

NOTICE TO BIDDERS

Sealed bids addressed to the City of Bellmead will be received at the Bellmead City Hall Council Chambers; 3015 Bellmead Drive; Bellmead, Texas 76705 until 2:00 PM on Thursday, September 25, 2025 for the construction of the Brame Park Improvements in the City of Bellmead, Texas. The bids shall be labeled:

Brame Park Improvements
Bellmead, Texas

Bids must be submitted on the Bid Form provided and must be accompanied by a cashier's check, certified check or acceptable bidder's bond payable without recourse to the City of Bellmead, Texas in an amount not less than five (5) percent of the bid submitted as a guarantee that the bidder will enter into a contract and execute a Performance Bond and a Payment Bond within fifteen (15) days after the notification of the award of the contract.

The bids will be publicly opened and read aloud in the Council Chambers at Bellmead City Hall; 3015 Bellmead Drive; Bellmead, Texas; 76705 at 2:00 PM on Thursday, September 25, 2025. The City Council will officially review the bids and award the contract as soon thereafter as practical. The City of Bellmead reserves the right to accept or reject any and all bids, as the best interest of the City may require, and to waive any informality in bids received.

Plans, specifications and bidding documents may be secured beginning Thursday, September 11, 2025 at Kasberg, Patrick & Associates, LP; (254) 773-3731; 19 North Main Street; Temple, Texas 76501 for a non-refundable cost of \$50.00 per set (11"x17") printed (or no charge for PDF download). Checks shall be made payable to Kasberg, Patrick & Associates, LP. They may be accessed electronically through Civcast (<https://www.civcastusa.com/>).

A Non-Mandatory Pre-Bid Conference will be held in the Bellmead City Hall located at 3015 Bellmead Drive, Bellmead, Texas 76705 at 2:00 PM on Tuesday, September 16, 2025. Although this is not a mandatory Pre-Bid Conference, it is highly recommended that all bidders attend, as there will be an opportunity for site visits immediately following the Pre-Bid Conference.

Technical questions and inquiries should be directed to Tyler Richburg, PLA, trichburg@coveylandscape.com until 12:00 p.m. on Friday, September 19, 2025. The Engineer and/or Owner shall not be bound by any references obtained by the Bidders unless an addendum is produced and released.

Waco Tribune-Herald & City of Bellmead Website

CITY OF BELLMEAD, TEXAS

September 11, 2025

September 18, 2025

Karen Evans, CPA – Assistant City Manager

CITY OF BELLMEAD, TEXAS



SPECIFICATIONS AND CONTRACT DOCUMENTS
FOR

Brame Park Improvements

Prepared By

COVEY
Planning + Landscape Architecture

Covey Planning + Landscape Architecture
CONSULTING ENGINEERS
TEMPLE, TEXAS



September 2025

9/10/2025

BRAME PARK IMPROVEMENTS

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Waco Tribune-Herald & City of Bellmead Website

September 11, 2025
September 18, 2025

CITY OF BELLMEAD, TEXAS



Karen Evans, CPA – Assistant City Manager

**SPECIAL PROJECT INFORMATION
TO BIDDERS/CONTRACTORS**

- A. All questions and inquiries about the project should be directed to Tyler Richburg, PLA, until 12:00 p.m. on Friday, September 19, 2025. Questions after that time and date will not be addressed and the Engineer and/or Owner shall not be bound by any references or dates obtained by the Bidders unless an official addendum is produced and released by Kasberg, Patrick & Associates, LP / Covey Planning and Landscape Architecture.
- B. Contract Administration and Pay Estimate Audits will be provided by KPA Engineers / Covey Planning and Landscape Architecture.
- C. The Bid Item for Mobilization, Bonds and Insurance shall not exceed 5% of the total amount Bid for any particular Base Bid, Add Alternate Bid or Alternate Bid.
- D. The play equipment and surfacing is to be purchased and installed by the City of Bellmead outside the scope of this contract. Any concrete, preparation work, and drainage improvements are to be provided as a part of this scope.

INSTRUCTION TO BIDDERS

1. Use of Separate Bid Forms

These contract documents include a complete set of bid and contract forms which are for the convenience of the bidders and are not to be detached from the contract document, completed or executed. Separate bid forms will be provided for your use.

2. Interpretations or Addenda

Each request for an interpretation shall be made to the engineer. Each interpretation made will be in the form of an Addendum to the contract documents and will be distributed to all parties holding contract documents no less than one (1) day prior to the bid opening. It is, however, the bidder's responsibility to make inquiry as to any addenda issued. All such addenda shall become part of the contract documents and all bidders shall be bound by such addenda, whether or not received by the bidder.

3. Inspection of Site

Each bidder should visit the site of the proposed work and fully acquaint himself with the existing conditions there and should fully inform himself as to the facilities involved, the difficulties and restrictions attending the performance of the contract. The bidder should thoroughly examine and familiarize himself with the drawings, technical specifications and all other contract documents. The contractor, by the execution of the contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal document or to visit the site or acquaint himself with the conditions there existing. The City of Bellmead will be justified in rejecting any claim based on lack of inspection of the site prior to the bid.

4. Bids

- a) All bids must be submitted on the forms provided and are subject to all requirements of the Contract Documents, including the Drawings.
- b) All bids must be regular in every respect and no interlineation, excisions or special conditions may be made or included by the bidder.
- c) The City of Bellmead may consider as irregular any bid on which there is an alteration of or departure from the bid form and, at its option, may reject any irregular bid.
- d) If contract is awarded, it will be awarded to a responsible bidder on the basis of the lowest/best bid and the selected alternate bid items, if any. The contract will require the completion of the work in accordance with the contract documents.

5. Bid Bond

- a) A bid bond in the amount of 5% of the bid issued by the acceptable surety shall be submitted with each bid. A certified check or bank draft payable to the City of Bellmead may be submitted in lieu of the Bid Bond.
- b) The bid bond or its comparable, will be returned to the bidder as soon as practical after the opening of the bids.

6. Unit Price

The unit price for each of the several items in the bid shall include its pro rata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price bid represents the total bid. Any bid not conforming to this requirement may be rejected as informal. Special attention is drawn to this condition, as the unit prices will be used to determine the amount of any change orders resulting from an increase or decrease in quantities.

7. Corrections

Erasures or other corrections in the bid must be noted over the signature of the bidder.

8. Time for Receiving Bids

Bids received prior to the advertised hour of opening will be kept securely sealed. The officer appointed to open the bids shall decide when the specified time has arrived and no bid received thereafter will be considered; except that when a bid arrives by mail after the time fixed for opening, but before the reading of all other bids is completed, and it is shown to satisfaction of the City of Bellmead that the late arrival of the bid was solely due to delay in the mail for which the bidder was not responsible, such bid will be received and considered.

9. Withdrawal of Bids

Bidder may withdraw the bid before the time fixed for the opening of bids, by communicating his purpose in writing to the City of Bellmead. Upon receipt of such notice, the unopened bid will be returned to the bidder. The bid guaranty of any bidder withdrawing his bid will be returned promptly.

10. Award of Contract/Rejection of Bids

- a) The contract will be awarded to the responsive, responsible Bidder submitting the lowest/best bid. The bidder selected will be notified at the earliest possible date. The City of Bellmead reserves the right to reject any or all bids and to waive any informality in bids received where such rejection or waiver is in its interest.

11. Execution of Agreement/Performance and Payment Bonds

- a) The failure of the successful bidder to execute the agreement and supply the required bonds within ten (10) days after the prescribed forms are presented for signature, or within such extended period as the City of Bellmead may grant, shall constitute a default and the City of Bellmead may, at its option either award the contract to the next lowest responsible bidder, or re-advertise for bids. In either case, the City of Bellmead may charge against the bidder the difference between the amount of the bid, and the amount for which a contract is subsequently executed irrespective of whether this difference exceeds the amount of the bid bond. If a more favorable bid is received through re-advertisement, the defaulting bidder shall have no claim against the City of Bellmead for a refund.

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-1 | 100% | LS | Mobilization, Bonds and Insurance, not-to-exceed 5% of the Base Bid Amount, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-2 | 100% | LS | For Preparing and Implementing Vehicular and Pedestrian Control Plan, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-3 | 100% | LS | Implement and Administer Stormwater Pollution Prevention Plan, Including Submission to and Receiving Permits from Texas Commission on Environmental Quality (TCEQ), Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-4 | 100% | LS | Provide DVD of Right-of-Way Pre-Construction and Post Construction Site Conditions for the Total Project, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |

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BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-5 | 100 | SY | For Furnishing, Installing, Maintaining, & Removing Stabilized Construction Exit, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-6 | 100% | LS | Provide Labor, Equipment, Tools & Supervision to Complete Site Preparation, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-7 | 100 | LF | Provide, Install, Maintain and Remove Silf Fence, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-8 | 100 | LF | Provide, Install, Maintain and Remove Tree Protection, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-9 | 11 | CY | For Excavating and Preparing the Area for the Poured in Place Rubber Surfacing, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |

**BID SCHEDULE
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BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-10 | 90 | LF | For Furnishing and Installing 6" Wide Concrete Edging, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-11 | 61 | CY | For Excavating and Hauling Off Existing Swingset Base Material, _____ Dollars and _____ Cents per Cubic Yard. | \$ _____ | \$ _____ |
| A-12 | 137 | LF | For Removing and Replacing Existing Swingset Edge Material, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-13 | 8 | LF | For Furnishing and Installing Wood Edge, Including All New Appertenances, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-14 | 61 | CY | For Furnishing and Installing Engineered Wood Fiber Mulch, Complete For _____ Dollars and _____ Cents per Cubic Yard. | \$ _____ | \$ _____ |

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FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-15 | 1 | EA | For Furnishing and Installing Playscape Accessibility Ramp, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-16 | 1 | EA | For Furnishing and Installing Drainage Sump, Including all Appertenances and Items for a Fully Functional System, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-17 | 163 | LF | For Excavating and Installing 4" PVC Pipe Including all Appertenances and Items to Create a Fully Functional System, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |
| A-18 | 1 | EA | For Furnishing and Installing Shade Structure, Including all Appertenances and Items to Create a Fully Functional System, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-19 | 67 | SY | Remove and Dispose of Existing Sidewalk, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |

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BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-20 | 93 | SY | Construct New Sidewalk, Per Sidewalk Details SW-1, SW-2, and SW-3 on Sheet C1.0, C1.1, C1.2, C1.3 Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-21 | 5 | LF | Fill Expansion Joint with Concrete Joint Sealant Material in Accordance with TxDOT DMS-6310, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |
| A-22 | 226 | SY | Mill and Dispose 1.5" Asphalt, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-23 | 226 | SY | Grade Parking Lot to Meet ADA Standards (Max. 2% Slope in All Directions), As Shown on Sheet C1.0, Including Haul Off of Any Excess Material, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|------------|-------------------------------|
| A-24 | 226 | SY | Furnish and Install HMAC, Type D, 1.5" Thickness, Including Prime and Tack Coat, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-25 | 6 | EA | Furnish and Install Concrete Wheelstops, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-26 | 105 | LF | Furnish and Install 4" Wide Parking/Gore Thermoplastic Striping, 100 mil Thickness, As Shown on Sheet C1.0, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |
| A-27 | 6 | EA | Furnish and Install Thermoplastic Handicap Symbols, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|------------|-------------------------------|
| A-28 | 2 | EA | Furnish and Install Sign Assembly with R7-8T and R7-8P Signs, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-29 | 4 | EA | Furnish and Install Sign Assembly with R7-8T Sign, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-30 | 7 | EA | For Furnishing & Installing Pedestrian Lights and All Necessary Electrical Items, Including All Items & Appertenances, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-31 | 7 | EA | For Furnishing & Installing All Electrical Items Per the Plans And Specifications, Including All Items & Appertenances Necessary For a Complete & Operational Lighting System, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |

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BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-32 | 100% | LS | For Furnishing & Installing Revegetation of All Disturbed Areas to Include Watering For Establishment, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-33 | 100% | LS | For Furnishing & Installing Thin-set Concrete for Restroom Entrances, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-34 | 2 | EA | For Removing Existing and Installing New ADA Accessible Restroom Thresholds, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |

TOTAL BID AMOUNT PART A (ITEMS A-1 - A-34)

BID AMOUNT \$: _____
(numerals)

(words)

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|-----------------|-------------------------------|
| B-1 | 8 | EA | For Furnishing & Installing Pedestrian Lights and All Necessary Electrical Items, Including All Items & Appertenances, Complete For | \$ _____ | \$ _____ |
| | | | | _____ Dollars | |
| | | | | and _____ Cents | |
| | | | | per Each. | |

TOTAL BID AMOUNT PART B (ITEMS B-1)

BID AMOUNT \$: _____
(numerals)

(words)

The above prices shall include all labor, materials, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

The work proposed to be done shall be accepted when fully completed and finished in accordance with the plans, specifications and Project Schedule shown herein to the satisfaction of the Engineer.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the Contract Documents pertaining to the work covered in the above bid, and that the bid prices contained in the proposal have been carefully checked and are submitted as correct and final.

Respectfully submitted:

Name:

By:

Address

Printed Name: _____

City, State & Zip

Seal & Authorization (if a Corporation)

Attest:

Phone

Fax

Email Address

Secretary

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,
_____ as Principal,
and _____ as
Surety, are hereby held and firmly bound unto _____ as OWNER in the
penal sum of _____ for payment
of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and
assigns.

SIGNED, this _____ day of _____, 2024. The Condition of the above obligation is
such that whereas the Principal has submitted to _____

a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the

Brame Park Improvements

NOW, THEREFORE,

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

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

THE SURETY, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

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

_____(L.S.)
Principal

Surety

By: _____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

END OF SECTION

STANDARD FORM OF AGREEMENT

STATE OF TEXAS

COUNTY OF McLennan }

THIS AGREEMENT, made and entered into this _____ day of _____, 2025, by and between The City of Bellmead, Texas of the County of McLennan and State of Texas, acting through Yousry Zakhary, City Manager thereunto duly authorized so to do, Party of the First Part, hereinafter termed OWNER, and _____ of the City of _____, County of _____ and State of _____, Party of the Second Part, Hereinafter termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the First Part (OWNER), and under the conditions expressed in the bond bearing even date herewith, the said Party of the Second Part (CONTRACTOR), hereby agrees with the said Party of the First Part (OWNER) to commence and complete the construction of certain improvements described as follows:

Brame Park Improvements

and all extra work in connection therewith, under the terms as stated in the General Conditions of the Agreement and at his (or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said construction, in accordance with the conditions and prices stated in the Proposal attached hereto, and in accordance with the Notice to Contractors, General and Special Conditions of Agreement, Plans and other drawings and printing or written explanatory matter thereof, and the Specifications and addenda therefor, as prepared by Kasberg, Patrick & Associates, LP; Nineteen North Main; Temple, Texas, 76501; (254) 773-3731, herein entitled the ENGINEER, each of which has been identified by the CONTRACTOR and the ENGINEER, together with the CONTRACTOR'S written Proposal, the General Conditions of the Agreement, and the Performance and Payment Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire contract.

The CONTRACTOR agrees to commence work within ten (10) calendar days after the date written notice to do so shall have been given him, and to substantially complete construction within 120 calendar days after issuance of the "Notice to Proceed" and to be at Final Completion within 120 calendar days after the issuance of the "Notice to Proceed", subject to such extensions of time as are provided by the General and Special Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds the price or prices shown in the proposal, which forms a part of this contract, such payments to be subject to the General and Special Conditions of the contract.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

City of Bellmead

Party of the First Part (OWNER)

Party of the Second Part (CONTRACTOR)

By: _____
Yousry Zakhary, City Manager

By: _____
Title: _____

ATTEST:

ATTEST:

Shannon Garcia, City Clerk

APPROVED AS TO FORM:

Charlie Buenger, City Attorney

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That _____,
a Texas corporation, whose address is _____
_____, Texas, _____; as Principal, and _____
_____, whose address is _____
, a corporation organized and existing under the laws of the State of Texas, as Surety, are
held firmly bound unto the City of Bellmead, Texas as Obligee, in the amount of _____
_____ Dollars (\$ _____) for
the payment of which sum we will bind ourselves, our heirs, executors, administrators,
successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has entered into a certain written contract with the Obligee, dated
the _____ day of _____, 2025, for the construction of the

Brame Park Improvements

specifically including in the scope of this work the bond, the additional guaranty
provisions set forth in the contract conditions, which contract is hereby referred to and
made a part hereof as fully and to the same extent as if copied at length herein, as well as
Principal’s primary obligation to perform according to the plans and specifications.

NOW, THEREFORE, the condition of this obligation is such, that if the said Principal
shall faithfully perform the work in accordance with the plans, specifications, instructions
to bidders, general and special conditions and other contract documents and shall fully
indemnify and save harmless Obligee from all costs and damage which Obligee may
suffer by reason of Principal's default, and reimburse and repay Obligee all outlay and
expense which Obligee may incur in making good such default, then this obligation shall
be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to Chapter 2253 of the
Texas Government Code, as amended, and all liabilities on this bond shall be determined
in accordance with the provisions of such statute, to the same extent as if it were copied
at length herein.

PROVIDED further that if any legal action be filed on this bond, venue shall be in
McLennan _____ County, _____ Texas.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder, or the plans, specifications, or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed thereunder. The Surety is responsible for additional amounts authorized by any change orders.

IN WITNESS WHEREOF, this instrument has been executed by the duly authorized representatives of the Principal and the Surety.

Signed and sealed this ____ day of _____, 2025.

Principal: _____

By: _____

_____(Title)

Surety: _____

By: _____

TDI Company Number: _____

The name and address of the Resident Agent of Surety is:

Note: Attach Power of Attorney and Required Notices Rider

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, That _____ a Texas corporation, whose address is _____, Texas; as Principal, and _____, whose address is _____, a corporation organized and existing under the laws of the State of Texas, as Surety, are held firmly bound unto the City of Bellmead, Texas as Oblige, in the amount of _____ Dollars (\$_____) for the payment of which sum we will bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has entered into a certain written contract with the Oblige, dated the _____ day of _____, 2025, for the construction of the

Brame Park Improvements

specifically including in the scope of this work the bond, the additional guaranty provisions set forth in the contract conditions, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, That if the said Principal shall well and faithfully make payment to each and every claimant (as defined in Chapter 2253, Texas Government Code, as amended) supplying labor or materials to it in the prosecution of the work provided for in said contract, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED further that if any legal action be filed on this bond, venue shall be in McLennan County, Texas.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as currently amended, and all liabilities on this bond shall be determined in accordance with the provisions of said statute to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder, or the plans, specifications, or drawings accompanying the same, or any assignment of the contract as may be provided for in the instructions to bidders, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, assignment thereof, or to the work to be performed thereunder. The Surety is responsible for additional amounts authorized by any change orders.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on the _____ day of _____, 2025.

Principal: _____

By: _____
_____, (Title)

Surety: _____

By: _____

TDI Company Number: _____

The name and address of the Resident Agent of Surety is:

Note: Attach Power of Attorney and Required Notices Rider

CERTIFICATE OF INSURANCE

THIS CERTIFICATE IS ISSUED FOR THE DURATION OF THE PROJECT AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES LISTED BELOW.

| | |
|-----------------------------|---|
| NAME AND ADDRESS OF AGENCY | COMPANIES AFFORDING COVERAGES COMPANY A <u>LETTER</u> COMPANY B <u>LETTER</u> COMPANY C <u>LETTER</u> COMPANY D <u>LETTER</u> COMPANY E <u>LETTER</u> |
| NAME AND ADDRESS OF INSURED | COMPANY C <u>LETTER</u> COMPANY D <u>LETTER</u> COMPANY E <u>LETTER</u> |

This is to certify that policies of insurance listed below have been issued to the insured named above and are in force at this time. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

| <input style="width: 80%; height: 15px;" type="text"/> COMPANY LETTER | TYPE OF INSURANCE | POLICY NUMBER | POLICY EXPIRATION DATE | LIMITS OF LIABILITY IN THOUSANDS (000) | | |
|--|--|---------------|------------------------|--|---------------|-----------|
| | | | | | EACH OCCURENC | AGGREGATE |
| _____ | GENERAL LIABILITY ___ Comprehensive Form Premises-Operations ___ Explosions and Collapse Hazard ___ Underground Hazard ___ Products/Completed Operations Hazard ___ Contractual Insurance ___ Broad Form ___ Property Damage ___ Independent Contractors ___ Personal Injury | | | Bodily Injury | \$ | \$ |
| | | | | Property Damage | \$ | \$ |
| | | | | Bodily Injury and Property Damage Combined | \$ | \$ |
| | | | | Personal Injury | | \$ |

| | | | | | | |
|-------|---|--|--|--|--|----------------------|
| _____ | AUTOMOBILE LIABILITY ___ Comprehensive Form ___ Owned ___ Hired ___ Non-Owned | | | Bodily Injury (Each Person) | | \$ |
| | | | | Bodily Injury (Each Accident) | | \$ |
| | | | | Property Damage | | \$ |
| | | | | Bodily Injury and Property Damage Combined | | \$ |
| _____ | EXCESS LIABILITY ___ Umbrella Form ___ Other than Umbrella | | | | | |
| _____ | WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY | | | Statutory | | |
| | | | | | | \$ (Each Account) |

OTHER

Builders Risk

Description of Operations/
Locations/Vehicles

PROJECT TITLE: Brame Park Improvements
PROJECT LOCATION: Bellmead, Texas

The City of Bellmead and the Engineer are named as an additional insureds under all insurance, other than Workman's Compensation.

Cancellation: No policies will be cancelled or reduced, restricted, or limited until ten (10) days after the owner has received written notice as evidence by return receipt or registered or certified letter.

NAME AND ADDRESS OF CERTIFICATE HOLDER:

DATE ISSUED: _____, 2025 AUTHORIZED REPRESENTATIVE

END OF SECTION

Notice of Award

Date:

Project: **Brame Park Improvements**

Owner: City of Bellmead Texas

Owner's Contract No.:

Contract: **Brame Park Improvements**

Engineer's Project No.: 2024-CLA536

Bidder:

Bidder's Address:

You are notified that your Bid dated _____, for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for:

Brame Park Improvements

The amount of the Contract is _____ Dollars (\$ _____).

5 copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

5 sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [5] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders, General Conditions, and Supplementary Conditions.
3. Other conditions precedent:

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Kasberg, Patrick & Associates, LP

By: _____

Tyler Richburg, PLA

Project Manager

Notice to Proceed

Date: _____

Contract: Brame Park Improvements

Engineer's Project No.: 2024-CLA536

To: _____

In accordance with the Agreement dated _____, by and between the City of Bellmead, Texas (Owner) and _____ (Contractor) for work to be performed in conjunction with the Brame Park Improvements.

Construction shall be completed within _____ calendar days of the issuance of this Notice to Proceed.

1. Contractor is hereby notified to commence work on _____, 2025. The Project shall be fully complete within _____ calendar days.
2. Liquidated damages to be paid by the Contractor for failure to complete the work by the completion date will be assessed at the rate of \$ 500.00 per day for each working day after the working days allotted have expired. The procedure and basis for the assessment of damages will be in accordance with the Special Conditions, Section 21.

ISSUED ON BEHALF OF

ACCEPTED ON BEHALF OF

City of Bellmead Texas

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date

Date

AFFIDAVIT AND RELEASE OF LIEN

**THE STATE OF TEXAS
COUNTY OF MCLENNAN**

WHEREAS, the undersigned _____,
who being duly sworn, on oath, says that he/she is the legal representative of _____
_____, has been employed by _____ The City of Bellmead Texas _____,
to furnish labor and materials for the installation of the _____ Brame Park Improvements _____ in
Bellmead, Texas.

NOW THEREFORE, for and in consideration of the sum of _____
_____ DOLLARS (\$ _____) and other
good and valuable consideration, the receipt of which is hereby anticipated, being payment in full for all
labor and/or materials furnished by the undersigned up to and including _____ 20____,
the undersigned hereby waives and releases any and all lien or claim of right of lien on said project or
premises on account of labor and/or materials furnished and further states that all applicable sales
taxes, State, Local and Federal, and all labor hired by him and all material purchased by him and used
in the construction of said project improvements have been paid in full. The undersigned hereby
warrants to defend _____ The City of Bellmead Texas _____ against any liens or claims made by said laborers
or suppliers of materials used in connection with said project.

Date _____

By: _____

Title: _____

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS THE _____ DAY OF _____, 2024, _____
_____ DID PERSONALLY APPEAR AND SIGN IN ACKNOWLEDGMENT OF THE
AFOREGOING AFFIDAVIT.

NOTARY PUBLIC IN AND FOR
THE STATE OF TEXAS

GENERAL CONDITIONS

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FOR

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GENERAL CONDITIONS OF AGREEMENT

1. DEFINITIONS OF TERMS

1.01 ... OWNER, CONTRACTOR AND ENGINEER. The OWNER, the CONTRACTOR and the ENGINEER are those persons or organizations identified as such in the Agreement and are referred to throughout the Contract Documents as if singular in number and masculine in gender. The term ENGINEER means the ENGINEER or his duly authorized representative. The ENGINEER shall be understood to be the ENGINEER of the OWNER, and nothing contained in the Contract Documents shall create any contractual or agency relationship between the ENGINEER and the CONTRACTOR.

1.02 ... CONTRACT DOCUMENTS. The Contract Documents shall consist of the Notice to Contractors (Advertisement), Special Conditions (Instructions to Bidders), Proposal, signed Agreement, Performance and Payment Bonds (when required), Special Bonds (when required), General Conditions of the Agreement, Technical Specifications, Plans, and all modifications thereof incorporated in any of the documents before the execution of the agreement.

The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In case of conflict between any of the Contract Documents, priority of interpretation shall be in the following order: Signed Agreement, Performance and Payment Bonds, Special Bonds (if any), Proposal, Special Conditions of Agreement, Notice to Contractors, Technical Specifications, Plans, and General Conditions of Agreement.

1.03 ... SUB-CONTRACTOR. The term Sub-Contractor, as employed herein, includes only those having a direct contract with the CONTRACTOR and it includes one who furnishes material worked to a special design according to the plans or specifications of this work, but does not include one who merely furnishes material not so worked.

1.04 ... WRITTEN NOTICE. Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who gives the notice.

1.05 ... WORK. The CONTRACTOR shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, services, insurance, and all water, light, power, fuel, transportation and other facilities necessary for the execution and completion of the work covered by the Contract Documents. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of a good quality. The CONTRACTOR shall, if required, furnish satisfactory evidence as to the kind and quality of materials. Materials or work described in words, which so applied, have a well-known technical or trade meaning shall be held to refer to such recognized standards.

1.06 ... 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 ENGINEER or OWNER to be done by the CONTRACTOR to accomplish any change, alteration or addition to the work

shown upon the plans, or reasonably implied by the specifications, and not covered by the CONTRACTOR'S Proposal, except as provided under "Changes and Alterations", herein.

1.07 ... WORKING DAY. A "Working Day" is defined as any day not including Saturdays, Sundays or any legal holidays, in which weather or other conditions, not under the control of the CONTRACTOR, will permit construction of the principal units of the work for a period of not less than seven (7) hours between 7:00 a.m. and 6:00 p.m.

1.08 ... CALENDAR DAY. "Calendar Day" is any day of the week or month, no days being excepted.

1.09 ... SUBSTANTIALLY COMPLETED. By the term "substantially completed" is meant that the structure has been made suitable for use or occupancy or the facility is in condition to serve its intended purpose, but still may require minor miscellaneous work and adjustment.

2. RESPONSIBILITIES OF THE ENGINEER AND THE CONTRACTOR

2.01 ... OWNER - ENGINEER RELATIONSHIP. The ENGINEER will be the OWNER'S representative during construction. The duties, responsibilities and limitations of authority of the ENGINEER as the OWNER'S representative during construction are as set forth in the Contract Documents and shall not be extended or limited without written consent of the OWNER and ENGINEER. The ENGINEER will advise and consult with the OWNER, and all of OWNER'S instructions to the CONTRACTOR shall be issued through the ENGINEER.

2.02 ... PROFESSIONAL INSPECTION BY ENGINEER. The ENGINEER shall make periodic visits to the site to familiarize himself generally with the progress of the executed work and to determine if such work generally meets the essential performance and design features and the technical and functional engineering requirements of the Contract Documents; provided and except, however, that the ENGINEER shall not be responsible for making any detailed, exhaustive, comprehensive or continuous on-site inspection of the quality or quantity of the work or be in any way responsible, directly or indirectly, for the construction means, methods, techniques, sequences, quality, procedures, programs, safety precautions or lack of same incident thereto or in connection therewith. Notwithstanding any other provision of this agreement or any other Contract Document, the ENGINEER shall not be in any way responsible or liable for any acts, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR'S or subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the work.

