B. Certificates of Inspection: Issued by lumber grading agency for exposed wood products not marked with grade stamp.
- C. Evaluation Reports: For the following, from ICC-ES:
 - 1. Preservative-treated wood products.
 - 2. Plastic decking.
 - 3. Expansion anchors.
 - 4. Metal framing anchors.
 - 5. Decking fasteners.

1.6 QUALITY ASSURANCE

- A. Lumber Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
- B. Lumber Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials under cover and protected from weather and contact with damp or wet surfaces. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
- B. Handle and store plastic lumber to comply with manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 LUMBER, GENERAL

A. Comply with DOC PS 20 and with grading rules of lumber grading agencies certified by ALSC's Board of Review as applicable. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by ALSC's Board of Review.

- 1. Factory mark each item with grade stamp of grading agency.
- 2. For items that are exposed to view in the completed Work, omit grade stamp and provide certificates of grade compliance issued by grading agency.
- Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry wood products.
- 4. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Regional Materials: Wood products shall be milled within 500 miles of Project site from wood that has been harvested within 500 miles of Project site.
- C. Certified Wood: Boards and dimension lumber shall be certified as "FSC Pure" or "FSC Mixed Credit" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and to FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- D. Maximum Moisture Content:
 - 1. Boards: 19 percent.
 - 2. Dimension Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less; 19 percent for more than 2-inch nominal (38-mm actual) thickness
 - 3. Timber. 19 percent.

2.2 WOOD DECKING

- A. Hand select wood for freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot holes, shake, splits, torn grain, and wane.
- B. Dimension Lumber Decking: No. 2 grade and the following species:
 - Douglas fir-larch, Douglas fir-larch (North), or Douglas fir-south; NLGA, WCLIB, or WWPA.
- C. Dimension Lumber Decking: Deck Heart or Construction Heart.
- D. Board Decking: 1-1/2-inch 1-inch actual thickness radius-edged decking of[any of] the following species and grades:
 - 1. Douglas fir-larch or Douglas fir-south, Patio 1; WWPA.
 - 2. Douglas fir-larch, Commercial Dex; WCLIB.
 - 3. Douglas fir-larch (North), Commercial Patio; NLGA.

2.3 WOOD RAILINGS

- A. Hand select wood for freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot holes, shake, splits, torn grain, and wane.
- B. Dimension Lumber Railing Members: No. 1 the following species:
 - 1. Douglas fir-larch, Douglas fir-larch (North), or Douglas fir-south; NLGA, WCLIB, or WWPA.

- C. Railing Boards:
 - 1. Douglas fir, C & Btr finish or C Select; NLGA, WCLIB, or WWPA.

2.4 DIMENSION LUMBER FRAMING

- A. Deck Framing: No. 1 the following species:
 - 1. Douglas fir-larch; WCLIB or WWPA.
 - 2. Douglas fir-south; WWPA.
 - 3. Douglas fir-larch (North); NLGA.
- B. Deck Framing: Any species and grade with a modulus of elasticity of at least 1,500,000 psi (10 350 MPa) and an extreme fiber stress in bending of at least 1000 psi (6.9 MPa) width for single-member use.

2.5 POSTS

- A. Dimension Lumber Posts: No. 2 grade and[any of] the following species:
 - Douglas fir-larch, Douglas fir-larch (North), or Douglas fir-south; NLGA, WCLIB, or WWPA.
- B. Timber Posts: Balsam fir, Douglas fir-larch, Douglas fir-larch (North), eastern hemlock

2.6 PRESERVATIVE TREATMENT

- A. Pressure treat boards and dimension lumber with waterborne preservative according to AWPA U1; Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
- B. Pressure treat timber with waterborne preservative according to AWPA U1; Use Category UC4a.
- C. Pressure treat poles with waterborne preservative according to AWPA U1; Use Category UC4a.
- D. Preservative Chemicals: Acceptable to authorities having jurisdiction.
 - 1. Do not use chemicals containing arsenic or chromium.
- E. Use process for boards and dimension lumber that includes water-repellent treatment.
- F. After treatment, redry boards, dimension lumber, timber and poles to 19 percent maximum moisture content.
- G. Mark treated wood with treatment quality mark of an inspection agency approved by ALSC's Board of Review.
 - 1. For items indicated to receive a stained or natural finish, omit marking and provide certificates of treatment compliance issued by inspection agency.