2.03 ... PAYMENTS FOR WORK. The ENGINEER shall review CONTRACTOR'S applications for payment and supporting data, determine the amount owed to the CONTRACTOR and approve, in writing, payment to CONTRACTOR in such amounts; such approval of payment to CONTRACTOR constitutes a representation to the OWNER of ENGINEER'S professional judgment that the work has progressed to the point indicated to the best of his knowledge, information and belief, but such approval of an application for payment to CONTRACTOR shall not be deemed as a representation by ENGINEER that ENGINEER has

made any examination to determine how or for what purpose CONTRACTOR has used the moneys paid on account of the Contract price.

2.04 ... INITIAL DETERMINATIONS. The ENGINEER initially shall determine all claims, disputes and other matters in question between the CONTRACTOR and the OWNER relating to the execution or progress of the work or the interpretation of the Contract Documents and the ENGINEER'S decision shall be rendered in writing within a reasonable time. Should the ENGINEER fail to make such decision within a reasonable time, appeal to arbitration may be taken as if his decision had been rendered against the party appealing.

2.05 ... OBJECTIONS. In the event the ENGINEER renders any decision which, in the opinion of either party hereto, is not in accordance with the meaning and intent of this contract, either party may file with the ENGINEER within thirty days his written objection to the decision, and by such action may reserve the right to submit the question so raised to arbitration as hereinafter provided.

2.06 ... LINES AND GRADES. Unless otherwise specified, all lines and grades shall be furnished by the ENGINEER or his representative. Whenever necessary, construction work shall be suspended to permit performance of 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 lines and grades will be needed. All stakes, marks, etc., shall be carefully preserved by the CONTRACTOR, and in case of careless destruction or removal by him or his employees, such stakes, marks, etc., shall be replaced at the CONTRACTOR'S expense.

2.07 ... CONTRACTOR'S DUTY AND SUPERINTENDENCE. The CONTRACTOR shall give adequate attention to the faithful prosecution and completion of this contract and shall keep on the work, during its progress, a competent superintendent and any necessary assistants. The superintendent shall represent the CONTRACTOR in his absence and all directions given to him shall be as binding as if given to the CONTRACTOR.

The CONTRACTOR is and at all times shall remain an independent contractor, solely responsible for the manner and method of completing his work under this contract, with full power and authority to select the means, method and manner of performing such work, so long as such methods do not adversely affect the completed improvements, the OWNER and ENGINEER being interested only in the result obtained and conformity of such completed improvements to the plans, specifications and contract.

Likewise, the CONTRACTOR shall be solely responsible for the safety of himself, his employees and other persons, as well as for the protection of the safety of the improvements being erected and the property of himself or any other person, as a result of his operations hereunder. Engineering construction drawings and specifications as well as any additional information concerning the work to be performed passing from or through the ENGINEER shall not be interpreted as requiring or allowing CONTRACTOR to deviate from the plans and specifications, the intent of such drawings, specifications and any other such instructions being to define with particularity the agreement of the parties as to the work the CONTRACTOR is to perform. CONTRACTOR shall be fully and completely liable, at his own expense, for design, construction, installation and use, or non-use of all items and methods incident to performance of

the contract, and for all loss, damage or injury incident thereto, either to person or property, including, without limitation, the adequacy of all temporary supports, shoring, bracing, scaffolding, machinery or equipment, safety precautions or devices, and similar items or devices used by him during construction.

Any review of work in process, or any visit or observation during construction, or any clarification of plans and specifications, by the ENGINEER, or any agent, employee, or representative of either of them, whether through personal observation on the project site or by means of approval of shop drawings for temporary construction on construction processes, or by other means or method, is agreed by the CONTRACTOR to be for the purpose of observing the extent and nature of work completed or being performed, as measured against the drawings and specifications constituting the contract, or for the purpose of enabling CONTRACTOR to more fully understand the plans and specifications so that the completed construction work will conform thereto, and shall in no way relieve the CONTRACTOR from full and complete responsibility for the proper performance of his work on the project, including but without limitation the propriety of means and methods of the CONTRACTOR in performing said contract, and the adequacy of any designs, plans or other facilities for accomplishing such performance. Deviation by the CONTRACTOR from plans and specifications that may have been in evidence during any such visitation or observation by the ENGINEER, or any of his representatives, whether called to the CONTRACTOR'S attention or not shall in no way relieve CONTRACTOR from his responsibility to complete all work in accordance with said plans and specifications.

2.08 ... CONTRACTOR'S UNDERSTANDING. It is understood and agreed that the CONTRACTOR has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this contract. No verbal agreement or conversation with any officer, agent or employee of the OWNER or ENGINEER either before or after the execution of this contract, shall affect or modify any of the terms or obligations herein contained.

2.09 ... CHARACTER OF WORKMEN. The CONTRACTOR agrees to employ only orderly and competent men, skillful in the performance of the type of work required under this contract, to do the work; and agrees that whenever the ENGINEER shall inform him in writing that any man or men on the work are, in his opinion, incompetent, unfaithful or disorderly, such man or men shall be discharged from the work and shall not again be employed on the work without the ENGINEER'S written consent.

2.10 ... 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 ENGINEER shall direct, and the sanitary conditions of the grounds in or about such structures shall at all times be maintained in a manner satisfactory to the ENGINEER.

2.11 ... SANITATION. Necessary sanitary conveniences for the use of laborers on the work, properly secluded from public observation, shall be constructed and maintained by the CONTRACTOR in such a manner and at such points as shall be approved by the ENGINEER, and their use shall be strictly enforced.

2.12 ... SHOP DRAWINGS. The CONTRACTOR shall submit to the ENGINEER, with such promptness as to cause no delay in his own work or in that of any other Contractor, four checked copies, unless otherwise specified, of all shop and/or setting drawings and schedules required for the work of the various trades, and the ENGINEER shall pass upon them with reasonable promptness, making desired corrections. The CONTRACTOR shall make any corrections required by the ENGINEER; file with him two corrected copies and furnish such other copies as may be needed. The ENGINEER'S approval of such drawings or schedules shall not relieve the CONTRACTOR from responsibility for deviations from drawings or specifications, unless he has in writing called the ENGINEER'S attention to such deviations at the time of submission, nor shall it relieve him from responsibility for errors of any sort in shop drawings or schedules. It shall be the CONTRACTOR'S responsibility to fully and completely review all shop drawings to ascertain their effect on his ability to perform the required contract work in accordance with the plans and specifications and within the contract time.

Such review by the ENGINEER shall be for the sole purpose of determining the sufficiency of said drawings or schedules to result in finished improvements in conformity with the plans and specifications, and shall not relieve the CONTRACTOR of his duty as an independent contractor as previously set forth, it being expressly understood and agreed that the ENGINEER does not assume any duty to pass upon the propriety or adequacy of such drawings or schedules, or any means or methods reflected thereby, in relation to the safety of either person or property during CONTRACTOR'S performance hereunder.

2.13 ... PRELIMINARY APPROVAL. The ENGINEER shall not have the power to waive the obligations of this contract for the furnishing by the CONTRACTOR of good material, and of his performing good work as herein described, and in full accordance with the plans and specifications. No failure or omission of the ENGINEER to discover, object to or condemn any defective work or material shall release the CONTRACTOR from the obligations to fully and properly perform the contract, including without limitations, the obligation to at once tear out, remove and properly replace the same at any time prior to final acceptance upon the discovery of said defective work or material; provided, however, that the ENGINEER shall, upon request of the CONTRACTOR, inspect and accept or reject any material furnished, and in event the material has been once accepted by the ENGINEER, such acceptance shall be binding on the OWNER, unless it can be clearly shown that such material furnished does not meet the specifications for this work.

Any questioned work may be ordered taken up or removed for re-examination, by the ENGINEER, prior to final acceptance, and if found not in accordance with the specifications for said work, all expense of removing, re-examination and replacement shall be borne by the CONTRACTOR, otherwise the expense thus incurred shall be allowed as EXTRA WORK, and shall be paid for by the OWNER; provided that, where inspection or approval is specifically required by the specifications prior to performance of certain work, should the CONTRACTOR proceed with such work without requesting prior inspection or approval he shall bear all expense of taking up, removing, and replacing this work if so directed by the ENGINEER.

2.14 ... DEFECTS AND THEIR REMEDIES. It is further agreed that if the work of any part thereof, or any material brought on the site of the work for use in the work or selected for the same, shall be deemed by the ENGINEER as unsuitable or not in conformity with the

specifications, the CONTRACTOR shall, after receipt of written notice thereof from the ENGINEER, forthwith remove such material and rebuild or otherwise remedy such work so that it shall be in full accordance with this contract.

2.15 ... CHANGES AND ALTERATIONS. The CONTRACTOR further agrees that the OWNER may make such changes and alterations as the OWNER 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 construction, without affecting the validity of this contract and the accompanying Performance and Payment 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, except as provided for unit price items under Section 5 "Measurement and Payment." If the amount of work is increased, and the 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, if any, established for such work under this contract, except as provided for unit price items under Section 5 "Measurement and Payment;" otherwise, such additional work shall be paid for as provided under Extra Work. In case the OWNER shall make such changes or alterations as shall make useless any work already done or material already furnished or used in said work, then the OWNER shall recompense the 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.

3. GENERAL OBLIGATIONS AND RESPONSIBILITIES

3.01 ... KEEPING OF PLANS AND SPECIFICATIONS ACCESSIBLE. The ENGINEER shall furnish the CONTRACTOR with an adequate and reasonable number of copies of all plans and specifications without expense to him, and the CONTRACTOR shall keep one copy of the same constantly accessible on the work, with the latest revisions noted thereon.

3.02 ... OWNERSHIP OF DRAWINGS. All drawings, specifications and copies thereof furnished by the ENGINEER shall not be reused on other work, and, with the exception of the signed contract sets, are to be returned to him on request, at the completion of the work. All models are the property of the OWNER.

3.03 ... ADEQUACY OF DESIGN. It is understood that the OWNER believes it has employed competent engineers and designers. It is, therefore, agreed that the OWNER shall be responsible for the adequacy of the design, sufficiency of the Contract Documents, the safety of the structure and the practicability of the operations of the completed project; provided the CONTRACTOR has complied with the requirements of the said Contract Documents, all approved modifications thereof, and additions and alterations thereto approved in writing by the OWNER. The burden of proof of such compliance shall be upon the CONTRACTOR to show that he has complied with the said requirements of the Contract Documents, approved modifications thereof and all approved additions and alterations thereto.

3.04 ... RIGHT OF ENTRY. The OWNER reserves the right to enter the property or location on which the works herein contracted for are to be constructed or installed, by such agent or agents as he may elect, for the purpose of inspecting the work, or for the purpose of constructing or installing such collateral work as said OWNER may desire.

3.05 ... COLLATERAL CONTRACTS. The OWNER agrees to provide by separate contract or otherwise, all labor and material essential to the completion of the work specifically excluded from this contract, in such manner as not to delay the progress of the work, or damage said CONTRACTOR, except where such delays are specifically mentioned elsewhere in the Contract Documents.

3.06 ... DISCREPANCIES AND OMISSIONS. It is further agreed that it is the intent of this contract that all work must be done and all material must be furnished in accordance with the generally accepted practice, and in the event of any discrepancies between the separate contract documents, the priority of interpretation defined under "Contract Documents" shall govern. In the event that there is still any doubt as to the meaning and intent of any portion of the contract, specifications or drawings, the ENGINEER shall define which is intended to apply to the work.

3.07 ... EQUIPMENT, MATERIALS AND CONSTRUCTION PLANT. The CONTRACTOR shall be responsible for the care, preservation, conservation, and protection of all materials, supplies, machinery, equipment, tools, apparatus, accessories, facilities, all means of construction, and any and all parts of the work, whether the CONTRACTOR has been paid, partially paid, or not paid for such work, until the entire work is completed and accepted.

3.08 ... DAMAGES. In the event the CONTRACTOR is damaged in the course of the completion of the work by the act, neglect, omission, mistake or default of the OWNER, or of the ENGINEER, or of any other CONTRACTOR employed by the OWNER upon the work, thereby causing loss to the CONTRACTOR, the OWNER agrees that he will reimburse the CONTRACTOR for such loss. In the event the OWNER is damaged in the course of the work by the act, negligence, omission, mistake or default of the CONTRACTOR, or should the CONTRACTOR unreasonably delay the progress of the work being done by others on the job so as to cause loss for which the OWNER becomes liable, then the CONTRACTOR shall reimburse the OWNER for such loss.

3.09 ... PROTECTION AGAINST ACCIDENT TO EMPLOYEES AND THE PUBLIC. The CONTRACTOR shall at all times exercise reasonable precautions for the safety of employees and others on or near the work and shall comply with all applicable provisions of Federal, State, and Municipal safety laws and building and construction codes. All machinery and equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America except where incompatible with Federal, State, or Municipal laws or regulations. The CONTRACTOR shall provide such machinery guards, safe walkways, ladders, bridges, gangplanks, and other safety devices. The safety precautions actually taken and their adequacy shall be the sole responsibility of the CONTRACTOR, acting at his discretion as an independent contractor.

3.10 ... PERFORMANCE AND PAYMENT BONDS. Unless otherwise specified, it is further agreed by the parties to this Contract that the CONTRACTOR will execute separate performance and payment bonds, each in the sum of one hundred (100) percent of the total contract price, in standard forms for this purpose, guaranteeing faithful performance of the work and the fulfillment of any guarantees required, and further guaranteeing payment to all persons supplying labor and materials or furnishing him any equipment in the execution of the Contract, and it is agreed that this contract shall not be in effect until such performance and payment bonds are furnished and approved by the OWNER.

Unless otherwise approved in writing by the OWNER, the surety company underwriting the bonds shall be acceptable according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States.

Unless otherwise specified, the cost of the premium for the performance and payment bonds shall be included in the CONTRACTOR'S proposal.

3.11 ... LOSSES FROM NATURAL CAUSES. Unless otherwise specified, all loss or damage to the CONTRACTOR arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the CONTRACTOR at his own cost and expense.

3.12 ... PROTECTION OF ADJOINING PROPERTY. The said CONTRACTOR shall take proper means to protect the adjacent or adjoining property or properties in any way encountered, which might be injured or seriously affected by any process of construction to be undertaken under this Agreement, from any damage or injury by reason of said process of construction; and he shall be liable for any and all claims for such damage on account of his failure to fully protect all adjoining property. The CONTRACTOR agrees to indemnify, save and hold harmless the OWNER and ENGINEER against any claim or claims for damages due to any injury to any adjacent or adjoining property, arising or growing out of the performance of the contract; but any such indemnity shall not apply to any claim of any kind arising out of the existence or character of the work.

3.13 ... PROTECTION AGAINST CLAIMS OF SUB-CONTRACTORS, LABORERS, MATERIALMEN AND FURNISHERS OF MACHINERY, EQUIPMENT AND SUPPLIES. The CONTRACTOR agrees that he will indemnify and save the OWNER and ENGINEER harmless from all claims growing out of the lawful demands of sub-contractors, laborers, workmen, mechanics, materialmen and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. When so desired by the OWNER, the CONTRACTOR shall furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived. If the CONTRACTOR fails so to do, then the OWNER may at the option of the CONTRACTOR either pay directly any unpaid bills, of which the OWNER has written notice, or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payments to the CONTRACTOR shall be resumed in full, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligation upon the OWNER by either the CONTRACTOR or his Surety.

3.14 ... PROTECTION AGAINST ROYALTIES OR PATENTED INVENTION.

The CONTRACTOR shall pay all royalties and license fees, and shall provide for the use of any design, device, material or process covered by letters patent or copyright by suitable legal agreement with the patentee or owner. The CONTRACTOR shall defend all suits or claims for infringement of any patent or copyright rights and shall indemnify and save the OWNER and ENGINEER harmless from any loss on account thereof, except that the OWNER shall defend all such suits and claims and shall be responsible for all such loss when a particular design, device, material or process or the product of a particular manufacturer or manufacturers is specified or required by the OWNER; provided however, if choice of alternate design, device, material or process is allowed to the CONTRACTOR, the CONTRACTOR shall indemnify and save OWNER harmless from any loss on account thereof. If the material or process specified or required by the OWNER is an infringement, the CONTRACTOR shall be responsible for such loss unless he promptly gives such information the OWNER.

3.15 ... LAWS AND ORDINANCES. The CONTRACTOR shall at all times observe and comply with all Federal, State and local laws, ordinances and regulations, which in any manner affect the contract or the work, and shall indemnify and save harmless the OWNER and ENGINEER against any claim arising from the violation of any such laws, ordinances, and regulations whether by the CONTRACTOR or his employees, except where such violations are called for by the provisions of the Contract Documents. If the CONTRACTOR observes that the plans and specifications are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work. If the CONTRACTOR performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the ENGINEER, he shall bear all costs arising therefrom. In case the OWNER is a body politic and corporate, the law from which it derives its powers, insofar as the same regulates the objects for which, or the manner in which, or the conditions under which the OWNER may enter into contract, shall be controlling, and shall be considered as part of this contract, to the same effect as though embodied herein.

3.16 ... ASSIGNMENT AND SUBLETTING. The CONTRACTOR further agrees that he will retain personal control and will give his personal attention to the fulfillment of this contract and that he will not assign by Power of Attorney, or otherwise, or sublet said contract without the written consent of the ENGINEER, and that no part or feature of the work will be sublet to anyone objectionable to the ENGINEER or the OWNER. The CONTRACTOR further agrees that the subletting of any portion or feature of the work, or materials required in the performance of this contract, shall not relieve the CONTRACTOR from his full obligations to the OWNER, as provided by this Agreement.

3.17 ... INDEMNIFICATION. The CONTRACTOR shall defend, indemnify and hold harmless the OWNER and the ENGINEER and their respective officers, agents and employees, from and against all damages, claims, losses, demands, suits, judgments and costs, including reasonable attorneys' fees and expenses, arising out of or resulting from the performance of the work, provided that any such damages, claim, loss, demand, suit, judgment, cost or expense:

-(1) . . . is attributable to bodily injury, sickness, disease or death or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom; and

.....(2) . . . is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any one of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

The obligation of the CONTRACTOR under this Paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, drawings, reports, surveys, Change Orders, designs or specifications, or the giving of or the failure to give directions or instructions by the ENGINEER, his agents or employees, provided such giving or failure to give is the primary cause of the injury or damage.

3.18 ... INSURANCE. The CONTRACTOR at his own expense shall purchase, maintain and keep in force such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S operations under the Contract, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.....(1) . . . Workmen's compensation claims, disability benefits and other similar employee benefit acts;

.....(2) . . . Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees, and claims insured by usual bodily injury liability coverages;

.....(3) . . . Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees, and claims insured by usual bodily injury liability coverages; and

.....(4) . . . Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

3.18.1 ... CERTIFICATE OF INSURANCE. Before commencing any of the work, CONTRACTOR shall file with the OWNER valid Certificates of Insurance acceptable to the OWNER and the ENGINEER. Such Certificates shall contain a provision that coverages afforded under the policies will not be canceled until at least fifteen days' prior written notice has been given to the OWNER.

The CONTRACTOR shall also file with the OWNER valid Certificates of Insurance covering all sub-contractors.

4. PROSECUTION AND PROGRESS

4.01 ... TIME AND ORDER OF COMPLETION. It is the meaning and intent of this contract, unless otherwise herein specifically provided, that the CONTRACTOR shall be allowed to prosecute his work at such times and seasons, in such order of precedence, and in such manner as shall be most conducive to economy of construction: provided, however, that the

order and the time of prosecution shall be such that the work shall be substantially completed as a whole and in part, in accordance with this contract, the plans and specifications, and within the time of completion designated in the Proposal; provided, also, that when the OWNER is having other work done, either by contract or by his own force, the ENGINEER may direct the time and manner of constructing the work done under this contract, so that conflict will be avoided and the construction of the various works being done for the OWNER shall be harmonized.

The CONTRACTOR shall submit, at such times as may reasonably be requested by the ENGINEER schedules which shall show the order in which the CONTRACTOR proposes to carry on the work, with dates at which the CONTRACTOR will start the several parts of the work, and estimated dates of completion of the several parts.

4.02 ... EXTENSION OF TIME. Should the CONTRACTOR be delayed in the completion of the work by any act or neglect of the OWNER or ENGINEER, or of any employee of either, or by other contractors employed by the OWNER, or by changes ordered in the work, or by strikes, lockouts, fires, and unusual delays by common carriers, or unavoidable cause or causes beyond the CONTRACTOR'S control, or by any cause which the ENGINEER shall decide justifies the delay, then an extension of time shall be allowed for completing the work, sufficient to compensate for the delay, the amount of the extension to be determined by the ENGINEER, provided, however, that the CONTRACTOR shall give the ENGINEER prompt notice in writing of the cause of such delay.

4.03 ... HINDRANCES AND DELAYS. No claims shall be made by the CONTRACTOR for damages resulting from hindrances or delays from any cause (except where the work is stopped by order of the OWNER) during the progress of any portion of the work embraced in this contract. In case said work shall be stopped by the act of the OWNER, then such expense as in the judgment of the ENGINEER is caused by such stoppage of said work shall be paid by the OWNER to the CONTRACTOR.

5. MEASUREMENT AND PAYMENT

5.01 ... QUANTITIES AND MEASUREMENTS. No extra or customary measurements of any kind will be allowed, but the actual measured and/or computed length, area, solid contents, number and weight only shall be considered, unless specifically provided.

5.02 ... ESTIMATED QUANTITIES. This agreement, including the specifications, plans and estimate, is intended to show clearly all work to be done and material to be furnished hereunder. Where the estimated quantities are shown for the various classes of work to be done and material to be furnished under this contract, they are approximate and are to be used only 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 where the basis for payment under this contract is the unit price method, payment shall be for the actual amount of such work done and the material furnished.

Where payment is based on the unit price method, the CONTRACTOR agrees that he 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 proposal; provided, however, that in case the actual quantity of any major item should become as much as 20% more than, or 20% less than the estimated or contemplated quantity for such items, then either party to this Agreement, upon demand, shall be entitled to a revised consideration upon the portion of the work above or below 20% of the estimated quantity.

A "Major Item" shall be construed to be any individual bid item incurred in the proposal that has a total cost equal to or greater than five (5) percent of the total contract cost, computed on the basis of the proposal quantities and the contract unit prices.

Any revised consideration is to be determined by agreement between the parties, otherwise by the terms of this Agreement, as provided under "Extra Work."

5.03 ... PRICE OF WORK. In consideration of the furnishing of all the necessary labor, equipment and material, and the completion of all work by the CONTRACTOR, and on the completion of all work and of the delivery of all material embraced in this Contract in full conformity with the specifications and stipulations herein contained, the OWNER agrees to pay the CONTRACTOR the prices set forth in the Proposal hereto attached, which has been made a part of this contract. The CONTRACTOR hereby agrees to receive such prices in full for furnishing all material and all labor required for the aforesaid work, also for all expense incurred by him, and for well and truly performing the same and the whole thereof in the manner and according to this Agreement.

5.04 ... PARTIAL PAYMENTS. On or before the 10th day of each month, the CONTRACTOR shall prepare and submit to the ENGINEER for approval or modification a statement showing as completely as practicable the total value of the work done by the CONTRACTOR up to and including the last day of the preceding month; said statement shall also include the value of all sound materials delivered on the site of the work that are to be fabricated into the work.

The OWNER shall then pay the CONTRACTOR on or before the 15th day of the current month the total amount of the approved statement, less 10 percent of the amount thereof, which 10 percent shall be retained until final payment, and further less all previous payments and all further sums that may be retained by the OWNER under the terms of this Agreement. It is understood, however, that in case the whole work be near to completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the CONTRACTOR, the OWNER may -- upon recommendation of the ENGINEER -- pay a reasonable and equitable portion of the retained percentage to the CONTRACTOR, or the CONTRACTOR at the OWNER'S option, may be relieved of the obligation to fully complete the work and, thereupon, the CONTRACTOR shall receive payment of the balance due him under the contract subject only to the conditions stated under "Final Payment".

5.05 ... USE OF COMPLETED PORTIONS. The OWNER shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work or such portions may not have expired but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the work, the CONTRACTOR shall be entitled to such extra compensation, or extension of time, or both, as the ENGINEER may determine.

The CONTRACTOR shall notify the ENGINEER when, in the CONTRACTOR'S opinion, the contract is "substantially completed" and when so notifying the ENGINEER, the CONTRACTOR shall furnish to the ENGINEER in writing a detailed list of unfinished work. The ENGINEER will review the CONTRACTOR'S list of unfinished work and will add thereto such items as the CONTRACTOR has failed to include. The "substantial completion" of the structure or facility shall not excuse the CONTRACTOR from performing all of the work undertaken, whether of a minor or major nature, and thereby completing the structure or facility in accordance with the Contract Documents.

5.06 ... FINAL COMPLETION AND ACCEPTANCE. Within ten (10) days after the CONTRACTOR has given the ENGINEER written notice that the work has been completed, or substantially completed, the ENGINEER and the OWNER shall inspect the work and within said time, if the work be found to be completed or substantially completed in accordance with the Contract Documents, the ENGINEER shall issue to the OWNER and the CONTRACTOR his Certificate of Completion, and thereupon it shall be the duty of the OWNER within ten (10) days to issue a Certificate of Acceptance of the work to the CONTRACTOR or to advise the CONTRACTOR in writing of the reason for non-acceptance.

5.07 ... FINAL PAYMENT. Upon the issuance of the Certificate of Completion, the ENGINEER shall proceed to make final measurements and prepare final statement of the value of all work performed and materials furnished under the terms of the Agreement and shall certify same to the OWNER, who shall pay to the CONTRACTOR on or after the 30th day, and before the 35th day, after the date of the Certificate of Completion, the balance due the CONTRACTOR under the terms of this Agreement, provided he has fully performed his contractual obligations under the terms of this contract; and said payment shall become due in any event upon said performance by the CONTRACTOR. Neither the Certificate of Acceptance nor the final payment, nor any provision in the Contract Documents, shall relieve the CONTRACTOR of the obligation for fulfillment of any warranty which may be required.

5.08 ... PAYMENTS WITHHELD. The OWNER may, on account of subsequently discovered evidence, withhold or nullify the whole or part of any certificate to such extent as may be necessary to protect himself from loss on account of:

-(a)Defective work not remedied
-(b)Claims filed or reasonable evidence indicating probable filing of claims.
-(c)Failure of the CONTRACTOR to make payments properly to subcontractors or for material or labor.
-(d)Damage to another contractor.
-(e)Reasonable doubt that the work can be completed for the unpaid balance of the contract amount.
-(f)Reasonable indication that the work will not be completed within the contract time.

When the above grounds are removed or the CONTRACTOR provides a Surety Bond satisfactory to the OWNER, which will protect the OWNER in the amount withheld, payment shall be made for amounts withheld because of them.

5.09 ... DELAYED PAYMENTS. Should the OWNER fail to make payment to the CONTRACTOR of the sum named in any partial or final statement, when payment is due, then the OWNER shall pay to the CONTRACTOR, in addition to the sum shown as due by such statement, interest thereon at the rate of six (6) percent per annum, unless otherwise specified, from date due as provided under "Partial Payments" and "Final Payments", until fully paid, which shall fully liquidate any injury to the CONTRACTOR growing out of such delay in payment, but the right is expressly reversed to the CONTRACTOR in the event payments be not promptly made, as provided under "Partial Payments", to at any time thereafter treat the contract as abandoned by the OWNER and recover compensation, as provided under "Abandonment of Contract", unless such payments are withheld in accordance with the provisions of "Payments Withheld".

6. EXTRA WORK AND CLAIMS

6.01 ... CHANGE ORDERS. Without invalidating this Agreement, the OWNER may, at any time or from time to time, order additions, deletions or revisions to the work; such changes will be authorized by Change Order to be prepared by the ENGINEER for execution by the OWNER and the CONTRACTOR. The Change Order shall set forth the basis for any change in contract price, as hereinafter set forth for Extra Work, and any change in contract time which may result from the change.

In the event the CONTRACTOR shall refuse to execute a Change Order which has been prepared by the ENGINEER and executed by the OWNER, the ENGINEER may in writing instruct the CONTRACTOR to proceed with the work as set forth in the Change Order and the CONTRACTOR may make claim against the OWNER for Extra Work involved therein, as hereinafter provided.

6.02 ... MINOR CHANGES. The ENGINEER may authorize minor changes in the work not inconsistent with the overall intent of the Contract Documents and not involving an increase in Contract Price. If the CONTRACTOR believes that any minor change or alteration authorized by the ENGINEER involves Extra Work and entitles him to an increase in the Contract Price, the CONTRACTOR shall make written request to the ENGINEER for a written Field Order.

In such case, the CONTRACTOR by copy of his communication to the ENGINEER or otherwise in writing shall advise the OWNER of his request to the ENGINEER for a written Field Order and that the work involved may result in an increase in the Contract Price.

Any request by the CONTRACTOR for a change in Contract Price shall be made prior to beginning the work covered by the proposed change.

6.03 ... EXTRA WORK. It is agreed that the basis of compensation to the CONTRACTOR for work either added or deleted by a Change Order for which a claim for Extra Work is made 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) be agreed upon before the Extra work is commenced, then the 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 to the CONTRACTOR of all workmen, such as foreman, timekeepers, mechanics and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment, for the time actually employed or used on such Extra Work, plus actual transportation charges necessarily incurred, 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 rateable proportion of premiums on Performance and Payment Bonds 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 or directed by the OWNER or by them agreed to. The ENGINEER may direct the form in which accounts of the “actual field cost” shall be kept and the records of these accounts shall be made available to the ENGINEER. The ENGINEER or OWNER 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 the CONTRACTOR. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using 100 percent, unless otherwise specified, of the latest schedule of Equipment Ownership Expense adopted by the Associated 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 the 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 the 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 ENGINEER. In case any orders or instructions, either oral or written, appear to the CONTRACTOR to involve Extra Work for which he should receive compensation or an adjustment in the construction time, he shall make written request to the ENGINEER for written order authorizing such 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 ENGINEER insists upon its performance, the CONTRACTOR shall proceed with the work after making written request for written order and shall keep an accurate account of the “actual field cost” thereof, as provided under Method (C). The CONTRACTOR will thereby preserve the right to submit the matter of payment to arbitration, as herein below provided.

6.04 ... TIME OF FILING CLAIMS. It is further agreed by both parties hereto that all questions of dispute or adjustment presented by the CONTRACTOR shall be in writing and filed with the ENGINEER within thirty (30) days after the ENGINEER has given any directions, order or instruction to which the CONTRACTOR desires to take exception. The ENGINEER shall reply within thirty (30) days to such written exceptions by the CONTRACTOR and render his final decision in writing. In case the CONTRACTOR should appeal from the ENGINEER’S decision, any demand for arbitration shall be filed with the ENGINEER and the OWNER in writing within ten (10) days after the date of delivery to CONTRACTOR of the ENGINEER’S

final decision. It is further agreed that final acceptance of the work by the OWNER and the acceptance by the CONTRACTOR of the final payment shall be a bar to any claims by either party, except where noted otherwise in the Contract Documents.

6.05 ... ARBITRATION. All questions of dispute under this Agreement shall be submitted to arbitration at the request of either party to the dispute. The parties may agree upon one arbiter, otherwise, there shall be three, one named in writing by each party, and the third chosen by the two arbiters so selected; or if the arbiters fail to select a third within ten (10) days, he shall be chosen by a District Judge serving the County in which the major portion of the project is located, unless otherwise specified. Should the party demanding arbitration fail to name an arbiter within ten (10) days of the demand, his right to arbitrate shall lapse, and the decision of the ENGINEER shall be final and binding on him. Should the other party fail to choose an arbiter within ten (10) days, the ENGINEER shall appoint such arbiter. Should either party refuse or neglect to supply the arbiters with any papers or information demanded in writing, the arbiters are empowered by both parties to take ex parte proceedings.

The arbiters shall act with promptness. The decision of any two shall be binding on both parties to the contract. The decision of the arbiters upon any question submitted to arbitration under this contract shall be a condition precedent to any right of legal action. The decision of the arbiter or arbiters may be filed in court to carry it into effect.

The arbiters, if they deem the case demands it, are authorized to award the party whose contention is sustained, such sums as they deem proper for the time, expense and trouble incident to the appeal, and if the appeal was taken without reasonable cause, they may award damages for any delay occasioned thereby. The arbiters shall fix their own compensation, unless otherwise provided by agreement, and shall assess the cost and charges of the arbitration upon either or both parties. The award of the arbiters must be made in writing.

7. ABANDONMENT OF CONTRACT

7.01 ... ABANDONMENT BY CONTRACTOR. In case the CONTRACTOR should abandon and fail or refuse to resume work within ten (10) days after written notification from the OWNER, or the ENGINEER, or if the CONTRACTOR fails to comply with the orders of the ENGINEER, when such orders are consistent with the Contract Documents, then, and in that case, where performance and payment bonds exist, the Sureties on these bonds shall be notified in writing and directed to complete the work, and a copy of said notice shall be notified in writing and directed to complete the work, and a copy of said notice shall be delivered to the CONTRACTOR.

After receiving said notice of abandonment, the CONTRACTOR shall not remove from the work any machinery, equipment, tools, materials or supplies then on the job; but the same, together with any materials and equipment under contract for the work, may be held for use on the work by the OWNER or Surety on the performance bond, or another contractor in completion of the work; and the CONTRACTOR shall not receive any rental or credit therefor (except when used in Work and Claims), it being understood that the use of such equipment and materials will ultimately reduce the cost to complete the work and be reflected in the final settlement.

Where there is no performance bond provided or in case the Surety should fail to commence compliance with the notice for completion herein before provided for, within ten (10) days after service of such notice, then the OWNER may provide for completion of the work in either of the following elective manners:

7.01.1 The OWNER may thereupon employ such force of men and use such machinery, equipment, tools, materials and supplies as said OWNER may deem necessary to complete the work and charge the expense of such labor, machinery, equipment, tools, materials and supplies to said CONTRACTOR, and expense so charged shall be deducted and paid by the OWNER out of such moneys as may be due, or that may thereafter at any time become due to the CONTRACTOR under and by virtue of this Agreement. In case such expense is less than the sum which would have been payable under this contract, if the same had been completed by the CONTRACTOR, then said CONTRACTOR shall receive the difference. In case such expense is greater than the sum which would have been payable under this contract, if the same had been completed by said CONTRACTOR, then the CONTRACTOR and/or his Surety shall pay the amount of such excess to the OWNER; or

7.01.2 The OWNER under sealed bids, after five (5) days' notice published one or more times in a newspaper having general circulation in the county of the location of the work, may let the contract for the completion of the work under substantially the same terms and conditions which are provided in this contract. In case any increase in cost to the OWNER under the new contract as compared to what would have been the cost under this contract, such increase shall be charged to the CONTRACTOR and Surety shall be and remain bound therefor. However, should the cost to complete any such contract prove to be less than what would have been the cost to complete under this contract, the CONTRACTOR and/or his Surety shall be credited therewith.

When the work shall have been substantially completed the CONTRACTOR and his Surety shall be so notified and Certificates of Completion and Acceptance, as provided in Paragraph 5.06 hereinabove, shall be issued. A complete itemized statement of the contract accounts, certified to by the ENGINEER as being correct, shall then be prepared and delivered to the CONTRACTOR and his Surety, whereupon the CONTRACTOR and/or his Surety, or the OWNER as the case may be, shall pay the balance due as reflected by said statement, within fifteen (15) days after the date of such completion.

In the event the statement of accounts shows that the cost to complete the work is less than that which would have been the cost to the OWNER had the work been completed by the CONTRACTOR under the terms of this contract; or when the CONTRACTOR and/or his Surety shall pay the balance shown to be due by them to the OWNER, then all machinery, equipment, tools, materials or supplies left on the site of the work shall be turned over to the CONTRACTOR and/or his Surety. Should the cost to complete the work exceed the contract price, and the CONTRACTOR and/or his Surety fail to pay the amount due the OWNER within the time designated hereinabove, and there remains any machinery, equipment, tools materials or supplies on the site of the work, notice thereof, together with an itemized list of such equipment and materials shall be mailed to the CONTRACTOR and his Surety at the respective addresses designated in this contract, provided, however, that actual written notice given in any manner will satisfy this condition. After mailing, or other giving of such notice, such property shall be held at the risk of the CONTRACTOR and his Surety subject only to the duty of the OWNER to

exercise ordinary care to protect such property. After fifteen (15) days from the date of said notice, the OWNER may sell such machinery, equipment, tools, materials or supplies and apply the net sum derived from such sale to the credit of the CONTRACTOR and his Surety. Such sale may be made at either public or private sale, with or without notice, as the OWNER may elect. The OWNER shall release any machinery, equipment, tools, materials, or supplies, which remain on the work, and belong to persons other than the CONTRACTOR or his Surety, to their proper owners. The books on all operations provided herein shall be open to the CONTRACTOR and his Surety.

7.02 ... ABANDONMENT BY OWNER. In case the OWNER shall fail to comply with the terms of this contract, and should fail or refuse to comply with said terms within ten (10) days after written notification by the CONTRACTOR, then the CONTRACTOR may suspend or wholly abandon the work, and may remove therefrom all machinery, tools and equipment, and all materials on the site of work that have not been included in payments to the CONTRACTOR and have not been wrought into the work. And thereupon the ENGINEER shall make an estimate of the total amount earned by the CONTRACTOR, which estimate shall include the value of all work actually completed by said CONTRACTOR (at the prices stated in the attached proposal where unit prices are used), the value of all partially completed work at a fair and equitable price, and the amount of all Extra Work performed at the prices agreed upon, or provided for by the terms of this contract, and a reasonable sum to cover the cost of any provisions made by the CONTRACTOR to carry the whole work to completion and which cannot be utilized. The ENGINEER shall then make a final statement of the balance due the CONTRACTOR by deducting from the above estimate all previous payments by the OWNER and all other sums that may be retained by the OWNER under the terms of this Agreement and shall certify same to the OWNER who shall pay to the CONTRACTOR on or before thirty (30) days after the date of the notification by the CONTRACTOR the balance shown by said final statement as due the CONTRACTOR, under the terms of this Agreement.

WAGE DECISION

01/05/2024 TX20240023

"General Decision Number: TX20240023 01/05/2024

Superseded General Decision Number: TX20230023

State: Texas

Construction Types: Heavy (Sewer/Water Treating Plant and Sewer/Incid. to Hwy.)

Counties: Bell, Bosque, Coryell, Falls, Freestone, Hamilton, Hill, Lampasas, Leon, Limestone, McLennan, Milam, Mills, Navarro, Robertson and Williamson Counties in Texas.

WATER & SEWAGE TREATMENT PLANTS AND LIFT PUMP STATIONS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

| | |
|---|---|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: | . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 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 2024. |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: | . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024. |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
0 01/05/2024

SUTX1990-003 02/09/1990

| | Rates | Fringes |
|--|-------------|------------|
| CARPENTER..... | \$ 9.00 ** | |
| CEMENT MASON/CONCRETE FINISHER... | \$ 8.00 ** | |
| ELECTRICIAN..... | \$ 13.45 ** | .80+8 1/2% |
| Form Builder..... | \$ 7.25 ** | |
| Form Setter..... | \$ 7.25 ** | |
| LABORER..... | \$ 7.25 ** | |
| Pipelayer..... | \$ 7.50 ** | |
| Power equipment operators: | | |
| Bulldozers..... | \$ 7.25 ** | |
| Cranes, Clamshells, Backhoes, Derricks, Dragline, Shovels..... | \$ 7.25 ** | |
| Front End Loaders..... | \$ 10.00 ** | |
| Scrapers..... | \$ 7.25 ** | |
| Steel Setter..... | \$ 9.50 ** | |
| Steel Worker..... | \$ 7.25 ** | |
| Truck drivers: | | |
| Tandem Axles..... | \$ 7.25 ** | |
| Transit Mix..... | \$ 7.25 ** | |
| Utility Laborer..... | \$ 7.25 ** | |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours

they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the 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 National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION"

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

SECTION G01 - PIPE EXCAVATION, TRENCHING, EMBEDMENT, ENCASEMENT AND BACKFILLING

G01.01 DESCRIPTION OF WORK

- A. This specification covers the requirements for furnishing all labor, equipment and material and performing all work necessary, in connection with excavation, trenching, embedment, encasement, and backfilling, for the installation of water lines in this project.

G01.02 EXCAVATION

A. General

1. Excavation shall include the removal of any trees, stumps, brush, debris, or other obstacles that may obstruct the line of work, and the excavation and removal of all earth, rock or other materials to the extent necessary to install the pipe and appurtenances in conformance with the line and grades shown in the plans, or as specified.

B. Topsoil

1. Topsoil and grass shall be stripped a minimum of twelve inches over the trench excavation site and stockpiled separately prior to start of excavation.
2. After the trench has been backfilled, topsoil shall be replaced to the extent that rock, excavated from the trench, shall be completely covered and the area returned to its original condition.

C. Maximum and Minimum Width of Trenches

1. The sides of all trenches shall be cut as nearly vertical as possible. Unless otherwise specified on the plans, the minimum width of trench in which the pipe may be installed shall not be less than eighteen (18) inches plus the outside diameter of the pipe, and the maximum width shall not be more than twenty-four (24) inches plus the outside diameter of the pipe, measured at an elevation in the trench which is twelve (12) inches above the top of the pipe when it is laid to grade.
2. Wherever the prescribed maximum trench width is exceeded, the Contractor shall use the class embedment or encasement required by the Engineer to provide the load carrying capacity for the trench width as actually cut, and the additional cost incurred will be borne by the Contractor.

D. Sheeting and Shoring

1. Sheeting and/or shoring shall be provided in accordance with the Contractor's Trench Safety Plan, or where required for other reasons in caving ground, or in wet, saturated or flowing materials, the sides of all trenches and excavations shall be adequately sheeted and braced so as to maintain the excavation free from slides or cave-ins.

E. Dewatering Excavations

1. There shall be sufficient pumping equipment, in good working order, available at all times to remove any water that accumulates in excavations. Where the pipeline crosses natural drainage channels, the work shall be conducted in such a manner that unnecessary damage or delays in the prosecution of the work will be prevented. Provisions shall be made for the satisfactory disposal of surface water pumped so as to prevent damage to public or private property. The Contractor shall be responsible for maintaining safe working conditions and suitable construction techniques.

F. Disposal of Excavated Materials

1. Suitable excavated materials may be piled adjacent to the work to be used for backfilling. Excavated materials unsuitable for backfilling, or in excess of that required for backfilling, shall be disposed of by the Contractor. Desirable topsoil, sod, etc., shall be carefully removed and piled separately adjacent to the work when required. Excavated materials shall be handled at all times in such a manner as to cause a minimum of inconvenience to public travel. Suitable selected bedding or backfill material shall be provided at no additional cost to the Owner. The Contractor shall indemnify and hold harmless the Owner and all of his officers, agents and employees from all suits, actions, or claims of any character resulting from his arrangements for and disposal of excavated materials.

G. Trench Depth

1. Subgrade in Earth

- a. Where a firm and stable foundation for the pipe can be obtained in the natural soil and where special embedment or encasement is not shown on the plans or specified herein, the bottom of the trench shall be excavated to a depth of not less than three (3) inches below the bottom of the pipe, one (1) inch below bell, and brought to true subgrade elevation with the embedment or encasement shown in the plans. Bell holes shall be accurately located and shall be of sufficient depth to allow ample room for making the joint and to relieve the pipe bell of all load.
- b. Where special embedment or encasement is shown on the plans, the subgrade shall be excavated to the section shown prior to placing the embedment or encasement.

2. Subgrade in Rock

- a. If the bottom of the excavation for the pipeline is found to be in rock or other hard material that cannot be excavated to a true subgrade and shaped to provide uniform bearing for the pipe barrel, the rock or other material shall be removed to a depth not less than three (3) inches below subgrade and the bottom of the trench brought to true subgrade elevation with the embedment or encasement shown in the plans. When constructing in expansive rock formations, the ditch shall be allowed to remain open for at least 24 hours to allow rock expansion prior to the placement of the pipe.

H. Soft Subgrade

1. Where soft or spongy material is encountered in the excavation at subgrade level, it shall be removed to such a depth that by replacing the unsuitable material with tamped gravel, a firm and stable foundation can be secured.
2. Gravel used shall be washed gravel or crushed stone and may fit any gradation of size up to three (3) inches. The particular gradation shall take into consideration the actual field conditions. Gravel with sharp edges will not be allowed.

I. Excavated Materials

1. Excavated materials shall be piled adjacent to the work to be used for backfilling as required. After the trench has been refilled, topsoil shall be replaced to the extent that rock excavated from the trench will be completely covered and the area is returned to its original condition.
2. Where required on the plans or when otherwise specified, desirable topsoil shall be piled separately in a careful manner and replaced in its original position.

J. Damage to Existing Utilities

1. Where existing utilities are damaged, they shall be replaced immediately with material equal to or better than the existing material. Such work shall be at the entire expense of the Contractor.

G01.03 EMBEDMENT AND ENCASEMENT

A. General

1. Embedment shall be as required in the plans. All embedment materials shall be free of grass, roots, vegetation, and other deleterious materials. Embedment details are shown on the Plans.
2. When the pipe has been checked for line and grade, the trench shall be backfilled with enough granular material or concrete on both sides to hold the pipe firmly in position. When placing granular material or concrete around the pipe, care shall be taken to fill all voids around the pipe. The pipe shall not be floated. The embedment or encasement material shall be carefully tamped to assure uniform pipe support and density.

B. Sand Embedment

Refer to City of Belton Standard Details.

C. Crushed Stone for Embedment

Refer to City of Belton Standard Details.

Pipe shall be bedded in accordance with the standard details shown in the plans and with the class of embedment specified on the plan-profile sheets. Crushed stone embedment shall be evenly spread to grade. Bell holes shall be dug to allow placement of the joint wrapper. After the pipe has been laid, embedment material shall be placed adjacent to the haunches of the pipe as shown in the Detail Sheet. Whenever the prescribed maximum trench width is exceeded, the Contractor shall utilize at his own expense the class of embedment or encasement required to provide the load-carrying capacity for the trench width as actually cut, as approved by the Engineer.

D. Embedment

NOT USED

E. Concrete Embedment and Encasement

1. Concrete embedment and encasement and cap shall have a minimum compressive strength of 2,000 pounds per square inch at 28 days.
2. Concrete shall be mixed to obtain a slump of not less than one (1) inch or more than four (4) inches.
3. After pipe joints are completed, the voids at the joints in the embedment section shall be filled with concrete, and the embedment shall be brought up to proper grade. Where concrete is placed over or along the pipe, it shall be placed in such manner as not to damage or injure the joints or displace the pipe. Care shall be taken in the placement of concrete to assure that a uniform pad, free of voids and of specified thickness, is constructed under the entire pipe section.
4. A cleavage line between the base concrete and the side embedment concrete will not be allowed. Backfilling shall be done in a careful manner and at such time, after concrete embedment or encasement has been placed, as not to damage the concrete in any way.
5. 2,000 psi Concrete shall be used and shall be paid for at the unit contract price per cubic yard for 2,000 psi Concrete actually placed and approved by the Engineer.

G01.04 BACKFILLING

A. General

1. Backfilling shall include the refilling and consolidating of the fill in trenches and excavations up to the surrounding ground surface or road grade at crossings. No backfill shall be placed until the Owner or Owner's Representative has observed the trench and pipe in place and has authorized the placing of backfill.
2. Backfilling shall be done with select material or concrete backfill as described hereafter and shown on the plans. No material of a perishable, spongy or otherwise unsuitable nature shall be used in backfilling.

B. Select Backfill Material

1. Unless otherwise shown on the plans, or approved by the Engineer, select material shall be used for backfill. Select materials shall be placed over the top of the embedment/encasement material, where designated on the plans and as shown in embedment details. Select material shall consist of a free-flowing material like sand or mixed sand and gravel, free from lumps, large stones, clay, debris, and organic materials. Select material may also include rock cuttings from a ditching machine (preferably wheel-type), provided that the largest chips shall have an average dimension in one place less than one (1) inch, and no dimension greater than two (2) inches.
2. If approved by the Engineer, good, sound excavated materials may be used as select material for backfill over the pipe. Good, sound excavated materials are defined as gravel, sandy loam or loam, free from excessive clay and having a Plasticity Index less than 22. Select material shall not have rocks with an average dimension larger than two (2) inches.
3. It shall be the full responsibility of the Contractor to explore the project and subsurface materials to determine if the trench excavation will be suitable for use as select materials and to follow as closely as possible this specification to insure a good, sound pipeline when completed.

C. Concrete Backfill

1. Where shown on the plans, concrete backfill shall consist of selected rock material or granular sand material mixed with a minimum of three sacks of cement per cubic yard. All material shall be mixed in a concrete mixer or transit mixed unless approved otherwise by the Owner.

D. Backfilling Operation

1. After the pipe and embedment have been placed to twelve (12) inches above the top of the pipe, the method of backfilling pipe trenches shall be as follows: Select material shall be carefully placed in layers of not more than six (6) inches in loose thickness. Select material shall consist of a free-flowing material like sand, free from lumps, large stones, clay, debris, and organic materials or excavated material from the trench which has a maximum dimension of two (2) inches, processed excavated material from the trench which has a maximum particle dimension of two (2) inches. Rock cuttings from a wheel-type ditching machine having an average dimension in one place of less than one (1) inch and no dimension greater than three (3) inches and shall be free from lumps, large stone and organic materials. The select material shall then be compacted with mechanical compactors. Select backfill material shall be compacted to 95% density ASTM D698 unless otherwise specified.

2. All trenches under proposed or existing roadways, driveways and sidewalks, paved waterways with concrete base, gravel roadways, and roadways with gravel base and asphalt surface, shall be backfilled by hand or mechanically tamping selected materials in six to eight inch layers to a minimum compaction of 95 percent ASTM D6904 at optimum moisture density.
3. After the trench has been refilled, topsoil shall be replaced to the extent that rock excavated from the trench will be completely covered or removed and the area is returned to its original condition, a minimum of 12 inches of topsoil shall be replaced.

G01.05 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for work performed under this specification for excavating, trenching, embedment, and backfilling. All costs incurred shall be included in the contract price for the appropriate items in the Proposal and Bid Schedule.
- B. No separate payment will be made for sand or gravel used in embedment. All costs incurred shall be included in the contract price for the appropriate bid item.
- C. Separate payment will be made for implementation of the Trench Safety Plan at the contract unit price as provided in the Proposal and Bid Schedule.
- D. Separate payment will be made for 2,000-PSI Concrete Encasement or Backfill at the contract unit price as provided in the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G02 - TRENCH SAFETY SYSTEMS

G02.01 DESCRIPTION OF WORK

- A. This specification covers the requirements for providing trench safety systems consisting of shoring, sheeting, trench shield, and/or laid back slopes to meet the trench safety requirements of the Occupational Safety and Health Administrations, as required for this project and specified herein.

G02.02 GENERAL

- A. Trench safety systems shall be provided by the Contractor as provided in Subpart P-Excavation, Trenching and Shoring, Part 10526 of the Code of Federal Regulations which describes safety and health regulation as administered by the U.S. Department of Labor Occupational Safety and Health Administration (O.S.H.A). The standard specified by the O.S.H.A. Regulation shall be the minimum allowed on this project. It shall be the responsibility of the Contractor to design and install adequate trench safety systems for all trenches excavated on this project.
- B. Before beginning construction, the Contractor shall furnish to the Owner for inclusion in the Contract Documents, a Trench Safety Plan for the entire project. The trench safety plan must be prepared and sealed by a Professional Engineer registered in the State of Texas. In addition, all trench safety systems utilized in this project must be designed by a Professional Engineer registered in the State of Texas. The Contractor shall be totally responsible for the safety of all persons involved in the construction of this project.

G02.03 SOIL BORINGS

- A. Any borings and soil data furnished by the Owner are for the convenience of the Contractor. The Contractor shall be responsible for any additional soil or geotechnical information required. The Contractor shall be responsible for properly designed trench safety systems to be utilized for any type or subsurface condition found on this project. The furnishing of soil information by the Owner in no way relieves the Contractor of this obligation.

G02.04 MEASUREMENT AND PAYMENT

- A. Payment for Trench Safety Systems shall be made per linear foot for pipe and per square foot for structural excavations as provided in the Proposal and Bid Schedule for Furnishing and Installing Trench Safety Systems. The payment shall be full compensation for all planning, engineering, materials, equipment, fabrications, installation, recovery and all incidental work required. All excavation and backfill in addition to that specified elsewhere in these specifications shall be considered subsidiary to this bid item.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G03 - CONSTRUCTION WITHIN RIGHT-OF-WAY OF HIGHWAYS,
COUNTY ROADWAYS, CITY STREETS AND RAILROADS

G03.01 DESCRIPTION OF WORK

This section of the specifications shall govern unless otherwise specified in applicable permits, the installation of pipelines along and across the rights-of-way of highways, roadways, and city streets.

G03.02 CONSTRUCTION IN TEXAS DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY

- A. Pipelines to be placed across rights-of-way of the Texas Department of Transportation (TxDOT) shall be installed as shown on the plans and as specified herein.
- B. Encasement pipe shall be installed under the highway by boring in accordance with details shown on the plans. The pipe shall be installed with even bearing throughout its length, and all voids between the earth and encasement pipe shall be filled with grout. The pipe shall be tightly jointed to prevent leakage.
- C. The Contractor shall notify TxDOT of his construction schedule not less the 5 days prior to commencing work within the right-of-way. The Contractor shall conform to the requirements of TxDOT as to details of construction methods and time of construction. All construction equipment must be kept well off the highway pavement unless otherwise approved by TxDOT.
- D. Where encasement of carrier pipe is required to be installed under highways, streets, or other facilities by jacking of boring methods, construction shall be made in a manner that will not interfere with the operation of the highway, or other facility, and will not weaken or damage any embankment or structure. During construction operations, barricades and lights to safeguard traffic and pedestrians shall be furnished and maintained, as required, until such time as the backfill has been completed and then shall be removed from the site.
- E. The Contractor shall take the proper precautions to avoid excavating earth or rock or shattering rock beyond the limits of excavation needed to install the conduit. All damages by excavating and blasting either of surface or subsurface structures, shall be repaired or replaced by the Contractor at his own cost and expense.
- F. The removal of any obstruction that may be found to conflict with the placing of this pipe will not be measured for payment or paid for as separate contract pay item. The removal of any such obstruction will be included in such contract pay items as are provided in the proposal and contract.

G03.03 CONSTRUCTION IN RIGHTS-OF-WAY OF COUNTY ROADS AND CITY STREETS

- A. Pipelines may be placed along and across county roads, city streets and private driveways by the open cut method, unless designated otherwise on the plans. However, the Contractor shall at all times, keep a sufficient width of the roadway clear of dirt and other material to allow free flow on one lane of traffic. It shall be the responsibility of the Contractor to build and maintain all weather by-passes and detours, if necessary, and to furnish all flagmen and to properly light, barricade and mark all by-passes and detours that might be required on and across the roadways involved in this project. Barricades, construction signs and warning lights shall conform to TxDOT and Public Transportation Standards of Construction.
- B. The Contractor shall make every effort to complete construction and allow immediate access to adjacent property at all driveway entrances located along the roadways or streets. Owners or tenants of improvements where access and/or entrance drives are located shall be notified at least eight (8) hours prior to the time the construction will be started at their drive-ins or entrances and informed as to the length of time driveways will be closed, which period shall not exceed six (6) hours.
- C. The Contractor shall be responsible for all road and entrance reconstruction, and repairs and maintenance of same, for a period of one year from the date of such reconstruction. In the event the repairs and maintenance are not made immediately, and it becomes necessary for the City to make such repairs, the Contractor shall reimburse the City for the cost of such repairs.
- D. Backfill in trenches within the rights-of-way of county roads and city streets shall be placed in accordance with requirements of the agency having jurisdiction of such roads or streets, and according to the various applicable sections of these specifications which govern the installation of the pipelines. Before completion of the proposed work, all roadway shoulders, slopes, ditches and berms shall be restored to their original condition.

G03.04 MEASUREMENT AND PAYMENT

No separate payment will be made for items included in this section. All related costs shall be included in the proper item of the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G04 – PREPARING RIGHT OF WAY

G04.01 DESCRIPTION OF WORK

- A. The work to be performed under this section of specifications shall consist of the preparation of the right of way for construction operations by the removal and disposal of all obstructions from the right of way and from designated easements, where removal of all such obstruction is not otherwise shown on the construction drawings and specifications.
- B. Such obstructions shall be considered to include remains of houses, foundations, floor slabs, concrete, brick, lumber, plaster, septic tank drain fields, basements, abandoned utility pipes or conduits, equipment, fences, retaining walls and buildings.
- C. This item shall also include the removal of trees and shrubs and other landscape features, not designated for preservation and stumps, brush, roots, vegetation, logs, curb and gutter, driveways, paved parking areas, miscellaneous stone, sidewalks, drainage structures, manholes, inlets, abandoned railroad tracks, scrap iron and debris, whether above or below ground except live utility facilities.
- D. These obstructions do not include wells which shall not be removed unless specifically noted to be removed. Where wells are to remain in place, they shall be protected in accordance with appropriate state or county regulations.

G04.02 CONSTRUCTION METHODS

A. General

- 1. All areas, as shown on the plans, shall be cleared of all structures and obstructions as defined above. Those trees, shrubs and other landscape features specifically designated on the plans for preservation shall be carefully protected from abuse, marring, or damage during construction operations. Continual parking and/or servicing of equipment under branches of trees marked for preservation will not be permitted. When trees and shrubs are designated for preservation and require pruning, they shall be trimmed as directed by the Owner and all exposed cuts over 2 inches in diameter shall be treated with a material approved by the Owner or his representative.
- 2. Culverts, storm sewers, manholes and inlets shall be removed in appropriate sequence for maintenance of traffic and drainage.