- H. Application: [Treat all wood unless otherwise indicated.] [Treat items indicated on Drawings and the following:]
 - 1. Framing members less than 18 inches (460 mm) above grade.
 - 2. Sills and ledgers.
 - 3. Members in contact with masonry or concrete.
 - 4. Posts.
 - 5. Round wood poles.
 - 6. Decking.
 - 7. Stair treads.

2.7 FASTENERS

- A. General: Provide Teflon Screw fasteners, acceptable to authorities having jurisdiction, and that comply with requirements specified in this article for material and manufacture. Provide screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate.
- B. Wood Screws and Lag Screws: ASME B18.2.1, ASME B18.6.1, or ICC-ES AC233.
- C. Stainless-Steel Bolts: ASTM F 593, Alloy Group 1 or 2 (ASTM F 738M, Grade A1 or Grade A4); with ASTM F 594, Alloy Group 1 or 2 (ASTM F 836M, Grade A1 or Grade A4) hex nuts and, where indicated, flat washers.
- D. Postinstalled Anchors: Stainless-steel, chemical or torque-controlled expansion anchors with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing according to ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1.

2.8 METAL FRAMING ANCHORS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Cleveland Steel Specialty Co.
 - 2. KC Metals Products, Inc.
 - 3. Phoenix Metal Products, Inc.
 - 4. R. H. Tamlyn & Sons LP.
 - 5. Simpson Strong-Tie Co., Inc.
 - 6. <u>USP Structural Connectors</u>.
- B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of products of manufacturers listed. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, coating designation.

- D. Stainless-Steel Sheet: ASTM A 666, Type 304.
- E. Joist Hangers: U-shaped, with 2-inch- long seat and 1-1/4-inch- wide nailing flanges at least 85 percent of joist depth.
 - 1. Thickness: 0.062 inch.
- F. Top Flange Hangers: U-shaped joist hangers, full depth of joist, formed from metal strap with tabs bent to extend over and be fastened to supporting member.
 - Strap Width: 2 inches.
 Thickness: 0.062 inch.
- G. Joist Ties: Flat straps, with holes for fasteners, for tying joists together over supports.
 - Width: 1-1/4 inches.
 Thickness: 0.062 inch.
 - 3. Length: 16 inches or 24 inches.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION, GENERAL

- A. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit work to other construction; scribe and cope as needed for accurate fit.
- B. Framing Standard: Comply with AF&PA WCD1 unless otherwise indicated.
- C. Install wood decking with crown up (bark side down).
- D. Install plastic lumber to comply with manufacturer's written instructions.
- E. Secure decking to framing with screws.
- F. Install metal framing anchors to comply with manufacturer's written instructions.
- G. Do not splice structural members between supports unless otherwise indicated.
- H. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

- Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of members or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- J. Apply copper naphthenate field treatment to comply with AWPA M4, to cut surfaces of preservative-treated lumber.
- K. Securely attach exterior rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. ICC-ES AC70 for power-driven fasteners.
 - 2. "Fastening Schedule" in ICC's International Building Code.
 - 3. "Fastener Schedule for Structural Members" and "Alternate Attachments" in ICC's International Residential Code for One- and Two-Family Dwellings.
- L. Use common wire nails unless otherwise indicated. Select fasteners of size that do not fully penetrate members where opposite side is exposed to view. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads unless otherwise indicated.
- M. For exposed work, arrange fasteners in straight rows parallel with edges of members, with fasteners evenly spaced and with adjacent rows staggered.

3.4 ELEVATED DECK JOIST FRAMING INSTALLATION

- A. General: Install joists with crown edge up and support ends of each member with not less than 1-1/2 inches of bearing on wood or metal, or 3 inches on masonry. Attach floor joists where framed into wood supporting members by using wood ledgers as indicated or, if not indicated, by using metal joist hangers. Do not notch joists.
- B. Frame openings with headers and trimmers supported by metal joist hangers; double headers and trimmers where span of header exceeds 48 inches.
- C. Lap members framing from opposite sides of beams or girders not less than 4 inches or securely tie opposing members together. Provide solid blocking of 2-inch nominal thickness by depth of joist over supports.
- D. Provide solid blocking of 2-inch nominal thickness by depth of joist at intervals of 96 inches o.c., between joists.

3.5 RAILING INSTALLATION

- A. Balusters: Fit to railings, nail or screw in place. Countersink fastener heads, fill flush, and sand filler.
- B. Railings: Secure wall rails with metal brackets. Fasten freestanding railings to newel posts and to trim at walls with countersunk-head wood screws or rail bolts.

END OF SECTION 061533