B. Disposal of Material

1. Unless otherwise shown on the plans, all materials and debris removed shall become the property of the Contractor, including all merchantable timber, and shall be removed from the right of way and disposed of in a manner satisfactory to the Owner.

C. Backfill

1. Holes remaining after removal of all obstructions, objectionable material, trees, stumps, etc., shall be backfilled with approved material, compacted and restored to its original contours by blading, bulldozing, or by other methods, as approved by the Owner. In areas to be immediately excavated, the backfilling of holes may not be required when approved by the Owner or his representative.
2. Before backfilling, the remaining ends of all abandoned storm sewers, culverts, sanitary sewers, conduits, and water or gas pipes over 3 inches in diameter, shall be plugged with an adequate quantity of concrete to form a tight closure or as otherwise stated.

G04.03 MEASUREMENT AND PAYMENT

- A. Preparation of right of way will be measured and paid for as provided for in the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G05 - CONCRETE

G05.01 DESCRIPTION OF WORK

- A. This specification covers the requirements for the manufacture, transporting, placing, jointing, finishing and curing of concrete of the structures included in the plans and specified herein.

G05.02 GENERAL

A. Submittals

The Contractor shall submit the following for review by the Owner:

1. Concrete mix designs prepared by a testing laboratory acceptable to the Owner.
2. Joint filler technical data.
3. Curing materials technical data.
4. Layout of construction joints locations prior to the submittal of steel reinforcement shop drawings.
5. Sieve analysis of aggregates.
6. Los Angeles Machine test results.
7. Elastomeric waterproof coating technical data.

B. Standards

The following standard specifications are a part of these specifications:

- | | |
|-----------|---|
| ACI 301, | Specifications for Structural Concrete for Buildings. |
| ACI 347, | Recommended Practice for Concrete Formwork. |
| ACI 318, | Building Code Requirements for Reinforced Concrete. |
| ACI 305R, | Hot Weather Concreting. |
| ACI 306R, | Cold Weather Concreting. |
| ACI 308, | Standard Practice for Curing Concrete. |
| ACI 309, | Standard Practice for Consolidation of Concrete. |

ACI 304, Guide for Measuring, Mixing, Transporting and Placing Concrete.

ACI 304.2R, Placing Concrete by Pumping Methods.

ACI 211.1, Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.

G05.03 MATERIALS AND PRODUCTS

A. Portland Cement

ASTM C 150, Type I cement shall be used. Portland cement used shall be made by a well-known manufacturer and produced by not more than one plant.

B. Water

Mixing water shall be potable, unless approved by Owner.

C. Fine Aggregate

1. Fine aggregate shall conform to ASTM C 33 and shall consist of natural sand or a mixture of natural sand and not more than fifty percent (50%) of stone screenings.
2. Stone screenings shall consist of clean, hard, durable un-coated fragments resulting from the crushing of stone.
3. Fine aggregates shall be free of any materials that are deleteriously reactive with the alkalis in the cement.

D. Coarse Aggregate

1. Coarse aggregate shall conform to ASTM C 33 Size No. 467, No. 57 or No. 67 for all concrete in direct contact with sewage or sewage effluent. Size No. 7 may be used in other concrete.
2. Coarse aggregates shall be free of any materials that are deleteriously reactive with the alkalis in the cement.
3. Coarse aggregates shall have a percent of wear of not more than forty-five (45) as determined in accordance with ASTM C 131, Resistance to Abrasion of Small Size Coarse Aggregate by use of the Los Angeles Machine.

4. Nominal maximum size of coarse aggregate shall not be larger than one-fifth of the narrowest dimension between sides of the forms, one-third of the depth of slabs, or three-fourths of the minimum clear spacing between reinforcing bars.
5. Where lightweight structural concrete is indicated on the drawings, coarse aggregate shall conform to ASTM C 330.

E. Admixtures

1. Only admixtures produced by established reputable manufacturers and used in compliance with the manufacturer's printed instructions may be used.
2. Only admixtures which have been incorporated and tested in the accepted mixes shall be used unless otherwise authorized in writing by the Owner.
3. Concrete admixtures shall conform to the following specifications:
4. Air Entraining Admixtures - ASTM C 260.
5. Specifications for Chemical Admixtures for Concrete - ASTM C 494.
6. Use of calcium chloride is not permitted.

F. Curing Materials

1. Water shall meet requirements for concrete mixing water and shall not stain or leave unsightly residue.
2. Liquid curing materials shall conform to specifications for Liquid Membrane-Forming Compounds for Curing Concrete - ASTM 309.
3. Sheet materials shall conform to specifications for Sheet Materials for Curing Concrete - ASTM C 101.

G. Non-Shrink Grout

Non-shrink grout shall contain no iron filings and shall be Embeco Non-Shrink Mortar, Halco Non-Shrink Grout, or an approved equal.

G05.04

STORAGE AND HANDLING OF MATERIALS

- A. Sacked cement shall be stored in a suitable ventilated, weathertight building which will protect the cement from dampness and placed in such a manner that will permit easy access for proper inspection and identification of each shipment. Store cement clear from floor or ground to prevent absorption of moisture.

- B. Suitable means shall be taken during handling and storage of aggregates to insure that intrusion of foreign materials and segregation of the coarse and fine aggregates does not occur and the grading is not affected. Store on wooden platforms, metal sheets or similar material; if stored on the ground, the sites of stockpiles shall be grubbed, cleaned of all vegetation and leveled off, the bottom six (6) inch layer of aggregate shall not be disturbed and shall not be used in the work.
- C. At the time of use, aggregates shall be free from frozen or foreign material, such as grass, wood, sticks, burlap, paper or dirt which may have become mixed with the aggregate in stockpiles or in handling.
- D. Where coarse aggregates are delivered to the job in two (2) or more sizes or types, each size or type shall be kept separate and not mixed prior to matching.

G05.05 PROPORTIONING AND DESIGN OF MIXES

- A. It shall be the responsibility of the Contractor to design the proportions of the concrete mixes within the limits indicated in Table "A" to produce concrete of the consistency and workability required, and to conform to the strength requirements specified.
- B. Concrete proportions shall be established on the basis of previous field experience or laboratory trial mixtures as specified in ACI 301, Chapter 3.

TABLE "A"

| Class Concrete | "Minimum or Required 28-Day Compressive Strength, PSI (See Quality Control) | Minimum Factor, Sacks Cement (94-lbs) per C.Y. Concrete | Maximum Water per 94 lbs. Cement, Gallons* | Maximum Water per 94 lbs. Cement, Gallons** | Maximum Size of Aggregate | Slump Range In. |
|----------------|---|---|--|---|---------------------------|-----------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| "A" | 4,000 | 6.00 | 5.2 | N/A | 1½" | 4"-6" |
| "B" | 3,000 | 5.00 | 7.0 | 7.5 | 1½" | 4"-6" |
| "C" | 2,000 | 4.50 | 6.5 | 8.0 | 3" | 2"-6" |

* With air-entraining agent added.

** Without air-entraining agent added.

- C. Class "A" concrete, as indicated in Table "A" shall be used for all reinforced concrete work included in this contract except as otherwise indicated on the Plans or as hereinafter provided.

- D. The maximum quantity of water per 94 pounds of cement as specified shall include the free water in the aggregates, not including moisture absorbed by the aggregates.
- E. In proportioning the mix and establishing the permissible slump, the Contractor shall make allowances for the water reducing potential of the admixtures, if used in the concrete, and to the use of high frequency mechanical vibration for compacting the concrete.
- F. Mix designs shall be proportioned to result in concrete slump at the point of placement as specified in Table "A".
- G. Contractor shall use an independent testing facility acceptable to the Owner for preparing and reporting proposed mix designs.
- H. Written reports of proposed concrete mixes shall be submitted to the Owner at least 15 days prior to the start of work. The Contractor shall not begin concrete production until mixes have been reviewed by the Owner. Review of the mix design does not relieve the Contractor of the responsibility for meeting all requirements specified herein.
- I. Adjustments to concrete mix designs may be requested by the Contractor when characteristics of materials, job conditions, weather, test results or other circumstances warrant; at no additional cost to and when acceptable to the Owner. Laboratory test data for revised mix designs and strength results shall be submitted to and accepted by the Owner before using the revised mixes.

G05.06 FORMING OF CONCRETE

A. General

1. Design and construction of all form work is the responsibility of the Contractor.
2. For all surfaces which are exposed in the finished work, forms shall be of steel, metal surfaces on wood, plywood, pressed boards, or well-seasoned boards, dressed all over and smooth. They shall be so built that when removed, the concrete will be left free from offsets, fins, ridges, or other unsightly defects.
3. Formwork shall be constructed so as to ensure that the concrete surfaces will conform to the tolerances of Section 3.3.1, "Recommended Practice for Concrete Formwork" (ACI 347). Forms shall be sufficiently tight to prevent leakage of mortar. The size and spacing of studs and wales shall be determined by the nature of the work and the height to which concrete is placed. Joints shall be snug, and shall occur at the designated locations only.
4. All forms shall be cleaned and inspected immediately prior to placing concrete. Deformed, broken, or defective forms shall be removed from the

work. Temporary openings shall be provided where necessary to facilitate cleaning and inspection just prior to placing concrete.

5. Should the forms show any sign of yielding, spreading or otherwise becoming displaced from correct alignment of position during or after the placing of concrete, they shall be corrected immediately by adjustment or bracing to the extent necessary, or, if required, shall be removed in part or in their entirety and rebuilt or reset.
6. The entire inside surfaces of forms shall be oiled with an approved, non-toxic form oil, or shall be thoroughly wetted just prior to placing concrete.
7. All exposed corners and edges shall have a formed $\frac{3}{4}$ -inch chamfer unless otherwise indicated on the Plans.
8. The Contractor shall provide openings in formwork to accommodate the work under this and other sections and build into the formwork all items such as sleeves, anchor bolts, inserts and all other items to be embedded in concrete for which placement is not specifically provided under other Sections.

B. Plain Sheathing Forms

1. Wooden forms for surfaces not exposed to view may be built of sound No. 1 yellow pine, Douglas fir, or equivalent acceptable lumber, dressed on all sides and neatly fitted. Matched lumber, shiplap, or other satisfactory joint lumber shall be used throughout, and tongue and grooved material shall be used where required.
2. The sheathing shall be erected in level random courses. All vertical joints shall be squared, and all horizontal joints shall be level and matched throughout the entire job. Except for panel forms, vertical joints shall not exceed the width of one board and shall be staggered at least thirty-two inches (32") and made on the center of a stud. Inside forms shall not be placed until exterior forms have been checked, or vice versa.
3. Forms for beam and girder soffits shall be constructed with nominal 2-inch lumber, and all joints shall be tight and even. Beam and girder soffits shall be sufficiently braced, shored, and wedged to prevent deflection.

C. Plywood Forms

Forms for all interior exposed concrete surfaces and designated areas of exterior exposed concrete surfaces shall be constructed with minimum thickness $\frac{3}{4}$ -inch plywood for straight sections and $\frac{1}{2}$ -inch plywood for curved sections. Plywood shall be made with a waterproof glue and manufactured especially for concrete form work. Edges shall be square in both directions and adjoining panels shall match in thickness, width, and length. Full size sheets of plywood shall be used, except where otherwise required or where smaller pieces will cover an entire area. Forms shall be placed so that markings will be symmetrical. Plywood shall be thoroughly oiled on contact faces and edges with raw linseed oil or other approved

form lacquer. Surplus oil shall be wiped off forms before reinforcing steel is placed and while the surfaces are accessible.

D. Steel Forms

If steel forms are proposed, they shall be approved prior to use. The forms shall be accurately constructed in a standard size and in such minor multiple widths and lengths as required. Steel forms shall be coated before each use, with a light, clear, paraffin-base oil, or other acceptable commercial preparation which will not discolor the concrete. Plates shall be wire brushed after each use.

E. Carton Forms

1. Where indicated on the Plans, a structural void at least 6 inches deep shall be provided between the earth and concrete through the use of carton forms which will remain in place and retain their strength until after the concrete has cured. Forms shall be corrugated fiberboard carton forms as manufactured by the Container Corporation of America and fabricated by Savway Concrete Forms, Inc., Dallas, Texas or approved equal.
2. The cover, ribs, and caps of forms shall be constructed of durable-wall corrugated fiberboard, laminated with waterproof adhesive. Covers and end caps shall be coated on the outside with paraffin containing polyethylene. All fabricated forms shall be capable of supporting a minimum load of 150 pounds per square foot.
3. Forms shall be securely held in position and protected from excessive moisture or other damage prior to and during the concreting operation. Free falls of wet concrete in excess of 2 feet, 6 inches will not be permitted on carton forms.
4. Voids below grade beams, walls, and slabs shall be closed by a monolithic extension of the concrete member at its edges, or by precast concrete blocks which extend at least 6 inches into the subgrade to retain the adjacent soil.

F. Form Ties

Only form ties, hangers, and clamps indicated on the forming plans shall be used, and they shall be of such type that no metal will be closer than 1½ inches from the surface. Wire ties will not be permitted. The assembly should provide cone-shaped depressions at the forms at the surface at least one (1) inch in diameter and 1½ inches deep to allow filling and patching. The spacing of form ties, hangers, and clamps shall be strictly in accordance with manufacturer's directions.

G. Removal of Forms

In general, forms shall not be removed until the concrete has hardened sufficiently to support its own load safely plus any superimposed loads that might be placed

thereon. In any event, forms shall be left in place at least the minimum required length of time specified below, after the placing of concrete in them:

| | |
|--|----------|
| Columns | 48 hours |
| Side forms for girders and beams..... | 48 hours |
| Bottom forms of slabs | 7 days |
| Bottom forms of beams and girders..... | 7 days |
| Walls | 48 hours |

G05.07 MIXING AND PRODUCTION OF CONCRETE

A. General

1. All concrete not placed in the work within forty-five (45) minutes after addition of water to batch shall be rejected and disposed of by the Contractor at his own cost and expense.
2. The Contractor shall provide access to the mixing plant for inspection by the Owner.

B. Ready Mix Concrete

1. All ready mix concrete shall be batched, mixed and transported in accordance with ASTM C 94.
2. Plant equipment and facilities shall conform to National Ready-Mix Concrete Association "Plan and Delivery Equipment Specification."
3. The production and delivery of ready-mixed concrete shall be such that will provide a continuous finishing operation and in no case more than twenty (20) minutes shall elapse between the depositing of successive batches of concrete in any monolithic unit.

C. Job Site Mixing

Site batched and mixed concrete shall comply with the recommendations of ACI 301, Chapter 7.

D. Control of Admixtures

1. Admixtures shall be charged into the mixer as solutions and shall be measured by means of an acceptable mechanical dispensing device. The liquid shall be considered a part of the mixing water.
2. If two or more admixtures are used, they shall be added separately to avoid possible interaction.
3. Addition of retarding admixtures shall be completed within one (1) minute after addition of water to the cement has been completed, or prior to the beginning of the last three-quarters of the required mixing, which ever occurs first.

E. Cold and Hot Weather Requirements

1. The Contractor shall comply with requirements of ACI 305 "Recommended Practice for Hot Weather Concreting" during hot weather conditions and when ambient temperature is 90 degrees F or above. Concrete deposited in hot weather shall have a placing temperature (not exceeding 90 degrees F) which will not cause difficulty in loss of slump, flash set or cold joints. The ingredients shall be cooled before mixing, or well crushed ice may be substituted for all or part of the mixing water if, due to high temperatures or other climatic factors, any undesirable effects are encountered. Cement shall not be added to the mixtures of water and aggregate when the temperature of the mixture is greater than 100 degrees F.
2. The Contractor shall comply with requirements of ACI 306 during cold weather conditions. Unless the temperature is at least 40 degrees F and rising, the temperature of the concrete when placed shall be at least 55 degrees F. If water or aggregate has been heated, the water shall be combined with the aggregate in the mixer before cement is added.

G05.08 PLACING CONCRETE

A. Preparation Before Placing

1. Before placing of concrete in any portion of a structure, adequate provision shall be made for walkways from which the concrete to be placed can be worked or runways over which the concrete may be transported in buggies, when such are to be used. Buggy runways shall be clear of the reinforcements in slabs or footings. Runways or walkways used for placing or working concrete in walls shall be properly supported and adequate in width for safe use by workmen. Runways shall provide convenient access to the entire length of wall in which concrete is being placed. Hand rails shall be installed on walkways or runways in accordance with OSHA Standards.
2. The Contractor shall remove frost, snow, ice, water and any other foreign materials from forms, secure reinforcement in place, and position joint materials and other embedded items.
3. In cold weather, the Contractor shall have protective blankets ready and heaters operational and in-place prior to placing concrete.
4. In hot weather, when temperature of reinforcing or forms is above 120 degrees F, the Contractor shall spray forms and reinforcement with water just prior to placing concrete.
5. Structural concrete shall be placed only on a firm and unyielding subgrade or sub-base, which is free from all loose material and debris. Subgrade shall be free of frost. The Contractor shall keep subgrade moist at time of concreting. If necessary, dampen with water in advance of concreting. The

Contractor shall allow no free water standing on subgrade nor any muddy or soft spots when concrete is placed.

B. Conveying and Depositing in Forms

1. The Contractor shall handle concrete from mixer to place of final deposit as rapidly as practicable by methods which prevent segregation or loss of ingredients to assure that quality is maintained.
2. To prevent segregation, the Contractor shall deposit concrete in approximately horizontal layers of 18 to 24 inches as near as possible to its final position.
3. Concrete shall not be allowed to drop freely more than four (4) feet or through a cage of reinforcing steel.
4. Chutes used to transport concrete shall have a slope not exceeding one vertical to two horizontal and not less than one vertical to three horizontal. The end of each chute shall be provided with a baffle to help prevent segregation, or the concrete shall be discharged through a tremie or elephant trunk directly into the form.
5. Pumping equipment shall be a suitable type with adequate pumping capacity. Loss of slump in pumping shall not exceed 1½ inches.
6. The Contractor shall consolidate all concrete by vibration, so that concrete is thoroughly worked around reinforcement, around embedded items and into corners of forms eliminating all air or stone pockets which may cause honeycombing, pitting, or places of weakness. The Contractor shall use internal vibrators having a minimum frequency of 8,000 vibrations per minute to consolidate concrete effectively. The Contractor shall not use vibrators to transport concrete within forms. The Contractor shall insert vibrators and withdraw at points approximately 18 inches apart. At each insertion, the Contractor shall allow duration sufficient to consolidate concrete but not sufficient to cause segregation; generally from 5 to 15 seconds. Where concrete is to have an as-cast finish, bring a full surface of mortar against form by vibration process, supplemented if necessary by spading, to work coarse aggregate back from formed surface.
7. While concrete is being placed adjacent to a joint in which a waterstop is specified, care shall be taken to see that the concrete is properly placed and worked along the joint in which the waterstop is held and that the waterstop itself is in the position specified on the drawings and is firmly bedded in mortar on all sides.
8. The concrete comprising each section of wall between joints shall be deposited continuously in layers of such thickness that none will be deposited on concrete which has hardened sufficiently to cause the formation of seams or places of weakness within the section.

C. Joints

1. Joints shall be provided in slabs on grade; locate joints as indicated. If saw cut joints are required or permitted, time cutting properly with set of concrete; start cutting as soon as concrete has hardened sufficiently to prevent aggregates from being dislodged by saw. Complete before shrinkage stresses produce cracking.
2. Other construction joints, not indicated on drawings, shall be located so as to least impair strength of the structure. Place joints in locations approved by the Owner.
3. Vertical construction joints shall be prepared and bonded in accordance with ACI 301, Chapter 6.

G05.09 FINISH OF CONCRETE SURFACES

A. Scope

The provisions of this subsection shall apply to all exposed exterior concrete surfaces and all interior concrete surfaces of conduits and structures whose finish is not specified elsewhere in these specifications or specifically indicated on the Plans.

B. General

1. The exposed tops of walls of structures shall be brought to true level, floated to bring a workable grout to the surface, struck off and leveled where necessary with cement grout of the same proportions as the mortar of the concrete. The wall tops shall then be floated, finished and edged unless otherwise indicated on the Plans. The edger used shall be of ½-inch radius and shall have its flanges ground to a knife edge so as to have as little burr as possible.
2. Slabs shall be edged as appropriate.

C. Finish of Formed Surfaces

1. General

- a. Unless otherwise noted on the drawings, the following finishes shall be used as applicable:
- b. Rough form finish - For exterior wall surfaces of structures, flumes and conduits not exposed to public view up to one foot below grade.
- c. Smooth rubbed finish (or paint type finish at Contractor's option) - For exterior wall surfaces exposed to view and interior wall surfaces of structures, flumes and conduits. Interior wall surfaces which shall receive the Smooth Rubbed Finish shall be all interior surfaces to a point one (1) foot below the minimum water surface

of open vessels containing liquids. Surfaces one foot or more below minimum water surface elevation in vessels containing liquids shall receive a Rough Form Finish. Apply the same finish on all surfaces.

2. Rough Form Finish

Tie holes and defects shall be patched. Fins exceeding ¼-inch shall be chipped or rubbed off. Otherwise, surfaces shall be left with the texture imparted by forms.

3. Smooth Form Finish

- a. Use form facing materials which shall produce a smooth, hard, uniform texture on the concrete. Arrange panels in an orderly and symmetrical manner with a minimum of seams.
- b. Tie holes and defects shall be patched and all fins shall be completely removed.

4. Smooth Rubbed Finish

- a. Provide smooth rubbed finish to surfaces which have received smooth form finish.
- b. Surfaces to be rub-finished shall be thoroughly wetted and kept in that condition until the rubbing work of each section is completed.
- c. Surfaces shall be rubbed with carborundum blocking or other abrasive and water until fins and any surplus materials have been removed and the surface is uniformly smooth. Grout or mortar shall not be used in the rubbing process and plastering of the surfaces will not be permitted. Rubbing blocks shall be driven by electric or compressed air tools except as hand rubbing is specifically permitted by the Owner.
- d. Rubbing of concrete surfaces shall commence within one (1) day after removal of forms.

5. Paint Type Finish

Finish shall be Elastomeric Waterproofing Coating 10 as manufactured by Sherwin Williams or approved equal. Apply one coat in accordance with manufacturer's recommendations, at a coverage of fifty (50) square feet per gallon.

D. Finish of Unformed Surfaces

1. Unless otherwise noted on the drawings, the following finishes shall be used as applicable:

2. Floated Finish - Top surfaces of slabs of all structures, water carrying conduits and liquid containers; surfaces intended to receive roofing, waterproofing membranes or sand bed terrazzo.
3. Troweled Finish - Interior floors intended as walking surfaces or for reception of floor coverings.
4. Non-Slip Broom Finish - Sidewalks, ramps and concrete paved areas (other than roadways and parking area); exterior platforms, steps and landings; exterior and interior pedestrian ramps, exposed floor areas and steps likely to be wet.

E. Finishing Tolerances

1. The following finishing tolerances shall be provided:
2. Class A Tolerance - Finishes shall be true planes within $\frac{1}{8}$ -inch in ten (10) feet as determined by a 10-foot straightedge placed anywhere on the slab in any direction.
3. Class B Tolerance - Finishes shall be true planes within $\frac{1}{4}$ -inch in ten (10) feet as determined by a 10-foot straightedge placed anywhere on the slab in any direction.
4. Class C Tolerance - Finishes shall be true planes within $\frac{1}{4}$ -inch in two (2) feet as determined by a 2-foot straightedge placed anywhere on the slab in any direction.
5. Tolerances shall be checked with a 10-foot straightedge for Class A or B tolerance and with a 2-foot straightedge for Class C tolerance applied at no less than two different angles.

F. Floated Finish

The top of the slab shall be screeded to grade and cross section. Concrete shall not be worked further until ready for floating. Begin floating when water sheen has disappeared and when surface has stiffened sufficiently to permit operation of float. Use a wood float only. Float to a surface within Class C tolerance. No further finish will be required on top slabs of structures of conduits which are to be buried. For all other slabs, float to a surface within Class B tolerance and refloat immediately to a uniform sandy texture.

G. Troweled Finish

1. Surface shall first receive floated finish. It shall next be power troweled, and finally hand troweled. Begin final troweling when the surface produces a ringing sound as trowel is moved over surface.
2. Finished surface shall be essentially free of trowel marks, and uniform in texture and appearance. Interior floor surfaces of administrative and similar

areas shall be plane to a Class A tolerance. Other surfaces shall be plane to a Class B tolerance.

H. Nonslip Broom Finish

Immediately after the concrete has received a floated finish, it shall be given a coarse transverse scored texture by drawing a fiber-bristle broom across the surface.

G05.10 CURING AND PROTECTION OF CONCRETE

A. General

1. Curing shall commence immediately following initial set or completion of surface finishing.
2. Standard Portland cement concrete surfaces normally exposed to the atmosphere shall be protected against too rapid drying by curing for a minimum period of seven (7) days. Similarly exposed high-early-strength concrete surfaces shall be cured for a minimum period of three (3) days.

B. Curing of Formed Surfaces

The Contractor shall cure formed surfaces, including the undersides of beams, supported slabs and other similar surfaces by moist curing. Minimize moisture loss from surfaces placed against forms by keeping forms wet until they can be safely removed. After form removal cure concrete until end of time prescribed. Vertical surfaces shall be protected from too rapid drying by covering with burlap.

C. Curing of Unformed Surfaces

1. For concrete surfaces not in contact with forms, one of the following procedures shall be applied immediately after completion of placement and finishing:
2. Ponding or continuous sprinkling.
3. Application of waterproof sheet materials conforming to ASTM C 101.
4. Application of curing compound conforming to ASTM C 309.
5. Apply curing materials in accordance with manufacturer's recommendations.
6. Apply curing compound immediately after water sheen has disappeared from surface. Curing compound shall not be used on any surface against which additional concrete or other material is to be bonded.
7. Curing materials shall, when tested in accordance with the method of "Test for Water Retention Efficiency of Liquid Membrane-Forming Compounds and Impermeable Sheet Materials for Curing Concrete", ASTM C 156, be

effective in limiting the water loss in the concrete test specimens to 3½ percent when applied at the rate recommended by the manufacturer.

D. Protection From Mechanical Injury

1. During the curing period, protect concrete from damaging mechanical disturbances, such as load stresses, heavy shock, and excessive vibration, and from damage by rain or flowing water.
2. Protect all finished concrete from damage by subsequent construction operations.

G05.11 CONCRETE REPAIRS

- A. All honeycomb, rock pockets and voids over ½-inch diameter shall be removed down to sound concrete. The area to be patched and an area at least six inches wide surrounding it shall be dampened to prevent absorption of water from the patching mortar.
- B. A bonding grout of 1 part cement to 1 part fine sand passing the No. 30 sieve, mixed to the consistency of thick cream, shall be brushed into the surface after surface water has evaporated. The patching mixture shall be made of the same materials as the concrete, except that the coarse aggregate shall be omitted and the mortar shall consist of not more than 1 part cement to 2½ parts sand by damp loose volume. The quantity of mixing water shall be no more than necessary for handling and placing. Patching mortar shall be mixed and allowed to stand with frequent manipulation with a trowel until it has reached the stiffest consistency that will permit placing.
- C. Apply patching mortar when bonding grout begins to lose water sheen. Mortar shall be thoroughly consolidated and struck off leaving patch slightly higher than surrounding area. Finish and cure in same manner as adjacent concrete.
- D. The Contractor shall thoroughly clean and dampen all tie holes.
- E. Tie holes shall be grouted solid with non-metallic non-shrinking grout. Tie holes shall be filled from the large end of the cone-shaped hole and packed solid by rodding.

G05.12 QUALITY CONTROL

A. Tests on Concrete

1. As the work progresses, concrete shall be sampled in accordance with ASTM Method of Sampling Fresh Concrete (ASTM C 102).
2. Slump tests shall be made according to ASTM Method of Test for Slump of Portland Cement Concrete (ASTM C 143).
3. Compression test specimens shall be made and cured according to ASTM Method of Mixing and Curing Concrete Test Specimens in the Field

(ASTM C 31). Not less than four compression specimens shall be made for each test at each age (Specifications for Ready-Mixed Concrete, ASTM C 94), nor less than one test for each 50 cubic yards of concrete of each class. At least one test per day shall be made for each class of concrete used that day. These specimens shall be cured under laboratory conditions. Additional specimens cured under job conditions may be required when, in the opinion of the Engineer, there is a possibility of the surrounding air temperature falling below 40 degrees F or rising above 90 degrees F.

4. Specimens shall be tested according to ASTM Method of Test for Compressive Strength of Cylindrical Concrete Cylinders (ASTM C 39).
5. Not less than two specimens shall be tested at seven (7) days and not less than two specimens at twenty-eight (28) days after pouring.
6. If the average strength of any three consecutive tests of laboratory-cured cylinders representing each class of concrete falls below required compressive strengths as indicated in Table "A", or if more than 10 percent of strength tests have values less than the required strength, the Owner shall have the right to order a change in the mix proportions for the remaining portion of the structure or project. If the average strength of the job-cured cylinders falls below the required strength, the Owner shall have the right to require changes in conditions of temperature and moisture necessary to secure the required strength. He may require test in accordance with ASTM Methods of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete (ASTM C 42) or order load tests to be made on the portions of the structures so affected.
7. In the event that changes are required in the water-cement ratio specified, the cost of such changes shall be borne by the Contractor.
8. Contractor shall furnish samples of aggregates to the testing laboratory. All concrete required for testing shall be furnished by the Contractor. No additional compensation will be paid the Contractor for concrete so used.
9. Owner shall normally pay for services of testing laboratory in connection with test made in the field or laboratory on concrete. Any testing or retesting required as a result of actual or apparent failure of concrete to fulfill specification requirements shall be paid for by the Contractor.

B. Acceptance of Work

1. Completed concrete work which fails to meet one or more requirements of this specification will be considered rejected until it has been repaired in a manner acceptable to the Owner.
2. If rejected concrete work cannot be brought into compliance by repairing, work may be remedied by one of the following:
 - a. Structural analysis or testing when strength of structure is deficient.

- b. Removal and replacement of concrete.
 - c. Reinforcement of the structure.
 - d. Contractor shall pay all costs of additional testing and/or engineering at no additional expense to Owner.
- 3. Contractor shall repair or replace rejected work at no additional cost to Owner.
 - 4. Failure to detect any defective work shall not in any way prevent later rejection when such defect is discovered.

G05.13 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for work in accordance with this section of the specifications, and the cost thereof shall be included in the proper item of the Proposal and Bid Schedule.
- B. The placement of concrete in excess of that shown in the Plans, which is approved in writing in advance by the Owner, will be paid for under the proper items in the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G06 - REMOVING AND REPLACING EXISTING PAVEMENT, DRIVEWAYS, SIDEWALKS AND PAVED WATERWAYS

G06.01 DESCRIPTION OF WORK

- A. This specification covers the requirements for removing and replacing existing pavement, driveways, sidewalks and paved waterways as shown in the plans and described herein.

G06.02 GENERAL

- A. Where it is necessary to remove pavement to allow the installation of the pipeline, the Contractor shall replace the pavement as specified herein.
- B. The existing pavement shall be removed for the width as shown in the plans for the particular type of pavement unless a greater width is authorized by the Engineer. Any pavement removed beyond the limits authorized shall be replaced by the Contractor and no separate payment will be made for replacement of the pavement beyond the authorized limits.
- C. Where damage to pavement beyond the authorized limits of removal occurs due to the construction of this project it shall be the responsibility of the Contractor to restore the damage prior to beginning construction. No separate payment will be made for the restoration of the damaged pavement.

G06.03 TRENCH BACKFILLING

- A. All trenches under or within 8 feet of existing concrete driveways, sidewalks, paved waterways, brick roadways, asphalt roadways, gravel roadways, shall be backfilled by hand or mechanically tamping selected materials in six-inch (6") layers until full settlement is reached at the depths shown on the Plans.

G06.04 CONCRETE PAVEMENT AND CONCRETE CURB OR CURB AND VARIABLE WIDTH GUTTER

- A. Existing reinforced or un-reinforced concrete driveway shall be removed for the actual width of the trench plus twelve (12") inches on either side of the firm walls of the trench, and the reinforcing steel shall be cleaned and laid back. After the trench has been properly backfilled, the reinforcing steel shall be bent and spliced into place as shown on the Plans, and a concrete slab at least six inches (6"), shall be poured and finished to meet the existing pavement.
- B. Where the proposed work transverses an existing concrete curb or curb and variable width gutter, the curb or curb and variable width gutter shall be replaced to conform to the existing section, or as directed by the Engineer. The "Mule and Plaster" method of construction for curb and gutter will be allowed.

- C. Concrete used for replacing concrete pavement and concrete curb or curb and variable width gutter shall be 3,000 psi concrete.

G06.05 ASPHALTIC CONCRETE PAVEMENT, CONCRETE BASE WITH AN ASPHALT SURFACE, BRICK PAVEMENT OR GRAVEL BASE WITH AN ASPHALT SURFACE

- A. Existing asphaltic concrete pavement, concrete base with asphalt surface, brick pavement, and a gravel base with an asphalt surface shall be removed for the actual width of the trench plus twelve (12) inches on either side of the firm wall of the trench. After the trench has been properly embedded and backfilled with select material a gravel base 12" thick shall be placed, tamped and rolled to a level 1 ½ inches below the existing pavement surface. A tack coat of Grade RC-2 asphalt shall be applied to the gravel base before the placement of asphaltic concrete surfacing. Then a layer of an approved type of asphaltic concrete 1 ½ inches thick shall be placed, tamped, and rolled with a flat wheel roller to meet the existing pavement.

G06.06 GRAVEL ROADWAY

- A. After the trench has been properly backfilled where a gravel roadway has been cut, a minimum compacted thickness of eight (8") inches of an approved grade of fresh road gravel shall be placed on the full width of the trench and rolled with a flat wheel roller to meet the existing surface.

G06.07 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for work performed in accordance with this section of the specifications, and the cost thereof shall be included in the appropriate item of the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G07 - SEDIMENTATION AND EROSION CONTROL

G07.01 SCOPE

- A. This specification covers the requirements for installing, maintaining, removing and cleaning the areas related to sedimentation control work as shown on the Drawings and as specified herein. The work shall include, but not necessarily be limited to: installation of temporary access ways and staging areas, stone filter boxes, sediment removal and disposal, device maintenance, removal of temporary devices, temporary mulching, excelsior matting installation and final cleanup.

G07.02 GENERAL

- A. The Contractor shall be responsible for the timely installation and maintenance of all sedimentation control devices necessary to prevent the movement of sediment from the construction site to off site areas or into the stream system via surface runoff or underground drainage systems. Measures in addition to those shown on the Drawings necessary to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at the expense of the Contractor. No additional charges to the Owner will be considered.
- B. Sedimentation and erosion control measures shall conform to the requirements outlined in the Texas Commission on Environmental Quality, Chapter 313.

G07.03 MATERIALS

- A. Crushed stone for sediment filtration devices, access ways and staging areas shall conform to Texas Department of Transportation "Standard Specifications for Construction of Highways, Streets and Bridges."
- B. Berm structural stone shall be rip-rap as follows:
 - 1. Rip-rap shall be sound, durable rock which is roughly rectangular shape and of suitable quality to insure permanence in the condition in which it is to be used. Rounded stones, boulders, sandstone or similar soft stone will not be acceptable. Material shall be free from overburden, spoil, shale, and organic material, meet the Engineer's approval and be well graded within the following limits:

| Weight of Stone | Percent Finer by Weight |
|-----------------|-------------------------|
| 40 lb | 100 |
| 12 lb | 50 |
| 3 lb | 0 |

C. Silt Fence

1. Steel posts shall be a minimum of 5 feet in length, 2-1/2-in by 2-1/2-in by 1/4-in angle post with self-fastening tabs and a 5-in by 4-in (nominal) steel anchor plate at bottom.
2. Welded wire fabric shall be 4-in by 4-in mesh of 12 gauge by 12 gauge steel wire.
3. Silt fence fabric shall be a woven, polypropylene, ultraviolet resistant material such as Mirafi 100X as manufactured by Mirafi, Inc., Charlotte, NC or equal.
4. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or 1/32-in diameter soft aluminum wire.
5. Prefabricated commercial silt fence may be substituted for built-in-field fence. Pre-fabricated silt fence shall be "Envirofence" as manufactured by Mirafi Inc., Charlotte, NC or equal.

D. One quarter inch woven wire mesh shall be galvanized steel or hardware cloth.

E. Straw mulch shall be utilized on all newly graded areas to protect areas against washouts and erosion. Straw mulch shall be comprised of threshed straw of oats, wheat, barley, or rye that is free from noxious weeds, mold or other objectionable material. The straw mulch shall contain at least 50 percent by weight of material to be 10-in or longer. Straw shall be in an air-dry condition and suitable for placement with blower equipment.

F. Latex acrylic copolymer, such as Soil Sealant with coalescing agent as manufactured by Soil Stabilization Co., Merced, CA or approved equivalent shall be used as straw mulch tackifier.

G. An asphalt tackifier shall only be used when temperatures are too low to allow the use of a latex acrylic copolymer and only with prior written approval from the Engineer.

H. Excelsior matting blanket shall be installed in all seeded drainage swales and ditches as shown on the Drawings or as directed by the Engineer. Excelsior matting shall be AMXCO Curlex Blanket as manufactured by American Excelsior Company, Arlington, TX or equal.

G07.04 INSTALLATION

A. Silt Fence Installation

1. Silt fences shall be positioned as indicated on the Drawings and as necessary to prevent off site movement of sediment produced by construction activities as directed by the Engineer.
2. Dig trench approximately 6-in wide and 6-in deep along proposed fence lines.
3. Drive metal-stakes, 8 feet on center (maximum) at back edge of trenches. Stakes shall be driven 2 feet (minimum) into ground.
4. Hang 4 by 4 woven wire mesh on posts, setting bottom of wire in bottom of trench. Secure wire to posts with self-fastening tabs.
5. Hang filter fabric on wire carrying to bottom of trench with about 4-in of fabric laid across bottom of trench. Stretch fabric fairly taut along fence length and secure with tie wires 12-in O.C. both ways.
6. Backfill trench with excavated material and tamp.
7. Install pre-fabricated silt fence according to manufacturer's instructions.

- B. Construct filter boxes as detailed on the Drawings, from 1/4-in woven wire mesh or hardware cloth and wood. Fill with crushed stone and place over all drop inlets and manholes to storm drain system as each inlet is completed. This should be done prior to setting casting, if there is a delay between installation of inlet structures or drain manholes and setting of castings. An alternate method is to ring each inlet with a silt fence.

C. Rock Berm Installation

1. Place berm structural stone across channel just below lower sandbag wall at work area. Face upstream side of structural berm with crushed stone.

- D. Staging areas and access ways shall be surfaced with a minimum depth of 4-in of crushed stone.

G07.05 MAINTENANCE AND INSPECTIONS

A. Inspections

1. Contractor shall make a visual inspection of all sedimentation control devices once per week and promptly after every rainstorm. If such inspection reveals that additional measures are needed to prevent movement of sediment to offsite areas or into the vent trench, Contractor shall promptly install additional devices as needed. Sediment controls in need of maintenance shall be repaired promptly.

B. Device Maintenance

1. Silt Fences

- a. Remove accumulated sediment once it builds up to one-half of the height of the fabric.
- b. Replace damaged fabric, or patch with a 2-ft minimum overlap.
- c. Make other repairs as necessary to ensure that the fence is filtering all runoff directed to the fence.

2. Filter Boxes: Replace crushed stone when it becomes saturated with silt.

3. Stone Filter Berm

- a. Muck out trapped silt from dewatering operations when it has built up to within 6-in of the top of the berm.
- b. Replace crushed stone filter when saturated with silt.

4. Add crushed stone to access ways and staging area as necessary to maintain a firm surface free of ruts and mudholes.

G07.06 TEMPORARY MULCHING

- A. Apply temporary mulch to areas where rough grading has been completed but final grading is not anticipated to begin within 30 days of the completion of rough grading.
- B. Straw mulch shall be applied at rate of 100 lbs/1000 ft² and tackified with latex acrylic copolymer at a rate of 1 gal/1000 ft² diluted in a ratio of 30 parts water to 1 part latex acrylic copolymer mix.

G07.07 REMOVAL AND FINAL CLEANUP

- A. Once the site has been fully stabilized against erosion, remove sediment control devices and all accumulated silt. Dispose of silt and waste materials in proper manner. Regrade all areas disturbed during this

process and stabilize against erosion with surfacing materials as indicated on the Drawings.

G07.08 MEASUREMENT AND PAYMENT

- A. Payment will be made for work performed in accordance with this section of the specifications, and the cost thereof shall be included in the appropriate items of the Proposal and Bid Schedule.

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION G08 - FINISH GRADING AND GRASS PLANTING

G08.01 GENERAL

- A. The Contractor shall perform finish grading as shown on the plans and described herein. The Contractor shall also provide all equipment and materials required and shall develop and present to the Owner a Bermuda grass ground cover at the plant site.
- B. It is the intent of these specifications that areas to be grassed beyond those specifically shown on the Landscaping plans shall include the slopes of all new embankments, the ground surrounding proposed buildings and plant structures, and those grassed areas of the existing plant grounds which are disturbed during proposed construction.
- C. It shall be understood and agreed that the actual limits of areas to be grassed shall be established on the site by the Owner.
- D. The hydromulching system of grass planting is described herein. Other procedures such as sodding or live sprigging may be used if approved by the Owner. The system used shall prevent erosion of topsoil until adequate ground cover develops and serves to control erosion.

G08.02 FINISH GRADING

- A. Finish grading shall involve bringing final ground surfaces to contour elevations shown on the plans, including placement of topsoil as described herein.
- B. Placement of structural fill, road subgrade, and area or site fill is described under other sections of these Specifications.
- C. Topsoil shall be used for the upper four (4) inches of soil in the finished plant site. It shall be supplied from stockpiled topsoil from the site or other local sources. Approximately six (6) inches, loose measure, of topsoil shall be placed in order to obtain the 4-inch layer of consolidated topsoil. Topsoil shall be lightly compacted. The Owner may require tilling of topsoil, if he feels it is over-compacted, prior to grass planting.

G08.03 GRASS PLANTING

A. Fertilizer

18-18-5, (Nitrogen, Phosphoric Acid, Potash) slow release granular at a rate of 25 pounds per 1000 square feet.

B. Water

The Contractor shall provide water necessary for grass planting and maintenance until acceptance by the Owner.

C. Planting Seasons

Grass planting by sodding, sprigging, or hydromulching shall normally be done between May 1 and September 15.

D. Hydromulching

Grass planting by hydromulching shall consist of applying water, Bermuda grass seed, fibrous mulch, and fertilizer to initiate grass cover.

G08.04 MAINTENANCE OF DEVELOPING GRASS

- A. The Contractor shall water and maintain all grassed areas until final acceptance. He shall also re-fertilize at the rate of 1 lb. of nitrogen and 1 lb. of phosphorous per 1,000 square ft. every 60 days until the grass is accepted.
- B. Areas which, due to settling or improper leveling, do not have positive drainage shall be re-leveled with topsoil and replanted with grass.
- C. Areas damaged by erosion, vehicle ruts and similar damage shall be re-leveled with topsoil and replanted. Finished ground surface shall be sufficiently smooth and level to facilitate mowing.

G08.05 ACCEPTANCE

- A. Work under this section shall be considered acceptable when finish graded surfaces are level and well-drained, when grass achieves full coverage and is at least 2 inches high, and when other requirements listed herein are met.
- B. Acceptance of work normally coincides with final acceptance of the entire project. However, seasonal factors may be cause for delay in grass planting, development, and acceptance.
- C. The Owner will accept responsibility for normal maintenance when project is accepted. However, the Contractor shall remain responsible for any subsequent grass damage that he causes, and for warranty of materials and workmanship as required in the Special Conditions.

G08.06 MEASUREMENT AND PAYMENT

- A. Grass seeding or grass sodding shall be measured and paid for by the square yard complete in place after provisional acceptance at the unit contract price as provided in the Proposal and Bid Schedule.

END OF SECTION

GENERAL REQUIREMENTS

SECTION G09 - SITE CONDITIONS

G09.01 SUBSURFACE INFORMATION

- A. No Subsurface investigations have been made by the Owner. The Contractor shall be responsible for any subsurface explorations and tests he deems necessary.

G09.02 SITE INVESTIGATION AND REPRESENTATION

- A. The Contractor acknowledges that he has satisfied himself as to the nature and location of the work; the general and local conditions, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads, and uncertainties of weather, river/stream stages, or similar physical conditions at the site; the conformation and conditions of the ground; the character of equipment and facilities needed preliminary to and during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this Contract.
- B. The Contractor further acknowledges that he has satisfied himself as to the character, quality, and quantity of surface and subsurface materials to be encountered from inspecting the site, as well as from information presented herein as a part of these Contract Documents. Any failure by the Contractor to acquaint himself with all the available information will not relieve him from responsibility for properly estimating the difficulty or cost of successfully performing the work. Neither the Owner nor the Engineer assume responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner or the Engineer.
- C. Existing ground profiles shown on the Plans were plotted from field surveys.

G09.03 RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

- A. Known utilities and structures adjacent to or encountered in the work are shown on the Drawings. The locations shown are taken from existing records and the best information available from existing plans; however, it is expected that there may be some discrepancies and omissions in the locations and quantities of utilities and structures shown. Those shown are for the convenience of the Contractor only, and no responsibility is assumed by either the Owner or the Engineer for their accuracy or completeness.
- B. Neither the Owner nor his officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the work.

- C. The Contractor shall at all times provide unobstructed access to fire hydrants, underground conduit, manholes, and water or gas valve boxes.
- D. Where the Contractor's operations could cause damage which might result in considerable expense, loss, and inconvenience when his operations are adjacent to or near railway, telegraph, telephone, television, power, oil, gas, water, sewer, irrigation, or other systems, no operations shall be commenced until the Contractor has made all arrangements necessary for the protection of these utilities and services.
- E. The Contractor shall notify all utility offices that are affected by the construction operation at least 15 days in advance of commencing construction operations. The Contractor shall not expose any utility without first obtaining permission from the affected agency. Once permission has been granted, locate and, if necessary, expose and provide temporary support for all existing underground utilities in advance of operations.
- F. The Contractor shall be solely and directly responsible to the Owners and operators of such utility properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage that may result from the construction operations under this Contract.
- G. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, the Contractor shall promptly notify the proper authority and cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no event shall interruption of any water or utility service be allowed unless prior approval is granted by the owner of the utility.
- H. The Contractor shall replace, at his own expense, any and all other existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract Documents.
- I. Where existing utility lines or structures are so located as to physically conflict with permanent structures to be constructed under this Contract, the conflicting utility line or structure shall be permanently relocated. Such relocations shall be considered as required by this Contract.
- J. The Contractor shall give immediate notice to the Engineer, the Owner and the owner of the utility (where applicable) when a physical conflict is determined to exist. The actual relocation of a public utility will be accomplished by the owner of the utility at his expense unless otherwise specified in these Contract Documents. Any delays resulting from the required relocations of the utilities are the responsibility of the Contractor.
- K. Where existing utility lines or structures are so located as to interfere with the Contractor's prosecution of the work, but do not physically conflict with completed manholes or other permanent structures to be constructed under this Contract, any modification, alteration, or relocation of interfering utility,

either permanent or temporary, shall be accomplished at the expense of the Contractor.

- L. The Contractor shall give immediate notice to the Engineer and the Owner of the utility when an interference is determined to exist and shall obtain approval to relocate such utility or to discontinue service therein from the Engineer and the owner of the utility. The owner of the utility shall have the right to do all work required to discontinue, relocate, and replace interfering utilities and charge the Contractor for all costs thereof. When approved by the Engineer and the owner of the utility, all work required to discontinue, relocate, and replace interfering utilities may be done by, or arranged for, by the Contractor. All such discontinuance, relocation, and replacement shall be accomplished in accordance with all requirements of the owner of the utility.
- M. When notified by the Contractor that an interference or conflict has been determined to exist, the Owner and the Engineer will determine whether such interference shall be considered as required by construction or as incidental to construction.

G09.04 INTERFERING STRUCTURES

- A. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground. An attempt has been made to show major structures on the Plans. While the information has been compiled from the best available sources, its completeness and accuracy cannot be guaranteed, and it is presented as a guide to avoid known possible difficulties.
- B. Protect existing structures from damage, whether or not they lie within the right-of-way or the limits of the easements obtained by the Owner. Where existing structures must be removed to properly carry out the work, or are damaged during the work, they shall be restored at the Contractor's own expense to at least their original condition and to the satisfaction of the Engineer.
- C. The Contractor may, with the approval of the Engineer and without additional compensation, remove and replace in a condition as good as or better than original, any small interfering structures such as fences and signposts that interfere with the Contractor's operations.

G09.05 FIELD RELOCATION

- A. During the progress of the work, minor relocations of the work may be necessary. Such relocations shall be made only by direction of the Engineer and the Owner. If existing structures are encountered that will prevent construction as shown, notify the Engineer before continuing with the work in order that the Engineer may make such field revisions as necessary to avoid conflict with the existing structures. If the Contractor shall fail to notify the Engineer when an existing structure is encountered and proceeds with the work despite this interference, he shall be responsible for any damage that may occur.

G09.06 LAND MONUMENTS

- A. The Contractor shall preserve or replace any existing Federal, State, County, City, and private land monuments encountered. All monument replacement by the Contractor shall be performed by a land surveyor licensed in the State of Texas.

G09.07 PAYMENT

- A. The work specified in this Section shall be considered incidental and payment will be included as part of the appropriate lump sum or unit prices specified in the Proposal and Bid Schedule.

END OF SECTION

Brame Park Improvements

OAK GROVE DRIVE, BELLMEAD, TEXAS 76705

Site Development Plan



A PROJECT BY

INDEX OF SHEETS

REVIEWED FOR CONSTRUCTION:

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION, AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

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COEFFICIENT
ENGINEERING

Project:

BRAME PARK IMPROVEMENTS

FOR BIDDING PURPOSES ONLY

BELLMEAD, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submittal Date:

August 19, 2025

Revisions:

Sheet Title:

COVER SHEET

Sheet Number:

G 1.0

Application Number:

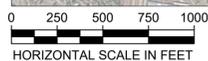
CITY OF BELLMEAD

DATE

CITY MANAGER
YOUSRY "YOST" ZAKHARY
MAYOR
JAMES CLEVELAND

COUNCIL MEMBERS
PRECINCT 1: KAREN COLEMAN
PRECINCT 2: TRAVIS GIBSON
PRECINCT 3: JAMES CLEVELAND
PRECINCT 4: TOMMY BAINBRIDGE
PRECINCT 5: BRYAN WINGET
COUNCILMAN AT LARGE: GARY MOORE

PROJECT LOCATION



TYLER RICHBURG, PLA
LANDSCAPE ARCHITECT'S NAME AND SEAL

September 11, 2025
DATE



Project:

BRAME PARK IMPROVEMENTS

BELLMEAD, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submital Date:

August 19, 2025

Revisions:

Sheet Title:

GENERAL NOTES

Sheet Number:

G 1.1

Application Number:

A. BIDDER/CONTRACTOR ELIGIBILITY

1. A NON-MANDATORY PRE-BID CONFERENCE WILL BE HELD PRIOR TO BID OPENING FOR THE PROJECT.

B. GENERAL NOTES

1. ALL CONSTRUCTION FOR THIS PROJECT SHALL GENERALLY CONFORM TO THE REQUIREMENTS OF THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES (2014 EDITION) UNLESS EXCEPTED OR NOTED ON THESE PLANS.
2. ALL BARRICADES, SIGNS AND TRAFFIC CONTROL FOR THIS PROJECT SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
3. THE BIDDERS FOR THIS PROJECT SHALL FAMILIARIZE THEMSELVES WITH ALL REQUIREMENTS OF WORKING IN STATE AND CITY OF BELLMEAD RIGHTS-OF-WAY AND EASEMENTS. THE BIDDERS SHALL FAMILIARIZE THEMSELVES WITH ALL INSURANCE REQUIREMENTS FOR SAID WORK AND SHALL INCLUDE IN THEIR BIDS, INSURANCE COSTS AND INSURANCE PREMIUMS THAT PROVIDE FOR THE STATE OF TEXAS, THE CITY OF BELLMEAD, AND THE ENGINEER AS ADDITIONAL INSURED UNDER THE CONTRACTOR'S POLICIES.
4. THE CONTRACTOR SHALL IF REQUIRED PROVIDE THE CITY OF BELLMEAD WITH A BARRICADE, SIGNING AND TRAFFIC PLAN WHICH WILL INCLUDE HOW TRAFFIC WILL BE HANDLED DURING CONSTRUCTION, THE BARRICADES, SIGNS AND LIGHTS SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. THE PLAN SHALL BE PREPARED BY A TEXAS REGISTERED PROFESSIONAL ENGINEER. STANDARD TRAFFIC CONTROL PLANS HAVE BEEN PROVIDED. SHOULD THE CONTRACTOR CHOOSE TO DEVIATE AND DEVELOP THEIR OWN TRAFFIC CONTROL IT SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.
5. CONTRACTOR SHALL NOTIFY THE CITY OF BELLMEAD A MINIMUM OF THREE (3) WORKING DAYS (MONDAY-FRIDAY) IN ADVANCE OF CONSTRUCTION STARTUP, FOLLOWED BY A LETTER OF CONFIRMATION. CONTRACTOR SHALL ALSO GIVE A MINIMUM OF THREE (3) WORKING DAYS (MONDAY-FRIDAY) NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OR PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. THE FOLLOWING ARE TELEPHONE NUMBERS OF THE ENTITIES MOST LIKELY TO BE AFFECTED:

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|--------------------------------|----------------------------------|
| TEXAS ONE CALL | 1-800-545-6005 |
| TEXAS EXCAVATION SAFETY SYSTEM | 1-800-344-8377 |
| TXU ELECTRIC DELIVERY | 1-512-244-5691 |
| ATMOS ENERGY | 1-866-332-8667 |
| CITY OF BELLMEAD, TEXAS | 1-254-799-2436 |
| CABLEVISION | 1-254-778-9441 |
| CENTROVISION | 1-254-773-1163 |
| SBC | 1-254-954-4102 OR 1-800-669-8344 |
| AT&T | 1-800-252-1133 |
6. LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS WAS COMPILED FROM RECORD INFORMATION. NO WARRANTY IS IMPLIED AS TO THE ACTUAL LOCATION OF EXISTING UTILITIES. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION BY POTHOLING. CONTRACTOR SHALL CALL THE CITY OF BELLMEAD, IF THERE ARE ANY CONFLICTS BETWEEN PROPOSED AND EXISTING UTILITIES, OR IF THE EXISTING UTILITIES ARE IN ANY WAY DIFFERENT FROM WHAT IS SHOWN ON THE DRAWINGS, THEN IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OR OTHER AFFECTED UTILITY BEFORE PROCEEDING WITH ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESOLVING ALL CONFLICTS AT HIS EXPENSE. THE OWNER WILL CONSIDER ANY CONFLICTS AT SAID LOCATIONS ON A CASE BY CASE BASIS IN ORDER TO DETERMINE IF THE CONTRACTOR SHOULD BE REIMBURSED FOR HIS EXPENSE IN SOLVING SAID CONFLICT.
7. CONTRACTOR SHALL MAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF THESE CONSTRUCTION OPERATIONS ARE TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR TO AT LEAST THE PREEXISTING CONDITION AT NO ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR SHALL COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES WITH ALL APPLICABLE UTILITY COMPANY OR COMPANIES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
9. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING OR A BREAK IN A LINE OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. CONTRACTOR TO COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
10. THE CONTRACTOR SHALL CONTACT THE CITY OF BELLMEAD FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR IS TO VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS, THE CITY OF BELLMEAD WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT RIGHT-OF-WAY/EASEMENT LINES.
11. CONTRACTOR SHALL STRIP 6 INCHES OF TOPSOIL FROM ALL AREAS SUBJECT TO GRADE MODIFICATIONS. REMOVE ANY AREA OF WEAK SOIL.
12. WITHIN CITY OF BELLMEAD RIGHT-OF-WAY, RESIDENTIAL DRIVEWAYS ARE TO HAVE A 10% MAXIMUM GRADE. NON RESIDENTIAL DRIVEWAYS ARE TO HAVE A 3% MAXIMUM GRADE FOR THE FIRST THIRTY (30) FEET OFF THE EDGE OF PAVEMENT.
13. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE. THIS WILL NOT BE A SEPARATE PAY ITEM, UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS.
14. THE CONTRACTOR SHALL MAKE AN EXAMINATION OF THE PROJECT SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF THE WORK TO BE ACCOMPLISHED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY WORK MADE NECESSARY BY UNUSUAL CONDITIONS OR OBSTACLES ENCOUNTERED DURING THE PROGRESS OF THE WORK, WHICH CONDITIONS OR OBSTACLES ARE READILY APPARENT UPON A VISIT TO THE SITE. IF THERE ARE ANY QUESTIONS OF THIS REGARD OR IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE SUBMISSION OF BIDS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF HIS MATERIALS AND EQUIPMENT FROM THEFT, VANDALISM, ANIMALS, FIRE, ETC., WHILE SAID MATERIALS AND EQUIPMENT ARE ON THE PROJECT WHETHER STORED OR INSTALLED IN PLACE, UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE CITY OF BELLMEAD.
16. UPON COMPLETION OF THE PROJECT, THE SITE(S) AS DEFINED HEREIN, SHALL BE CLEANED OF ALL DEBRIS AND LEFT IN A NEAT AND PRESENTABLE CONDITION.
17. IN THOSE CASES WHERE FIXED FEATURES REQUIRE, THE DESIGN SLOPES INDICATED HEREIN AND ON THE CROSS SECTIONS MAY BE MODIFIED IN THE FIELD AS DETERMINED BY THE ENGINEER IF EXISTING CONDITIONS SO REQUIRE.

18. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT ALL ADJOINING PAVEMENT SECTIONS SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION AND ANY DAMAGES INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.
19. WHERE EXISTING PAVEMENT ADJOINS NEW PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAWED TO A NEAT TRANSVERSE LINE TO PERMIT ADEQUATE JOINING.
20. AT TIMES REQUESTED BY THE CONTRACTOR, THE CITY OF BELLMEAD STREET DEPARTMENT FORCES WILL REMOVE AND/OR RELOCATE EXISTING TRAFFIC SIGNS. FIVE WORKING DAYS NOTICE WILL BE REQUIRED.
21. ACCESS TO OFFICES, BUSINESSES AND DRIVEWAYS ALONG THE PROJECT MUST RECEIVE PRIORITY BY THE CONTRACTOR. ACCESS SHALL BE MAINTAINED AT ALL TIMES.
22. EXISTING PAVING, BUILDINGS AND OTHER ITEMS SHOWN ON THE PLANS ARE NOT SPECIFICALLY RELATED TO THE WORK OF THE CONTRACTOR AND IS FOR INFORMATION ONLY, UNLESS OTHERWISE NOTED.
23. THE PROCUREMENT AND TRANSPORTATION OF WATER REQUIRED FOR INCLUSION IN THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR.
24. ALL UTILITY TECHNICAL SPECIFICATIONS FOR THE CITY OF BELLMEAD SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS LISTED BELOW AND AMENDMENTS INCLUDED HEREIN. THE TECHNICAL SPECIFICATIONS FROM "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (BLUE BOOK) BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS:

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
REGIONAL INFORMATION CENTER
P.O. BOX 5888 ARLINGTON, TEXAS 76005-5888

WILL BE USED ON THE PROJECT. COPIES MAY BE PURCHASED FROM THE ABOVE ADDRESS OR REVIEWED AT THE CITY ENGINEERS OFFICE. RESPONSIBILITY FOR UPDATING THESE COPIES WILL BE THE CONTRACTORS RESPONSIBILITY.

C. CONSTRUCTION LAYOUT/PROJECT COORDINATION

1. CONTRACTOR SHALL LOCATE, PROTECT AND MAINTAIN BENCHMARKS, MONUMENTS AND CONTROL POINTS. RE-ESTABLISHMENT OF DISTURBED OR DESTROYED ITEMS SHALL BE ACCOMPLISHED BY A TEXAS REGISTERED PROFESSIONAL LAND SURVEYOR AT NO COST TO THE OWNER.
2. PRE-CONSTRUCTION CONFERENCE
 - A. PRIOR TO BEGINNING WORK ON THE PROJECT AND SOON AFTER THE AWARD OF THE CONTRACT, A CONFERENCE WILL BE HELD AMONG THE REPRESENTATIVES OF THE CITY OF BELLMEAD, THE ENGINEER, THE CONTRACTOR AND ANY SUBCONTRACTOR THAT WILL BE INVOLVED IN THE WORK. AT THAT TIME THE CONTRACTOR SHALL SUBMIT CHARTS OR BRIEFS, OUTLINING THE MANNER OF EXECUTION OF THE WORK THAT IS INTENDED IN ORDER TO COMPLETE THE SPECIFIED WORK WITHIN THE ALLOTTED TIME. THIS CONFERENCE WILL MORE COMPLETELY ESTABLISH THE SEQUENCE OF WORK TO BE FOLLOWED AND ESTABLISH THE ESTIMATED PROGRESS SCHEDULE FOR COMPLETION OF THE VARIOUS TASKS. WHEN APPLICABLE, THE PRE-CONSTRUCTION CONFERENCE WILL BE HELD ONLY AFTER INSTALLATION OF THE EROSION AND SEDIMENTATION CONTROLS. THIS CONFERENCE SHOULD TAKE PLACE ON THE SITE TO DEMONSTRATE COMPETENCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN.
 - B. IN ADDITION, AT THIS CONFERENCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING THE ENGINEER WITH ALL OF THE FOLLOWING, AS SPECIFIED HEREIN OR AS DIRECTED BY THE ENGINEER:
 - a. SAMPLES OF ALL MATERIALS TO BE USED ON THE PROJECT WITH IDENTIFICATION AS TO PRODUCT NAME, NAME, LOCATION, PHONE NUMBER (INCLUDING AREA CODE) AND MAILING ADDRESS OF PRODUCT SOURCE AND MANUFACTURER, IF DIFFERENT FROM SOURCE; CONTENT OF PRODUCT; AMOUNT OF EACH INGREDIENT IN THE PRODUCT, AND MANUFACTURER'S DIRECTIONS AS TO USE AND APPLICATION OF THE PRODUCT, IF APPLICABLE.
 - b. MANUFACTURER'S LITERATURE OF ALL MATERIALS AND EQUIPMENT INSTALLED ON THE PROJECT.
3. THE PLANS FOR THIS PROJECT SHOW PROPOSED ELEVATIONS, SLOPES AND DIMENSIONS THAT ARE INTENDED FOR ACTUAL PLACEMENT. HOWEVER, THERE MAY BE SOME INSTANCES WHERE EXISTING CONDITIONS MAKE IT IMPRACTICAL TO ACHIEVE THE IDEAL. IN THOSE INSTANCES, THE ENGINEER WILL ASSIST THE CONTRACTOR IN MAKING PROPER FIELD CHANGES TO BETTER ACCOUNT FOR FIELD CONDITIONS.
4. THE CONTRACTOR FOR THE PROJECT WILL MARK THE LIMITS OF CONSTRUCTION AND RIGHT-OF-WAY PRIOR TO COMMENCEMENT OF THE PROJECT. PRIVATE PROPERTY SHALL BE OFF LIMITS UNLESS WRITTEN PERMISSION IS GIVEN TO THE CONTRACTOR BY THE OWNER. THE CITY OF BELLMEAD WILL NOT BE RESPONSIBLE FOR ANY CONTRACTOR OPERATIONS OFF OF THE PROJECT SITE.

D. STORM WATER NOTES

1. STORM WATER AND DRAIN LINES SHALL BE AS FOLLOWS.
 - A. ALL PIPES 18-INCHES OR GREATER IN DIAMETER SHALL BE C-76 CLASS III REINFORCED CONCRETE PIPE, UNLESS OTHERWISE NOTED.
 - B. ALL PIPE JOINTS SHALL BE WRAPPED AND SECURED AROUND EACH JOINT WITH AN 18-INCH WIDE STRIP OF MARFI-140-N OR APPROVED EQUIVALENT.
2. DO NOT EXCEED MANUFACTURER'S RECOMMENDATION FOR CURVATURE OF LINES AND/OR DEFLECTION OF PIPE JOINTS. INSTALL JOINTS OR FITTINGS AS REQUIRED. CONTRACTOR SHALL NOT USE BEND OR WYES.
3. THROUGHOUT THE CONSTRUCTION, AND THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR IS TO ASSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED.
4. PRIOR TO FINAL ACCEPTANCE, ALL NEW STORM SEWER STRUCTURES AND STORM SEWER PIPE SHALL BE CLEANED OUT BY THE CONTRACTOR. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED AS SUBSIDIARY TO THE VARIOUS BID ITEMS.

E. SITE GRADING/CONNECTION NOTES

1. CONTRACTOR SHALL CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES. THIS SHALL BE SUBSIDIARY TO THE PROJECT.
2. CONTRACTOR SHALL REMOVE BUILT UP MATERIAL ON ADJACENT PUBLIC ROADWAYS RESULTING FROM HIS WORK. CLEANING TO BE AT LEAST ONCE A DAY. THIS SHALL BE SUBSIDIARY TO THE PROJECT.
3. CONTRACTOR SHALL NOT STOCKPILE MATERIAL WITHIN THE 100 YEAR FLOOD PLAIN.
4. THIS PROJECT IS A UNIT PRICE PROJECT AND PAYMENTS SHALL BE MADE AT THE UNIT PRICE AND QUANTITY FOR ITEMS CONSTRUCTED AND/OR INSTALLED.

5. THE SUCCESSFUL CONTRACTOR SHALL DEVELOP A PROJECT SCHEDULE FOR THE PROJECT IN PRIMAVERA, MICROSOFT OFFICE, EXCEL, OR OTHER SOFTWARE THAT ILLUSTRATES THE TASKS TO COMPLETE THE PROJECT WITH A CRITICAL PATH. THE SCHEDULE SHALL BE MAINTAINED THROUGHOUT THE PROJECT AND THE CONTRACTOR SHALL BE PREPARED TO REVIEW AND DISCUSS THE SCHEDULE AT THE CONSTRUCTION PROGRESS MEETINGS. CONSTRUCTION PROGRESS MEETINGS WILL BE HELD AT A MINIMUM OF ONCE PER MONTH AND THE CITY RESERVES THE RIGHT TO HAVE CONSTRUCTION PROGRESS MEETINGS AS REGULARLY AS THEY DEEM NECESSARY. THIS SHALL BE SUBSIDIARY TO THE PROJECT.
6. ALL HYDRO MULCH ON THIS PROJECT SHALL BE INSTALLED UTILIZING HIGH PERFORMANCE - FLEXIBLE GROWTH MEDIUM. THE SPECIFICATION FOR HIGH PERFORMANCE - FLEXIBLE GROWTH MEDIUM IS INCLUDED IN THE SPECIFICATIONS AND CONTRACT DOCUMENT BOOK FOR THIS PROJECT. ALL ELEMENTS OF THE SPECIFICATION SHALL BE PERFORMED AND INCLUDED IN THE PROJECT. ALL BID ITEMS FOR FURNISHING AND INSTALLING HYDRO-MULCH SHALL INCLUDE HIGH PERFORMANCE - FLEXIBLE GROWTH MEDIUM, WATER TO ESTABLISH AND MAINTAIN GRASS AND FINAL MOWING PRIOR TO ACCEPTANCE.
7. ALL STORAGE AREAS FOR MATERIALS AND EQUIPMENT OR OTHER AREAS DISTURBED BY THE CONTRACTOR IN THE CONSTRUCTION OF THIS PROJECT THAT ARE OUTSIDE OF THE AREA TO REMAIN NON-VEGETATED SHALL BE RE-VEGETATED AT NO EXPENSE TO THE CITY.
8. THE CONTRACTOR SHALL NOTIFY AFFECTED PROPERTY OWNERS A MINIMUM OF 1 WEEK PRIOR TO THE START OF CONSTRUCTION IN AND AROUND THEIR RESPECTIVE PROPERTIES.
9. INCLUDED WITH THE DESIGN PACKAGE ARE THE DESIGN AUTOCAD FILES THAT INCLUDES EXISTING SURFACE AND PROPOSED SURFACE. USE OF THE AUTOCAD FILE IS AT THE RISK OF THE BIDDERS. NO WARRANTY IS ISSUED BY THE DESIGN ENGINEER OR THE CITY FOR USE OF THIS FILE.
10. ALL STORAGE AREAS FOR MATERIALS AND EQUIPMENT OR OTHER AREAS DISTURBED BY THE CONTRACTOR IN THE CONSTRUCTION OF THIS PROJECT THAT ARE OUTSIDE OF THE AREA TO REMAIN NON-VEGETATED SHALL BE RE-VEGETATED AT NO EXPENSE TO THE CITY.
11. ALL WATER VALVES, WATER METERS, MANHOLES, HAND HOLES, PULL BOXES, JUNCTION BOXES, ETC. THAT ARE IN THE AREA OF CONSTRUCTION SHALL BE ADJUSTED TO THE FINAL GRADE OF INFRASTRUCTURE. THIS SHALL BE SUBSIDIARY TO THE PROJECT.
12. ALL WATER SERVICES SHALL BE HDPE AS SHOWN IN THE DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL WATER METERS AND INSTALLING ALL ITEMS AND APPARATUS REQUIRED BY THE CITY OF BELLMEAD AND OTHER REGULATORY AGENCIES FOR WATER SERVICE INSTALLATIONS.
13. ALL ASPHALT PAVING SHALL RECEIVE PRIME COAT AND TACK COAT AS APPROPRIATE. THIS SHALL BE SUBSIDIARY TO THE RESPECTIVE ASPHALT BID ITEMS.
14. THERE MAY BE INSTANCES IN WHICH FIELD ADJUSTMENTS OR CHANGES WILL BE REQUIRED FOR CONSTRUCTION OF THIS PROJECT. IN THOSE INSTANCES, THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO MAKE FIELD ADJUSTMENTS IN ORDER TO SUCCESSFULLY COMPLETE THE PROJECT. THESE ADJUSTMENTS WILL BE PAID UTILIZING EXISTING BID PRICES AT THE UNIT PRICE BID AND QUANTITY INSTALLED. IN THE EVENT THERE IS NOT A BID ITEM FOR A CONSTRUCTION TASK, A CHANGE ORDER WILL BE ISSUED.
15. CURB INLETS THAT EXTEND INTO THE SIDEWALKS SHALL BE INCORPORATED AND MEET ALL ADA STANDARDS. THIS SHALL BE SUBSIDIARY TO THE PROJECT.
16. ALL STORM WATER JUNCTION BOXES AND INLETS SHALL INCLUDE MANHOLES AND SHALL BE SUBSIDIARY TO THE APPROPRIATE BID ITEM FOR JUNCTION BOXES AND INLETS.
17. THE BID ITEM "FURNISH & INSTALL COMPACTED FILL, COMPLETE FOR" IN A QUANTITY OF CUBIC YARDS IS BASED ON THE AUTOCAD MODEL WHICH HAS BEEN PROVIDE THE QUANTITY IS IN COMPACTED CUBIC YARDS AND ALL BIDDERS SHALL APPLY THEIR CONVERSION FROM LOOSE TRUCK CUBIC YARDS TO THE BID ITEMS FOR COMPACTED CUBIC YARDS. THIS BID ITEM AND THE BID ITEM "UNCLASSIFIED EXCAVATION" SHALL BE PLAN QUANTITY ITEMS AND SHALL BE PAID THE QUANTITY SHOWN ON THE BID SCHEDULE UNLESS THERE IS A SIGNIFICANT CHANGE TO THE GRADING PLAN FOR THE PROJECT.
18. ALL DEWATERING FOR CONSTRUCTION SHALL BE SUBSIDIARY TO THE PROJECT.
19. THE SUCCESSFUL CONTRACTOR SHALL PERFORM MOWING OF THE VEGETATION ONCE GRASS HAS REACHED A HEIGHT OF 3 INCHES AND A FINAL MOWING OF THE PROJECT PRIOR TO ACCEPTANCE. THIS SHALL BE SUBSIDIARY TO THE PROJECT.
20. CONTRACTOR SHALL MOW OR SHRED RIGHT-OF-WAY AND EASEMENTS PRIOR TO RELEASING THE PROJECT TO THE CITY OF BELLMEAD. THIS WILL BE SUBSIDIARY TO THE PROJECT AND WILL NOT HAVE A SPECIAL PAY ITEM.
21. REQUIRED FILL EMBANKMENT OUTSIDE OF THE ROADWAY SHALL BE PLACED AND COMPACTED PER TECHNICAL SPECIFICATIONS OR MAXIMUM 6 INCH LOOSE LIFTS AND COMPACTED TO MINIMUM 95% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE TO +2%. IF NOT OTHERWISE SPECIFIED.
22. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALK DAMAGED OR REMOVED BY THE CONTRACTOR THAT ARE NOT A PART OF THIS CONTRACT ARE TO BE REPAIRED BY THE CONTRACTOR TO AT LEAST THE PREEXISTING CONDITION AT HIS EXPENSE BEFORE ACCEPTANCE OF THE WORK.
23. MAKE CONNECTION BETWEEN NEW AND EXISTING ASPHALT STREETS BY REMOVING EXISTING STREET FROM THE END OF EXISTING PAVEMENT UNTIL FULL DEPTH BASE AND HMAC ARE ENCOUNTERED AND HMAC APPEARS TO BE IN SOUND CONDITION. PROVIDE EXPANSION JOINTS AND DOWELS WHERE CONNECTING EXISTING CURB TO NEW CONSTRUCTION.
24. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE THE CROWN OF THE INTERSECTING STREETS TO CULMINATE IN A DISTANCE OF 40 FEET FROM THE INTERSECTING CURB LINE, UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
25. UNLESS OCCURRING AT AN EXPANSION JOINT, MAKE CONNECTION BETWEEN NEW AND EXISTING SIDEWALK BY EXPOSING AND CLEANING A ONE FOOT LENGTH OF WELDED WIRE REINFORCEMENT AND LAPPING NEW REINFORCEMENT ONTO THIS LENGTH.
26. STREETS SHALL BE CUT AND/OR FILLED TO SUBGRADE PRIOR TO UTILITY CONSTRUCTION.

F. TESTING AND SUBMITTALS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING MATERIAL SAMPLES AS WELL AS ANY MANUFACTURERS LITERATURE OF MATERIALS USED ON THIS PROJECT AS REQUIRED BY THE ENGINEER. ANY COSTS ASSOCIATED WITH ANY SAMPLING AND TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THESE COSTS SHALL BE CONSIDERED AS INCIDENTAL AND THE CONTRACTOR WILL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION.
2. CONTRACTOR SHALL COORDINATE ALL MATERIALS TESTING WITH THE CITY OF BELLMEAD CONSTRUCTION REPRESENTATIVE AND THE CITY TESTING COMPANY, INCLUDING SOIL DENSITY TESTS AND RELATED SOILS ANALYSIS. TESTS TO BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY UNDER CONTRACT WITH THE CITY OF BELLMEAD, AT THE FREQUENCY, TIME AND LOCATION AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS. A COPY OF THE TEST RESULTS TO BE FORWARDED TO THE CITY OF BELLMEAD, THE OWNERS REPRESENTATIVE, AND THE CONTRACTOR. TESTS WHICH SHOW UNSATISFACTORY RESULTS ARE TO BE REPEATED AT THE EXPENSE OF THE CONTRACTOR SUBSEQUENT TO THE CONTRACTOR'S REMEDIAL ACTIVITIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PAY FOR ALL CHARGES OF TESTING LABORATORIES FOR SERVICES IN CONNECTION WITH INITIAL TESTS MADE ON ALL IMPORTED MATERIALS TO THE PROJECT SITES INCLUDING BUT NOT LIMITED TO EMBEDMENT MATERIALS, FILL MATERIAL, BACKFILL MATERIAL, SELECT MATERIAL, CRUSHED LIMESTONE BASE, SUBBASE, CONCRETE, STEEL, WOOD FORMS, LIQUID ASPHALT, AGGREGATE, WATER, CEMENT, CURING COMPOUND, GUARD RAIL, HOT MIX, ETC.
4. THE TESTS FOR WHICH THE CONTRACTOR WILL TYPICALLY BE RESPONSIBLE ARE ATTERBERG LIMITS, SIEVE ANALYSIS, PLASTICITY INDICES, MIX DESIGN, CALIFORNIA BEARING RATIOS, TRIAXIAL TESTING, PROCTORS (MOISTURE DENSITY CURVES) AND ALL TESTS REQUIRED BY THE SPECIFICATIONS THAT PROVE THE MATERIAL BROUGHT TO THE PROJECT SITES MEETS OR EXCEEDS THE SPECIFICATIONS AND CONTRACT DOCUMENTS. THE CITY OF BELLMEAD WILL PAY ALL THE CHARGES OF TESTING LABORATORIES FOR SERVICES IN CONNECTION WITH IN PLACE FIELD DENSITIES, CONCRETE CYLINDERS TESTING, HMC DENSITY TESTS AND ANY IN PLACE TEST REQUIRED FOR QUALITY ASSURANCE. RETESTING AFTER FAILURE OF INPLACE TESTS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

G. CONCRETE FOR CONSTRUCTION

1. THE CONCRETE FOR ALL VALLEY GUTTERS, RADIUS UNITS, DRIVEWAYS, BOX CULVERTS, APRONS, 1. HEADWALLS, AND WING WALLS SHALL BE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 P.S.I., A MINIMUM 7-DAY FLEXURAL STRENGTH OF 510 P.S.I., A MAXIMUM WATER TO CEMENT RATIO OF 6.0 GALLONS PER SACK AND BE A MINIMUM (6) SIX SACKS PER CUBIC YARD OF CONCRETE SHALL BE REQUIRED UNLESS OTHERWISE SPECIFIED IN PLANS. ALL OTHER CONCRETE SHALL BE AS SPECIFIED ON THE PLANS.
2. TYPE 2 MEMBRANE CURING COMPOUND (WHITE PIGMENTED) SHALL BE USED FOR THIS PROJECT.
3. ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH THE REQUIREMENTS OF TxDOT ITEM 526 "MEMBRANE CURING".
4. CONCRETE RIP RAP SHALL BE 4-INCHES IN THICKNESS, CLASS "A" CONCRETE WITH #4 BARS 16" ON CENTER EACH WAY. FINISHED CONCRETE SHALL RECEIVE A BROOM FINISH AND BE SPRAYED WITH TYPE 2 MEMBRANE CURING COMPOUND. THE RIP RAP SHALL BE PLACED WITH A 24-INCH DEPTH BY 6-INCH WIDE TOE DITCH AT THE BOTTOM OF SLOPE EDGE AND WITH AN 18-INCH DEPTH BY 6-INCH WIDE TOE DITCH AT THE TOP OF SLOPE EDGE AND ALONG THE EDGE OF THE SLOPE, UNLESS OTHERWISE NOTED ON THE PLANS.
5. ALL EXPANSION JOINT MATERIAL FOR DRIVEWAY AND SIDEWALK INSTALLATIONS SHALL BE GRADE 1.5 REDWOOD (1/2" x 3 1/2" DIMENSION) OR 3/4" ASPHALT IMPREGNATED FIBERBOARD. SNAP-CAP, VOID CAP OR OTHER APPROVED MATERIAL TO ACHIEVE A CLEAN, STRAIGHT EXPANSION JOINT SHALL BE USED. THE EXPANSION JOINT SHALL BE SEALED WITH A TxDOT APPROVED MATERIAL MEETING THE REQUIREMENT OF DMS-6310.
6. ALL REINFORCING STEEL FOR CONCRETE SHALL MEET ASTM A 615, GRADE 60.
7. PRE-CAST INLETS, JUNCTION BOXES, MANHOLES AND BOX CULVERTS ARE ALLOWABLE ON THIS PROJECT. HOWEVER, ALL SUPPLIER SUBMITTALS WILL BE REQUIRED AND THE OWNER RESERVES THE RIGHT TO CHANGE ELEVATIONS AND SLOPES OF, TO AND FROM EACH PROPOSED STRUCTURE AT ANY TIME.

H. JOB SITE SAFETY NOTES

1. ALL CONSTRUCTION OPERATIONS FOR THIS PROJECT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COPIES OF THE OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE OBTAINED FROM OSHA: 903 SAN JACINTO, AUSTIN, TEXAS.
2. THESE PLANS, PREPARED BY KASBERG, PATRICK & ASSOCIATES, LP, DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR HIS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF KASBERG, PATRICK & ASSOCIATES, LP, REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE WORK.
3. THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY PLAN SIGNED AND SEALED BY LICENSED ENGINEER IN THE STATE OF TEXAS TO THE CITY OF BELLMEAD FOR RECORD PURPOSES, AS REQUIRED BY THE LAWS OF THE STATE OF TEXAS. IMPLEMENTATION OF THE SUBMITTED TRENCH SAFETY PLAN SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ALL JOB SITE SAFETY, FOR MANAGEMENT OF JOB SITE PERSONNEL, FOR SUPERVISION OF THE USE OF JOB SITE EQUIPMENT AND FOR DIRECTION OF ALL CONSTRUCTION PROCEDURES, METHODS AND ELEMENTS REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
5. BLASTING IS NOT PERMITTED ON THIS PROJECT.
6. IN ADDITION TO OTHER SAFETY REQUIREMENTS, ALL TRUCKS USED FOR HAULING MATERIAL AND/OR EQUIPMENT TO AND/OR FROM THIS PROJECT SHALL BE EQUIPPED WITH AN AUDIBLE BACKUP WARNING DEVICE THAT IS IN GOOD OPERATING CONDITION.
7. ADVISORY SPEED LIMIT SIGNS SHALL BE PLACED AS DIRECTED BY THE CITY OF BELLMEAD AND THE TEXAS DEPARTMENT OF TRANSPORTATION. THE LOCATION AND SPEED WILL BE DETERMINED BY THOSE TWO ENTITIES IN ORDER TO FIT PROJECT CONDITIONS.
8. PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC IS OF THE UTMOST IMPORTANCE FOR THE PROJECT. THE TRAFFIC CONTROL AND SEQUENCE OF CONSTRUCTION PLAN SHALL ADDRESS ALL ANTICIPATED SITUATIONS IN THIS REGARD WITH SUFFICIENT DETAIL. THE CONTRACTORS PLAN WILL BE REVIEWED BY LOCAL TxDOT OFFICIALS AND THE CITY OF BELLMEAD.

I. ENVIRONMENTAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING SANITARY FACILITIES ON THIS PROJECT FOR EMPLOYEES.
2. CONTRACTOR SHALL NOT PLACE ASPHALT PRODUCTS ON THE GROUND WITHIN 48 HOURS OF FORECASTED RAIN.
3. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL, INCLUDING METHODS OF HANDLING AND DISPOSAL.
4. CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES TO BE COORDINATED WITH THE CITY OF BELLMEAD. THIS SHALL BE SOLE RESPONSIBILITY OF THE CONTRACTOR.

- CONTRACTOR SHALL LOCATE MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR TO PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS AND OTHER POTENTIALLY TOXIC MATERIALS.
- NO OPEN BURNING IS ALLOWED WITHIN THE BELLMEAD CITY LIMITS. BURNING IS ALLOWED IN BELL COUNTY BY AIR CURTAIN DESTRUCTORS METHOD AND PRIOR WRITTEN APPROVAL FROM APPLICABLE GOVERNMENT AGENCIES AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR CAN HAUL CLEARED VEGETATION TO AN ACCEPTABLE OFF-SITE LOCATION WITH WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE. PRIOR TO CONSTRUCTION THE CONTRACTOR MUST DESIGNATE TO THE CITY OF BELLMEAD REPRESENTATIVE WHICH METHOD WILL BE USED FOR DISPOSAL OF CLEARED VEGETATION.
- FUEL STORAGE IS NOT ALLOWED ON THIS PROJECT.
- CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT CONSTRUCTION AREA AND THE ACTIONS TO BE TAKEN TO REMEDY THE PROBLEM.
- CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
- IN THE EVENT THAT SITE GRADING AND/OR EXCAVATION REVEALS WHAT MIGHT BE HAZARDOUS MATERIALS, ALL CONSTRUCTION OPERATIONS SHALL CEASE. THE CITY OF BELLMEAD FIRE DEPARTMENT, FIRE CHIEF AND CITY ENGINEER SHALL BE CALLED TO THE SITE TO EVALUATE THE SITUATION. IF REQUIRED, THE CITY OF BELLMEAD WILL AUTHORIZE THE HAZARDOUS MATERIALS RESPONSE COMPANY WHICH IS UNDER CONTRACT WITH THE CITY OF BELLMEAD TO BEGIN REMEDIATION OF THE SITUATION. AT THAT SAME TIME, THE CITY OF BELLMEAD WILL DETERMINE WHAT CONSTRUCTION ACTIVITIES MAY CONTINUE THAT WOULD NOT ENDANGER CONSTRUCTION WORKERS OR CITIZENS.
- CONTRACTOR SHALL COPY THE CITY OF BELLMEAD AND THE ENGINEER ON SWPPP, NOI, AND NOT.

J. PROJECT DOCUMENTATION

- ALL BOUNDARY AND TOPOGRAPHIC SURVEY SERVICES FOR THIS PROJECT WERE PROVIDED BY QUICK, INC. OF SALADO, TEXAS.

K. SIDEWALK/ADA

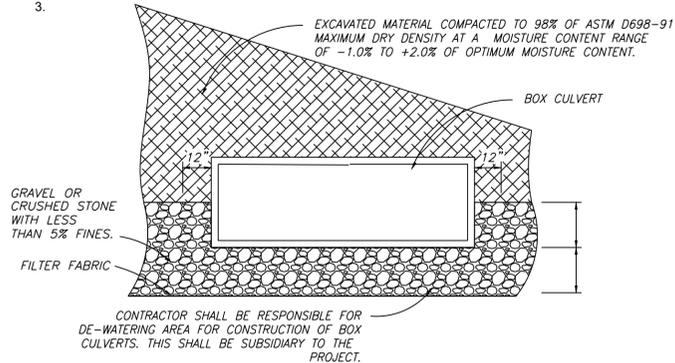
- THE SIDEWALK SHALL COMPLY WITH SECTION 403 OF THE TEXAS ACCESSIBILITY STANDARDS.
- THE RUNNING SLOPE OF THE PROPOSED SIDEWALK SHALL NOT BE STEEPER THAN 1:20 (5%)
- THE CROSS SLOPE OF THE SIDEWALK SHALL NOT BE STEEPER THAN 1:48 (2%)
- THE MAXIMUM ALLOWABLE VERTICAL CHANGE IS 1/4 - INCH.

L. PAVEMENT STRUCTURE SPECIFICATIONS / NOTES

- THE DETAIL FOR THE PAVEMENT STRUCTURE FOR THIS PROJECT IS SHOWN ON OTHER PLAN SHEETS.
- SINCE SOME VARIATION WAS FOUND IN SUBSURFACE CONDITIONS AT BORING LOCATIONS, ALL PARTIES INVOLVED SHOULD BE AWARE THAT EVEN MORE VARIATION MAY BE ENCOUNTERED BETWEEN BORING LOCATIONS. STATEMENTS IN THE GEOTECHNICAL REPORT FOR THE PROJECT AS TO SUBSURFACE OVER GIVEN AREAS ARE INTENDED ONLY AS ESTIMATIONS BASED ON DATA OBTAINED AT SPECIFIC BORING LOCATIONS.

M. REINFORCED CONCRETE BOX CULVERTS

- DEWATERING SHALL BE REQUIRED AS NEEDED FOR CONSTRUCTION AND BE SUBSIDIARY TO THE BOX CULVERT PAY ITEM(S).
- THE FOLLOWING DETAIL SHALL GOVERN WITH RESPECT TO EMBEDMENT AND BACKFILL FOR REINFORCED CONCRETE BOX CULVERTS:
-



**REINFORCED CONCRETE BOX CULVERT
TYPICAL BEDDING AND BACKFILL**
NOT TO SCALE

N. STORMWATER POLLUTION PREVENTION PLAN (SW3P)

- CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SW3P) FOR THE PROJECT. THE ENGINEER HAS INCORPORATED IN THESE CONSTRUCTION DRAWINGS SOME MINIMUM STORM WATER CONTROLS THAT SHOULD BE INCLUDED INTO THE CONTRACTOR'S PLANS.
- CONTRACTOR SHALL SUBMIT THE SW3P TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THE ENGINEER AND THE CITY OF BELLMEAD, COMPLETE THE NOTICE OF INTENT (NOI) AND FORWARD THE NOTICE OF TERMINATION (NOT) WHEN THE PROJECT IS COMPLETED AND ACCEPTED BY THE CITY OF BELLMEAD, TEXAS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING, MAINTAINING, REPORTING AND INSPECTION OF THE WATER POLLUTION ABATEMENT PLAN AND INSTALLED CONTROLS.
- AFTER PERMANENT EROSION CONTROL HAS BEEN ESTABLISHED THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES. THIS SHALL BE SUBSIDIARY TO THE

EROSION CONTROL PAY ITEMS.

O. BID SCHEDULE NOTES

- THE BID SCHEDULE CONTAINS A BID ITEM FOR PAYMENT TO THE CONTRACTOR FOR PROVIDING RECORD DRAWINGS (AS-BUILTS) FOR THIS PROJECT. FINAL PAYMENT FOR THE PROJECT WILL NOT BE RELEASED BY THE CITY OF BELLMEAD UNTIL THE RECORD DRAWINGS ARE DELIVERED TO THE ENGINEER IN AN ACCEPTABLE, LEGIBLE CONDITION.

P. WATERLINE

- ALL TESTING SHALL BE IN COMPLIANCE WITH CURRENT TCEQ REGULATIONS, AND TECHNICAL SPECIFICATIONS.
- ALL WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT TCEQ REGULATIONS, CHAPTER 290.
- ALL FIRE HYDRANTS TO BE CITY OF BELLMEAD STANDARD FIRE HYDRANT TYPE B, UNLESS OTHERWISE NOTED.
- PIPE MATERIAL FOR 3" AND SMALLER WATER LINES SHALL BE DR-21 PVC, CLASS 200. PIPE MATERIAL FOR 4-INCH TO 12-INCH WATER LINES SHALL BE PVC, AWWA C900, CLASS 150, DR-18 OR CLASS 250 DUCTILE IRON PIPE. PIPE MATERIAL FOR 14-INCH AND LARGER WATER LINES SHALL BE PVC, AWWA C905, CLASS 150, DR-18 OR CLASS 250 DUCTILE IRON PIPE.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT A PLAN FOR TIE-INS AND FLUSHING FOR APPROVAL BY OWNER. SCHEDULE SHALL BE CONFIRMED WITH THE CITY 48 HOURS PRIOR TO ACTIVITY.

Q. WASTEWATER LINE

- ALL WASTEWATER PIPE SHALL BE SDR 26 WITH PIPE STIFFNESS OF 115 PSI, UNLESS OTHERWISE NOTED OR SPECIFIED.
- ALL WASTEWATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT TCEQ REGULATIONS, CHAPTER 217.
- ALL TESTING SHALL BE IN COMPLIANCE WITH CURRENT TCEG REGULATIONS AND TECHNICAL SPECIFICATIONS.

R. UTILITY ABANDONMENT

- IF UTILITIES ARE TO BE ABANDONED, CONTRACTOR SHALL LOCATE UTILITIES, CUT AND CAP AT REMOVAL LIMITS AND PLACE AND COMPACT LOW PI SELECT FILL MATERIAL.
- CONTRACTOR SHALL CUT AND CAP EXISTING SERVICE CONNECTIONS TO BE RELOCATED SO THAT NO PIPE REMAINING IN THE GROUND IS "OPEN". METER BOXES AND METERS SHALL BE PRESENTED TO THE CITY OF BELLMEAD FOR SALVAGE.
- VALVES TO BE ABANDONED IN PLACE SHALL HAVE VALVE RISER AND VALVE BOX REMOVED AND SURFACE RESTORED PER EMBEDMENT DETAIL FOR ROADWAY OR OUT OF ROADWAY CONDITIONS.
- FIRE HYDRANTS SHALL BE REMOVED AT FITTING PRIOR TO HYDRANT. CONTRACTOR SHALL PRESENT FIRE HYDRANT TO THE CITY OF BELLMEAD FOR SALVAGE.
- ABANDONMENT OF EXISTING MANHOLES SHALL CONSIST OF:
 - REMOVING AND PROPERLY DISPOSING OF ALL DEBRIS WITHIN THE MANHOLE. CONTRACTOR SHALL NOT ALLOW DEBRIS TO WASH DOWNSTREAM.
 - REMOVE AND DISPOSE OF GRADE RINGS, CONE SECTION AND CONCRETE STRUCTURE TO A POINT 3 FEET BELOW THE FINISHED GRADE.
 - PLACE FLOWABLE FILL TO A POINT 3 FEET BELOW THE FINISHED SURFACE FOR INSTALLATION IN NATURAL GROUND OR TO THE LIMITS OF PROPOSED ASPHALT ROADWAY.

S. EARTHWORK

- SITE PREPARATION** - CONSTRUCTION AREAS SHALL BE STRIPPED OF ALL VEGETATION, ASPHALT AND UNDERLYING BASE MATERIAL, LOOSE SOILS, TOP SOILS, AND OTHER UNSUITABLE MATERIAL CURRENTLY PRESENT AT THE SITE. THIS SHALL BE INCLUDED IN THE BID ITEM FOR PREPARATION OF RIGHT-OF-WAY. ONCE FINAL SUBGRADE ELEVATIONS HAVE BEEN ACHIEVED, THE EXPOSED SUBGRADE SHALL BE CAREFULLY PROOFROLLED WITH A MINIMUM 25-TON PNEUMATIC TIRE ROLLER (AS PER TXDOT ITEM 216) TO DETECT WEAK ZONES IN THE SUBGRADE. WEAK AREAS DETECTED DURING PROOFROLLING, AS WELL AS ZONES CONTAINING DEBRIS OR ORGANICS AND VOIDS RESULTING FROM REMOVAL OF VEGETATION, ROOTS, ETC. SHALL BE REMOVED AND REPLACED WITH GENERAL FILL AS DESCRIBED BELOW. PROPER SITE DRAINAGE SHALL BE MAINTAINED DURING CONSTRUCTION SO THAT PONDING OF SURFACE RUNOFF DOES NOT OCCUR AND CAUSES CONSTRUCTION DELAYS AND/OR INHIBIT SITE ACCESS.
- FILL COMPACTION REQUIREMENTS** - SUBSEQUENT TO PROOFROLLING, AND JUST PRIOR TO PLACEMENT OF FILL, THE EXPOSED SUBGRADE WITHIN THE CONSTRUCTION AREAS SHALL BE EVALUATED FOR MOISTURE AND DENSITY. IF THE MOISTURE AND/OR DENSITY REQUIREMENTS DO NOT MEET THE CRITERIA DESCRIBED BELOW, THE SUBGRADE SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES, MOISTURE ADJUSTED AND COMPACTED TO AT LEAST 98 PERCENT OF THE TEX-114-E MAXIMUM DRY DENSITY (OR TEX-113-E AS APPROPRIATE).

| FILL TYPE ¹ | TxDOT OR USCS CLASSIFICATION | ACCEPTABLE LOCATION FOR PLACEMENT ² |
|---|------------------------------------|--|
| FLEXIBLE BASE ^{3A} | ITEM 247, TYPE A GRADE 2 OR BETTER | PAVEMENT BASE |
| TYPE C EARTHEN ROCK EMBANKMENT FILL ^{4A,5} | ITEM 132, TYPE C (6 ≤ PI ≤ 20) | WITHIN ROADWAY LIMITS, INCLUDING EMBANKMENTS |
| GENERAL FILL ⁶ | ON-SITE EXCAVATED SOIL | WITHIN ROADWAY LIMITS, INCLUDING EMBANKMENTS |

- PRIOR TO ANY FILLING OPERATIONS, SAMPLES OF PROPOSED BORROW AND/OR ON-SITE MATERIALS SHALL BE OBTAINED FOR LABORATORY TESTING. THE TESTS WILL PROVIDE A BASIS FOR EVALUATION OF FILL COMPACTION BY IN-PLACE DENSITY TESTING. A QUALIFIED SOIL TECHNICIAN SHALL PERFORM SUFFICIENT IN-PLACE DENSITY TESTS DURING THE FILLING OPERATIONS TO EVALUATE THAT PROPER LEVELS OF COMPACTION, INCLUDING DRY UNIT WEIGHT AND MOISTURE CONTENT, ARE BEING ATTAINED.
- ALL FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFT THICKNESSES OF 8 INCHES WITH COMPACTED LIFT THICKNESSES OF NO MORE THAN 6 INCHES. ALL LIFTS SHALL BE TESTED FOR DENSITY AND MOISTURE CONTROL, AS WELL AS PROOFROLLING. ALL FILL MUST BE FREE OF VEGETATION, ORGANIC MATTER, AND FOREIGN DEBRIS. IF COBBLES OR BOULDERS EXIST THAT ARE LARGER THAN THE MAXIMUM AGGREGATE SIZE TABULATED ABOVE, THEY MUST BE BROKEN DOWN OR PULVERIZED INTO SMALLER ROCK SIZES MEETING THE ABOVE REQUIREMENTS PRIOR TO BEING PLACED OR SPREAD OUT WITHIN PROPOSED CONSTRUCTION AREAS.

c. IMPORTED FLEXIBLE BASE AND TYPE C EMBANKMENT FILL SHALL MEET THE REQUIREMENTS OF THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) 2004 STANDARD SPECIFICATIONS MENTIONED ABOVE. TYPE C EMBANKMENT FILL SHALL NOT INCLUDE ANY ROCKS LARGER THAN 4 INCHES, PRIOR TO SPREADING AND COMPACTION.

d. THE USE OF IMPORTED "CRUSHER FINES" TO MEET THE TYPE C EMBANKMENT FILL SPECIFICATIONS IS PROHIBITED DUE TO THEIR SUSCEPTIBILITY TO POOR SUPPORT CHARACTERISTICS UPON EXPOSURE TO EXCESSIVE MOISTURE I WET WEATHER.

e. EXCAVATED ON-SITE SOILS, IF FREE OF ORGANICS, DEBRIS, AND ROCKS LARGER THAN 4 INCHES, MAY BE CONSIDERED FOR USE AS FILL IN GENERAL AREAS.

| FILL TYPE | PERCENT COMPACTION | MOISTURE CONTENT |
|--|--|------------------|
| FLEXIBLE BASE | 100% TEX-113-E | -3 TO +3 OPTIMUM |
| TYPE C EARTHEN OR ROCK EMBANKMENT FILL | ALL FILL LESS THAN 5 FEET : ≥95 PERCENT OF THE TEX-113-E OR TEX-114-E (DEPENDING UPON SOIL TYPE) FOR FILLS GRATER THAN 5 FEET IN DEPTH: ≥100 PERCENT OF THE TEX-113-E OR TEX-114-E (DEPENDING UPON SOIL TYPE) | -3 TO +3 OPTIMUM |
| GENERAL FILL (ON-SITE STRATUM I SOILS) | ALL FILL LESS THAN 5 FEET : ≥95 PERCENT OF THE TEX-113-E OR TEX-114-E (DEPENDING UPON SOIL TYPE) | 0 TO +4 OPTIMUM |
| GENERAL FILL (ON-SITE STRATUM III SOILS) | FOR FILLS GRATER THAN 5 FEET IN DEPTH: 100 PERCENT OF THE TEX-113-E OR TEX-114-E (DEPENDING UPON SOIL TYPE) | -3 TO +3 OPTIMUM |

T. PAVEMENT COMPONENTS

- HOT MIX ASPHALTIC CONCRETE (HMAC)** - THE ASPHALTIC CONCRETE SHALL BE PLANT MIXED, HOT LAID TYPE C (COARSE-GRADED SURFACE COURSE) AND TYPE B (FINE-GRADED BASE COURSE) MEETING THE MASTER SPECIFICATION REQUIREMENTS IN TXDOT ITEM 340. THE MIX SHALL BE DESIGNED FOR A STABILITY OF AT LEAST 35 IN ACCORDANCE WITH TEX-208-F AND SHALL BE COMPACTED TO BETWEEN 91 AND 96 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, WHEN TESTED IN ACCORDANCE WITH TEX-207-F AND TEX-227-F. IN ACCORDANCE WITH TXDOT ITEM 340, COMPACTED LIFT THICKNESSES SHALL BE BETWEEN 2.5 AND 5 INCHES FOR TYPE B HMAC AND 2 AND 4 INCHES FOR TYPE C HMAC.
- CRUSHED LIMESTONE BASE (CLB)** - BASE MATERIAL SHALL BE COMPOSED OF CRUSHED LIMESTONE MEETING THE REQUIREMENTS OF TXDOT ITEM 247, TYPE A, GRADE 2 OR BETTER. THE CLB SHALL BE COMPACTED TO A MINIMUM OF 100 PERCENT OF THE TEX-113-E MAXIMUM DRY DENSITY AT -3 TO +3 PERCENT OF OPTIMUM MOISTURE CONTENT. EACH LIFT OF CLB SHALL BE THOROUGHLY PROOFROLLED JUST PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS AND/OR ASPHALT.
- LIME-TREATED SUBGRADE (LTS)** -IF LIME-TREATED SUBGRADE IS UTILIZED, THE SUBGRADE SHALL BE TREATED WITH LIME MEETING THE REQUIREMENTS OF TXDOT ITEM 260. LIME TREATMENT MAY BE ACCOMPLISHED BY THE SLURRY PLACEMENT PROCESS. THE LIME SHALL INITIALLY BE BLENDED WITH A MIXING DEVICE SUCH AS A PULVERMIXER, SUFFICIENT WATER ADDED, AND ALLOWED TO CURE FOR AT LEAST 48 HOURS. AFTER CURING, MIXING SHALL CONTINUE UNTIL THE GRADATION REQUIREMENTS OF TXDOT ITEM 260.4 ARE MET. THE MIXTURE SHALL THEN BE MOISTURE ADJUSTED AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY TEX-114-E. PLACEMENT OF THE LIME-TREATED SUBGRADE SHALL EXTEND AT LEAST 24 INCHES BEHIND CURBS. AN OPTIMUM PERCENTAGE OF LIME OF AT LEAST 7 PERCENT BY DRY SOIL WEIGHT SHALL BE UTILIZED.
- MOISTURE CONDITIONED SUBGRADE** - IF LIME-TREATED SUBGRADE IS NOT UTILIZED, THE SOIL SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES, MOISTURE CONDITIONED, AND RECOMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY TEX-114-E. ON-SITE SOILS SHALL BE MOISTURE CONDITIONED AND COMPACTED AS DETAILED IN SECTION 4.1.1 -COMPACTION REQUIREMENTS. CARE SHALL BE TAKEN SUCH THAT THE SUBGRADE DOES NOT DRY OUT OR BECOME SATURATED PRIOR TO PAVEMENT CONSTRUCTION. THE PAVEMENT SUBGRADE SHALL BE THOROUGHLY PROOFROLLED WITH A RUBBER-TIRED VEHICLE (FULLY-LOADED WATER OR DUMP TRUCK) IMMEDIATELY PRIOR PLACEMENT OF BASE MATERIAL. PARTICULAR ATTENTION SHALL BE PAID TO AREAS ALONG CURBS, ABOVE UTILITY TRENCHES, AND ADJACENT TO LANDSCAPE ISLANDS, MANHOLES, AND STORM DRAIN INLETS. PLACEMENT OF THE MOISTURE CONDITIONED SUBGRADE SHALL EXTEND AT LEAST 24 INCHES BEHIND CURBS.

ON MOST PROJECTS, ROUGH SITE GRADING IS ACCOMPLISHED RELATIVELY EARLY IN THE CONSTRUCTION PHASE. FILLS ARE PLACED AND COMPACTED IN A UNIFORM MANNER. HOWEVER, AS CONSTRUCTION PROCEEDS, EXCAVATIONS ARE MADE INTO THESE AREAS. DRY WEATHER MAY DESICCATE SOME AREAS; RAINFALL AND SURFACE WATER SATURATES SOME AREAS; HEAVY TRAFFIC FROM CONCRETE AND OTHER DELIVERY VEHICLES DISTURBS THE SUBGRADE; AND MANY SURFACE IRREGULARITIES ARE FILLED IN WITH LOOSE SOILS TO TEMPORARILY IMPROVE SUBGRADE CONDITIONS. AS A RESULT, THE PAVEMENT SUBGRADE SHALL BE CAREFULLY EVALUATED AS THE TIME FOR PAVEMENT CONSTRUCTION APPROACHES. THIS IS PARTICULARLY IMPORTANT IN AND AROUND UTILITY TRENCH CUTS, MANHOLES, AND STORM DRAIN INLETS, AS WELL AS ANY LANDSCAPED AND IRRIGATED AREAS. ALL PAVEMENT AREAS SHALL BE MOISTURE CONDITIONED AND PROPERLY COMPACTED TO THE RECOMMENDATIONS IN THESE NOTES PRIOR TO PAVING. THOROUGH PROOFROLLING OF PAVEMENT AREAS USING A FULLY-LOADED WATER TRUCK OR DUMP TRUCK (RUBBER-WHEELED VEHICLE THAT CAN IMPART POINT WHEEL LOADS) SHALL BE PERFORMED NO MORE THAN 36 HOURS PRIOR TO SURFACE PAVING. ANY PROBLEMATIC AREAS SHALL BE REWORKED AND COMPACTED AT THAT TIME. PROOFROLLING SHALL BE RE-PERFORMED IF THE SUBGRADE AND/OR BASE IS EXPOSED TO RAINFALL PRIOR TO SUBSEQUENT CONSTRUCTION ACTIVITIES (I.E., BASE OR ASPHALT PLACEMENT).

U. ESTABLISHMENT OF VEGETATION

THE ESTABLISHMENT OF VEGETATION IS A CRITICAL ELEMENT OF THIS PROJECT AND AN ELEMENT OF THE PAVING DESIGN. WITHIN SEVEN CALENDAR DAYS OF PLACING THE CURB AND GUTTER THE CONTRACTOR SHALL BACKFILL THE SLOPES TO THE CURBS AS SHOWN ON THE CROSS SECTIONS, HYDROMULCH THE SLOPES AND WATER TO DEVELOP VEGETATION GROWTH AND WATER TO SUSTAIN THE GROWTH. WATERING SHALL OCCUR DAILY TO MAINTAIN MOISTURE CONDITION AND BE ACCOMPLISHED WITH EQUIPMENT WITH SPRAYING CAPABILITIES. CONTRACTOR SHALL MONITOR SOIL CONDITIONS AFTER RAIN TO DETERMINE IF WATERING IS REQUIRED TO MAINTAIN SOIL MOISTURE CONDITION.

V. ONE COURSE SURFACE TREATMENT

THE ONE COURSE SURFACE TREATMENT, WILL BE APPLIED TO THE CRUSHED LIMESTONE BASE MATERIAL WITHIN SEVEN CALENDAR DAYS OF PASSING MOISTURE AND DENSITY. THE APPLICATION WILL BE FROM EDGE TO EDGE OF THE CRUSHED LIMESTONE BASE MATERIAL. THE SURFACE TREATMENT WILL CONSIST OF 0.40 - 0.44 GALLONS PER SQUARE YARD OF CRS-2P (WARM WEATHER) OR CRS-1P (COOL WEATHER) AND TYPE A #3 NON-LIGHTWEIGHT AGGREGATE. THE ONE COURSE SURFACE TREATMENT SHALL MEET THE REQUIREMENTS OF TXDOT ITEM 316. THIS WILL BE BID BY THE SQUARE YARD.

W. GRADING AND DRAINAGE

THE PERFORMANCE OF THE PROPOSED PAVEMENTS WILL NOT ONLY BE DEPENDENT UPON THE QUALITY OF CONSTRUCTION, BUT ALSO UPON THE STABILITY OF THE MOISTURE CONTENT OF THE NEAR-SURFACE SUBGRADE. THEREFORE, PROPER SITE DRAINAGE SHOULD BE DEVELOPED DURING CONSTRUCTION SO THAT PONDING OF SURFACE WATER ON THE ROADWAY SURFACES AND ALONG THE ROADWAY PERIMETERS DOES NOT OCCUR.

X. WATER AND ESTABLISHMENT OF VEGETATION ALONG PAVEMENT EDGES

IN-SITU STRATUM 1 FAT CLAY SOILS WILL SERVE AS PAVEMENT SUBGRADE IN MANY AREAS AND MAY BE USED AS FILL IN AREAS ALONG THE ROADWAY, DEPENDING UPON THEIR PI AND ROCK SIZES AS TABULATED IN FILL MATERIAL TYPES.

ALTHOUGH METHODS CAN BE UNDERTAKEN TO REDUCE THE POSSIBILITY OF CRACKING IN THE PAVEMENT, CRACKING MAY STILL OCCUR. MOST PAVEMENT CRACKING OVER EXPANSIVE CLAY SOILS BEGINS LONGITUDINALLY WITHIN A FEW FEET ROUGHLY PARALLEL TO THE PAVEMENT EDGES AND THEN PROGRESSES INWARD. THIS IS DUE TO AN EDGE DRYING OR WETTING PROCESS IN WHICH THE SOILS ADJACENT TO THE PAVEMENT SUBGRADE EITHER WICK MOISTURE AWAY FROM THE SUBGRADE OR PROVIDE EXCESS MOISTURE INTO THE SUBGRADE. EITHER PROCESS TYPICALLY LEADS TO SUBGRADE SHRINKING OR SWELLING, WHICH THEN RESULTS IN CRACKS PROPAGATING UPWARD THROUGH THE SUBGRADE, BASE, AND INTO THE SURFICIAL ASPHALT.

THE PRIMARY GOAL WHEN ATTEMPTING TO REDUCE THE POTENTIAL FOR EDGE CRACKING IS TO MAINTAIN RELATIVELY CONSISTENT MOISTURE LEVELS IN THE SUBGRADE AND THE ADJACENT SOILS THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. THE ESTABLISHMENT OF VEGETATION IS A CRITICAL ELEMENT OF THIS PROJECT AND OF THE PAVEMENT DESIGN. WITHIN SEVEN (7) CALENDAR DAYS OF PLACING THE CURB AND GUTTER, THE CONTRACTOR SHALL BACKFILL THE SLOPES, VEGETATE THE AREA AND WATER TO ESTABLISH AND SUSTAIN THE GROWTH OF THE VEGETATION. WATERING SHALL OCCUR DAILY TO MAINTAIN MOISTURE CONDITION AND SHALL BE ACCOMPLISHED WITH EQUIPMENT WITH SPRAYING CAPABILITIES. THE CONTRACTOR SHALL MONITOR MOISTURE CONDITION AFTER RAIN EVENTS TO DETERMINE IF WATERING IS REQUIRED TO MAINTAIN MOISTURE CONDITION. PAYMENT FOR THESE REQUIREMENTS SHALL BE INCLUDED IN THIS BID ITEM FOR FURNISHING AND INSTALLING HYDROMULCH WITH FLEXIBLE GROWTH MEDIUM.

Y. RAIN/WEATHER DAYS

THIS PROJECT IS A CALENDAR DAY PROJECT AND WILL ALLOW SUBMITTAL OF WEATHER DAYS. THE CITY OF BELLMEAD REQUIRES THAT THE AVERAGE RAIN DAYS IN A MONTH BE EXCEEDED BEFORE ANY WEATHER DAYS ARE ADDED TO THE PROJECT. A WEATHER DAY SHALL BE CONSIDERED ANY DAY WITH ANY AMOUNT OF PRECIPITATION. IN ORDER TO SUBMIT FOR ADDITIONAL DAYS FOR WEATHER, THE CONTRACTOR SHALL TRACK THE PRECIPITATION ON THE PROJECT SITE AND SUBMIT THE DAYS OF PRECIPITATION MONTHLY AND INCLUDE THE AVERAGE PRECIPITATION DAYS FOR THAT MONTH AS SHOWN IN THE TABLE BELOW. ONLY DAYS IN EXCESS OF THE AVERAGE PRECIPITATION FOR THE MONTH WILL BE ALLOWED FOR ADDITIONAL DAYS DUE TO WEATHER. AVERAGE RAIN DAYS SHALL BE AS FOLLOWS:

| | AVERAGE RAIN DAYS | |
|------------|-------------------|--------------------|
| JANUARY - | 7 DAYS | JULY - 6 DAYS |
| FEBRUARY - | 7 DAYS | AUGUST - 5 DAYS |
| MARCH - | 7 DAYS | SEPTEMBER - 7 DAYS |
| APRIL - | 7 DAYS | OCTOBER - 7 DAYS |
| MAY - | 8 DAYS | NOVEMBER - 7 DAYS |
| JUNE - | 6 DAYS | DECEMBER - 7 DAYS |



Project:

BRAME PARK IMPROVEMENTS

BELLMEAD, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submittal Date:

August 19, 2025

Revisions:

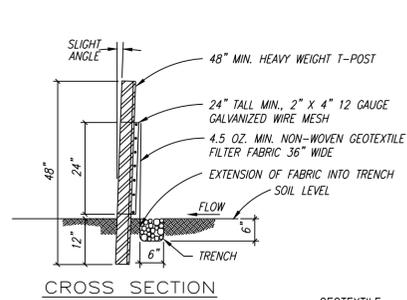
Sheet Title:

GENERAL NOTES

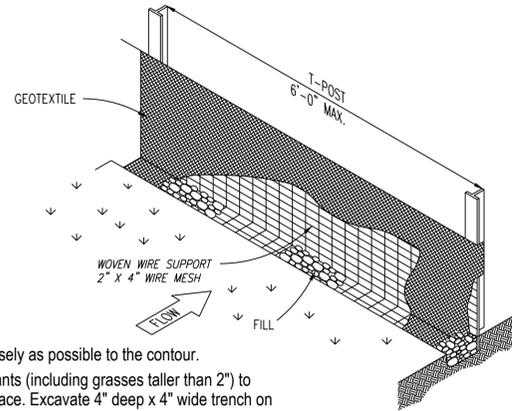
Sheet Number:

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Application Number:



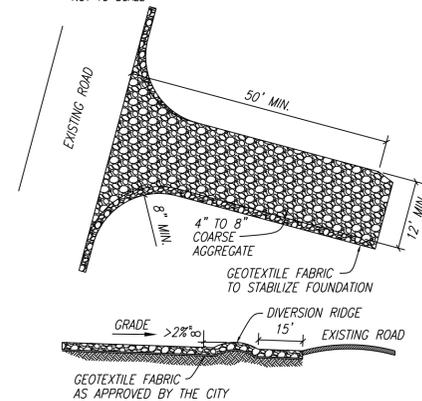
Inspection and maintenance guidelines:
 - Inspect all fencing weekly, and after any rainfall event.
 - Remove sediment when buildup reaches 6 inches.
 - Replace any torn fabric.
 - Replace or repair any sections crushed or collapsed in the course of construction activity.



Installation:

- Layout the silt fence following as closely as possible to the contour.
- Clear the ground of debris, rocks, plants (including grasses taller than 2") to provide a smooth flow approach surface. Excavate 4" deep x 4" wide trench on upstream side of face per plans.
- Drive the heavy duty t-post at least 12 inches into the ground and at a slight angle towards the flow.
- Attach the 2" x 4" 12 gauge welded wire mesh to the t-post with 1 1/2 gauge galvanized t-post clips, the top of the wire to be 24" above ground level. The welded wire mesh to be overlapped 6" and tied at least 6 times with hog rings.
- The silt fence to be installed with a skirt a minimum of 11" wide placed on the uphill side of the fence inside excavated trench. The fabric to overlap the top of the wire by 1".
- Anchor the silt fence by backfilling with excavated dirt and rocks.
- Geotextile splices should be a minimum of 18" wide attached in at least 6 places. Splices in concentrated flow areas will not be accepted.

SILT FENCE DETAIL
 NOT TO SCALE



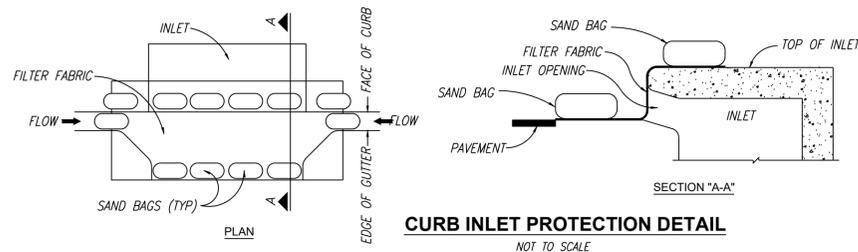
Installation:

- Clear the area of debris, rocks or plants that will interfere with installation.
- Grade the area for the entrance to flow back on to the construction site. Runoff from the stabilized construction entrance onto a public street will not be accepted.
- Place geotextile fabric if required.
- Place rock as required.

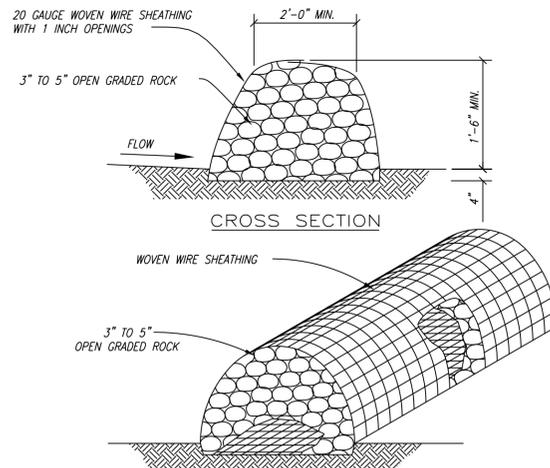
Inspections and maintenance guidelines:

- The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
- All sediment spilled, dropped, washed or tracked on to public rights-of-way should be removed immediately by contractor.
- When necessary, wheels should be cleaned to remove sediment prior to entrance onto public rights-of-way.
- When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

STABILIZED CONSTRUCTION ENTRANCE
 NOT TO SCALE



CURB INLET PROTECTION DETAIL
 NOT TO SCALE



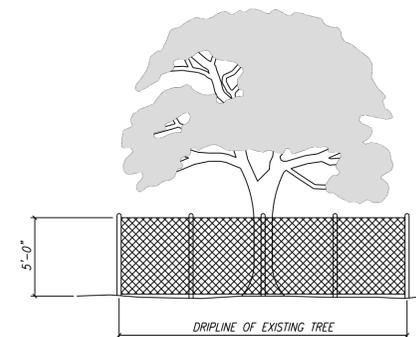
Installation:

- Layout the rock berm following as closely as possible to the contour.
- Clear the ground of debris, rocks or plants that will interfere with installation.
- Place woven wire fabric on the ground along the proposed installation with enough overlap to completely encircle the finished size of the berm.
- Place the rock along the center of the wire to the designated height.
- Wrap the structure with the previously placed wire mesh secure enough so that when walked across the structure retains it's shape.
- Secure with tie wire.
- The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approx. 4 inches deep to prevent failure of the control.
- The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Inspection and Maintenance Guidelines:

- Inspection should be made weekly and after each rainfall event by the responsible party. For installations in streambeds, additional daily inspections should be made.
- Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner.
- Repair any loose wire sheathing.
- The berm should be reshaped as needed during inspection.
- The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.

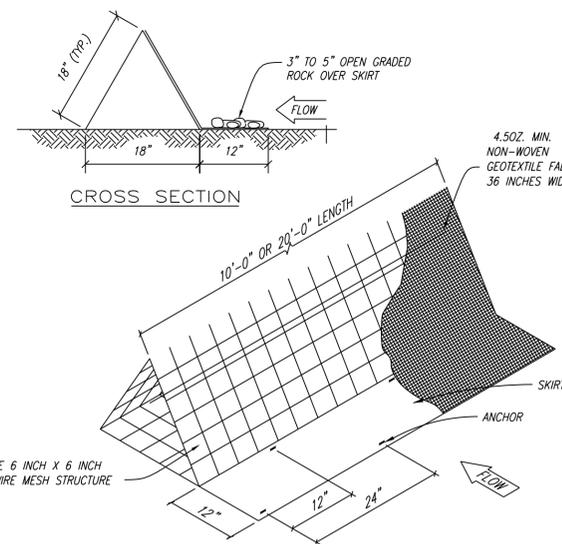
ROCK BERM DETAIL
 NOT TO SCALE



Notes:

1. Tree protection fences shall be installed prior to the commencement of any site preparation work (clearing, grubbing or grading).
2. Fences shall completely surround the tree, or clusters of trees; will be located at the outermost limit of the tree branches (dripline), and will be maintained throughout the construction project in order to prevent the following:
 - A. Soil compaction in the root zone area resulting from vehicular traffic, or storage of equipment or materials.
 - B. Root zone disturbances due to grade changes (greater than six inches (6") cut or fill or trenching not reviewed and authorized by the city.
 - C. Wounds to exposed roots, trunks or limbs by mechanical equipment.
 - D. Other activities detrimental to trees, such as chemical storage, cement truck cleaning and fire.
3. Exceptions to installing fences at tree driplines may be permitted in the following cases:
 - A. Where permeable paving is to be installed, erect the fence at the outer limits of the permeable paving area.
 - B. Where trees are close to proposed buildings, erect the fence no closer than six feet (6'-0") to building.

TREE PROTECTION - CHAIN LINK FENCE
 NOT TO SCALE



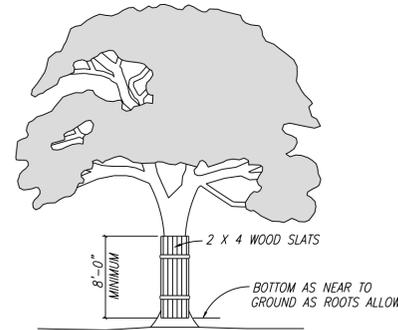
Installation:

- Layout the filter dike following as closely as possible to the contour.
- Clear the ground of debris, rocks or plants that will interfere with installation.
- Place the filter dike sections one at a time, with the skirt on the uphill side towards the direction of flow anchoring each section to the ground before the next section is placed.
- Anchors should be placed on 2'-0" centers alternating from front to back so that there is actually only 1'-0" in between anchors.
- Securely fasten the skirt from one section of filter dike to the next.
- Filter dikes shall maintain continuous contact with the ground.
- After the site is completely stabilized, the dikes and any remaining silt should be removed. Silt should be disposed of in a manner that will not contribute to additional siltation.

Inspection and Maintenance Guidelines:

- Inspection should be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
- Inspect and realign berms as needed to prevent gaps between the sections.
- Accumulated silt should be removed after each rainfall event, and disposed of in a manner which shall not cause additional siltation.

TRIANGULAR FILTER DIKE
 NOT TO SCALE



NOTES:

1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT FEET (8'-0") OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINE: MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
4. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DRESSINGS GREATER THAN FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
7. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

TREE PROTECTION - WOOD SLATS

EROSION/SEDIMENTATION AND TREE PROTECTION NOTES

1. The contractor to install and maintain erosion/sedimentation controls and tree/natural area protective fencing prior to any site preparation work (clearing, grubbing, grading, or excavation). Contractor to remove erosion/sedimentation controls at the completion of project and grass restoration.
2. The placement of erosion/sedimentation controls to be in accordance with the approved erosion and sedimentation control plan and water pollution abatement plan. Deviations from the approved plan shall be submitted to and approved by the owner's representative.
3. All disturbed areas to be restored as noted in the water pollution abatement plan.
4. The seeding for erosion control to be applied over areas disturbed by construction as follows:

 From September 15 to March 1, seeding to be with a combination of 2 pounds per 1,000 square feet of unhulled bermuda and 2 pounds per 1,000 square feet of winter rye with a purity of 95% with 90% germination. From March 2, to September 14, seeding to be with hulled bermuda grass (cynodon dactylyn) at a rate of 2 pounds per 1,000 square feet with a purity of 95% with 85% germination.

5. The planted area to be irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of four (4) inches. The irrigation to occur at 10-day intervals during the first two months. Rainfall occurrences of 1/2 inch or greater to postpone the watering schedule one week.
6. Restoration to be acceptable when the grass has grown to at least 1-1/2 inches high with 95% coverage, provided no bare spots larger than 25 square feet exist.
7. A minimum of four (4) inches of topsoil to be placed in all areas disturbed by construction.
8. The contractor to hydromulch or sod (as shown on plans) all exposed cuts and fills upon completion of construction, except where cuts are made in solid rock.
9. Erosion and sedimentation controls to be installed or maintained in a manner which does not result in soil buildup within tree dripline.
10. To avoid soil compaction, contractor shall not allow vehicular traffic, parking, or storage of equipment or materials in the tree dripline areas.
11. Where a fence is closer than four (4) feet to a tree trunk, protect the trunk with strapped-on planking to a height of eight (8) feet (or to the limits of lower branching) in addition to the fencing.
12. Trees to be removed in a manner which does not impact trees to be preserved.
13. Any root exposed by construction activity to be pruned flush with the soil. Backfill root areas with good quality topsoil as soon as possible. If exposed root areas are not backfilled within two days, cover them with organic material in a manner which reduces soil temperature and minimizes water loss due to evaporation.
14. Contractor to prune vegetation to provide clearance for structures, vehicular traffic, and equipment before damage occurs (ripping of branches, etc.). All finished pruning to be done according to recognized, approved standards of the industry (reference the "National Arborist Association pruning standards for shade trees").
15. The contractor is to inspect the controls at weekly intervals and after every rainfall exceeding 1/4 inch to verify that they have not been significantly disturbed. Any accumulated sediment after a significant rainfall to be removed and placed in the owner designated spoil disposal site. The contractor to conduct periodic inspections of all erosion/sedimentation controls and to make any repairs or modifications necessary to assure continued effective operation of each device.
16. Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development immediately adjacent to a protected tree, erect the fence approximately two to four feet (2'-4') behind the area in question.
17. No above and/or below ground temporary fuel storage facilities to be stored on the project site.
18. If erosion and sedimentation control systems are existing from prior contracts, owner's representative and the contractor to examine the existing erosion and sedimentation control systems for damage prior to construction. Any damage to preexisting erosion and sedimentation controls noted to be repaired at owners expense.
19. Intentional release of vehicle or equipment fluids onto the ground is not allowed. Contaminated soil resulting from accidental spill to be removed and disposed of properly.

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Project:

BRAME PARK IMPROVEMENTS

BELLMead, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submital Date:

August 19, 2025

Revisions:

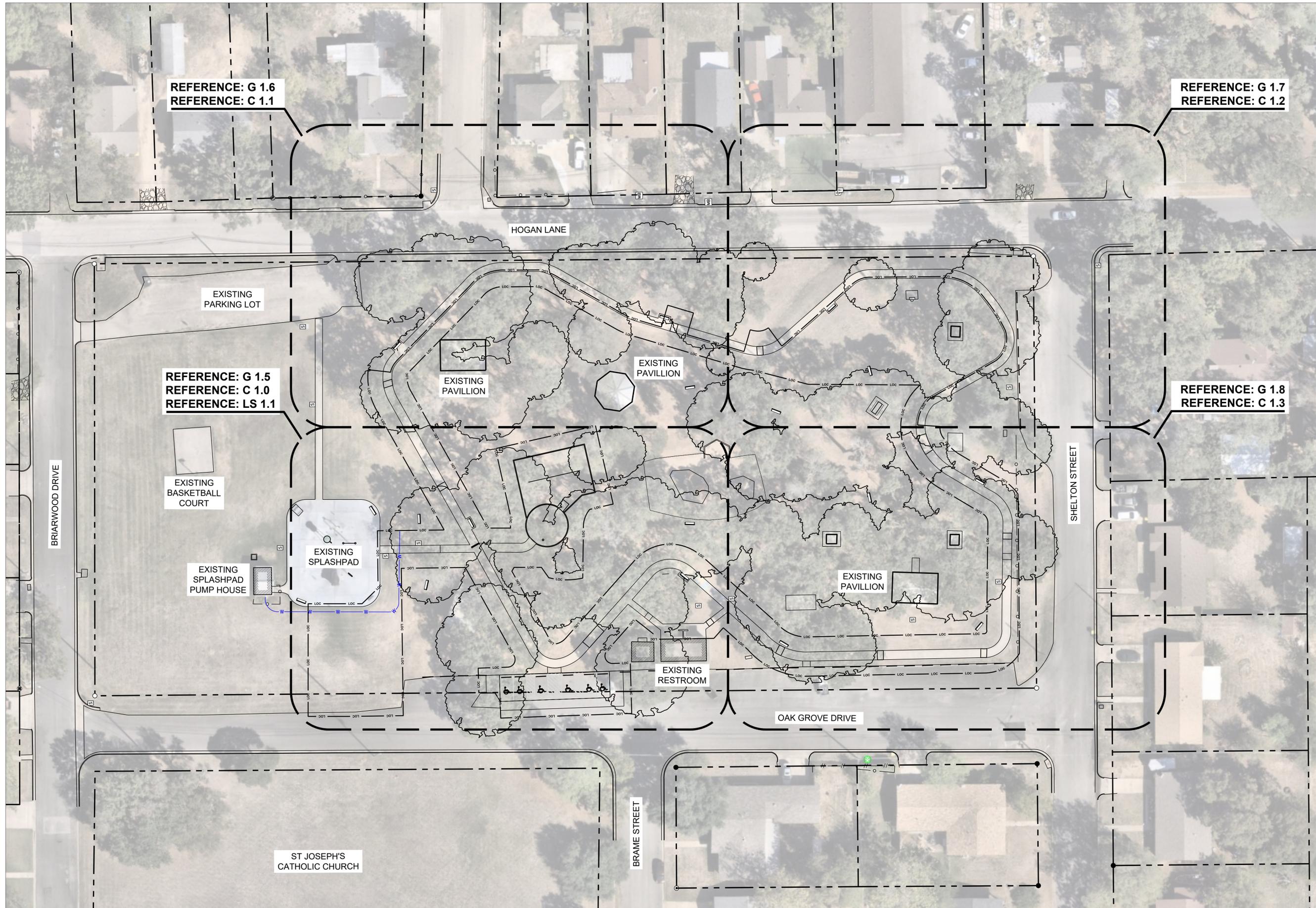
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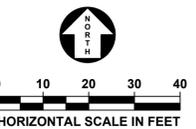
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Application Number:



Project:
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 IMPROVEMENTS**



BELLMead, TEXAS

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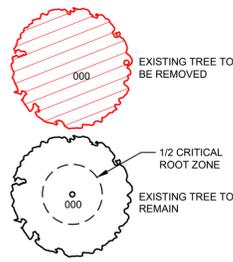
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**OVERALL REFERENCE
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Sheet Number:

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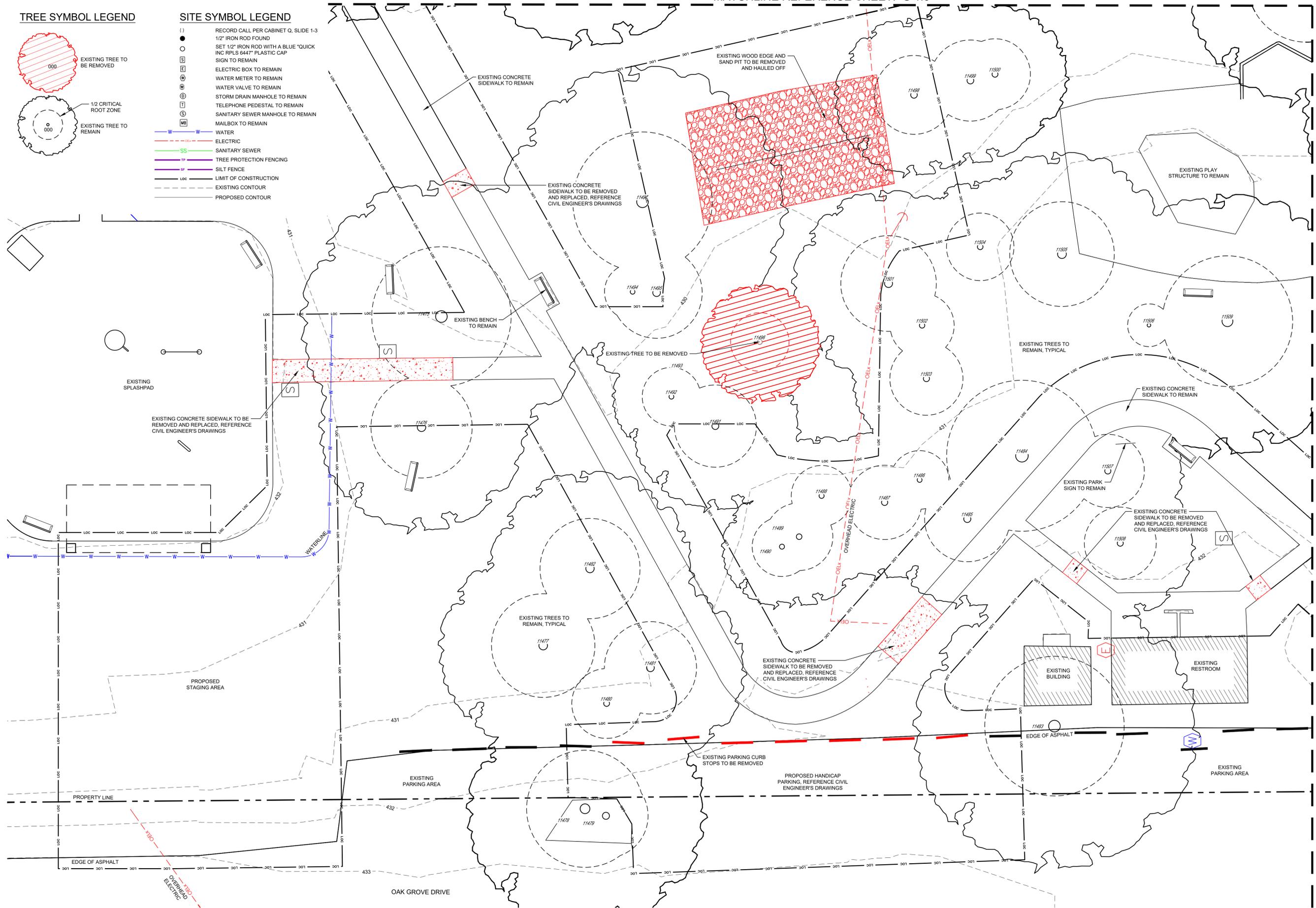
Application Number:

TREE SYMBOL LEGEND



SITE SYMBOL LEGEND

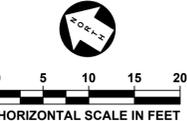
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MATCHLINE REFERENCE SHEET: G 1.8



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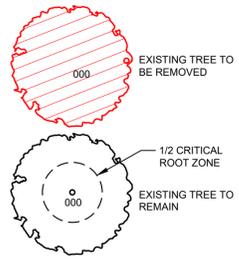
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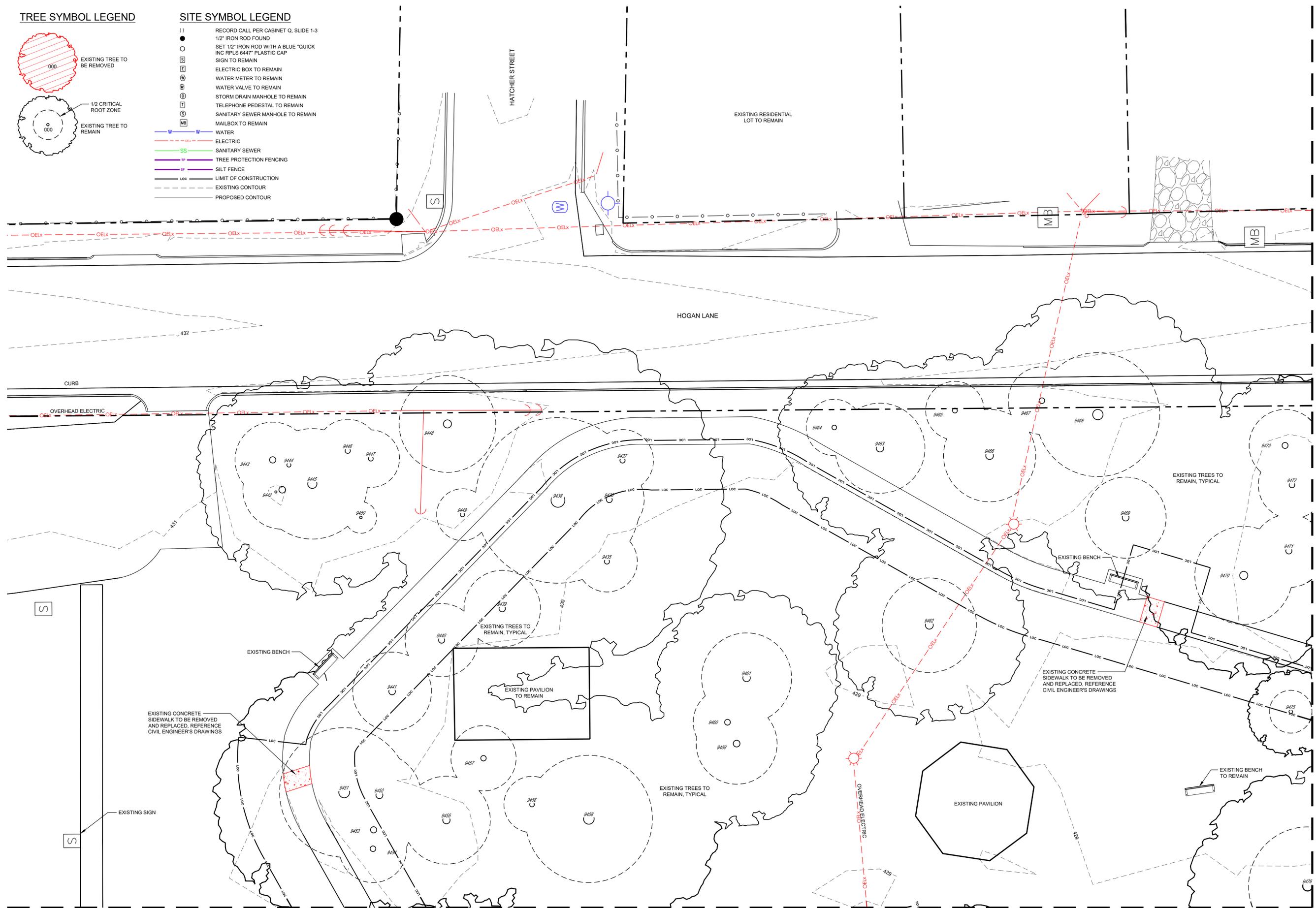
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MATCHLINE REFERENCE SHEET: G 1.5

MATCHLINE REFERENCE SHEET: G 1.7

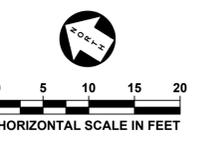
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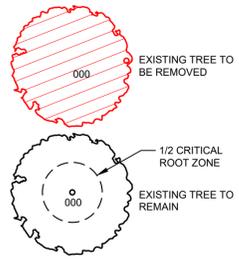
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Application Number:

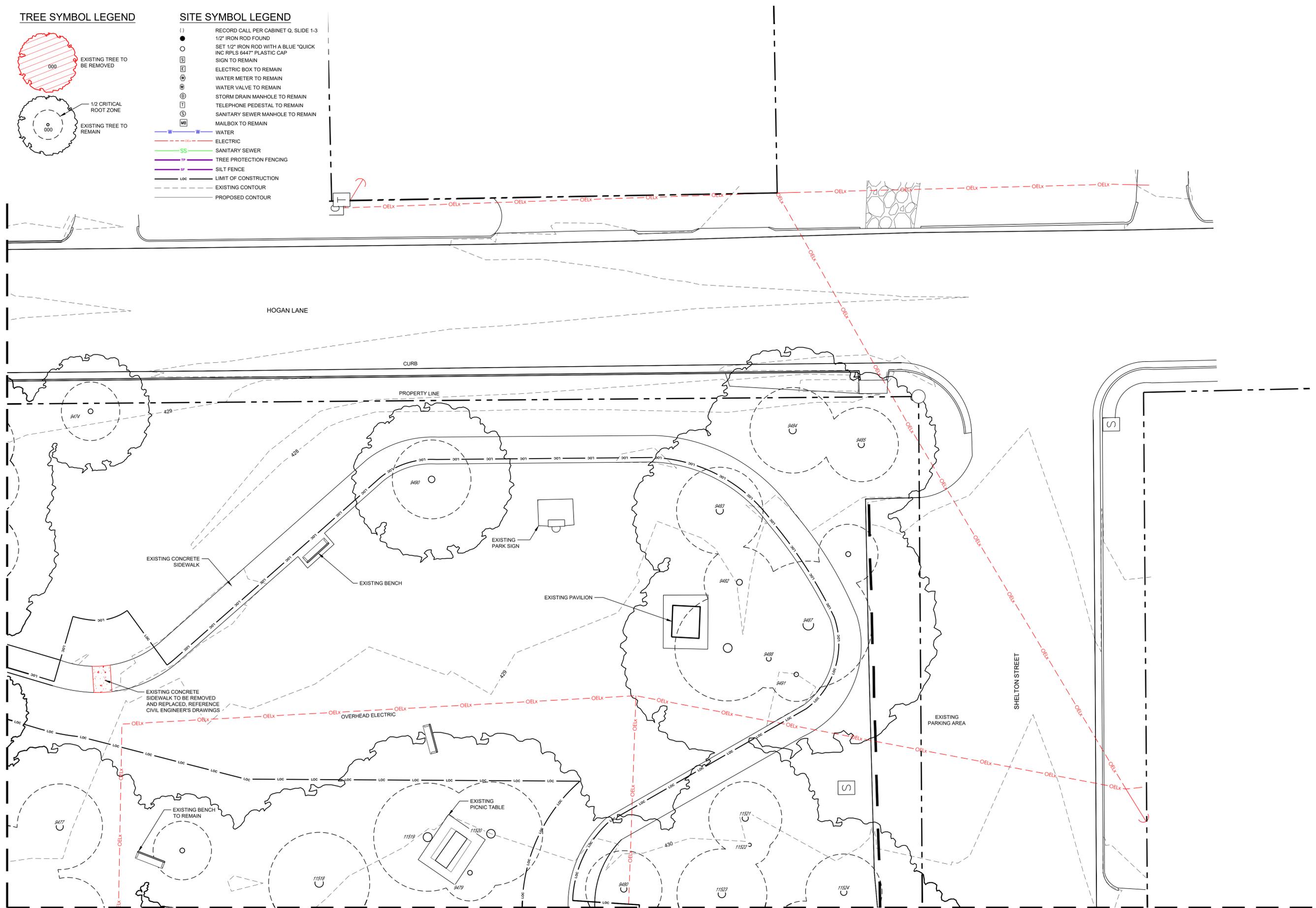
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MATCHLINE REFERENCE SHEET: G 1.6



MATCHLINE REFERENCE SHEET: G 1.8

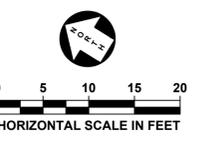
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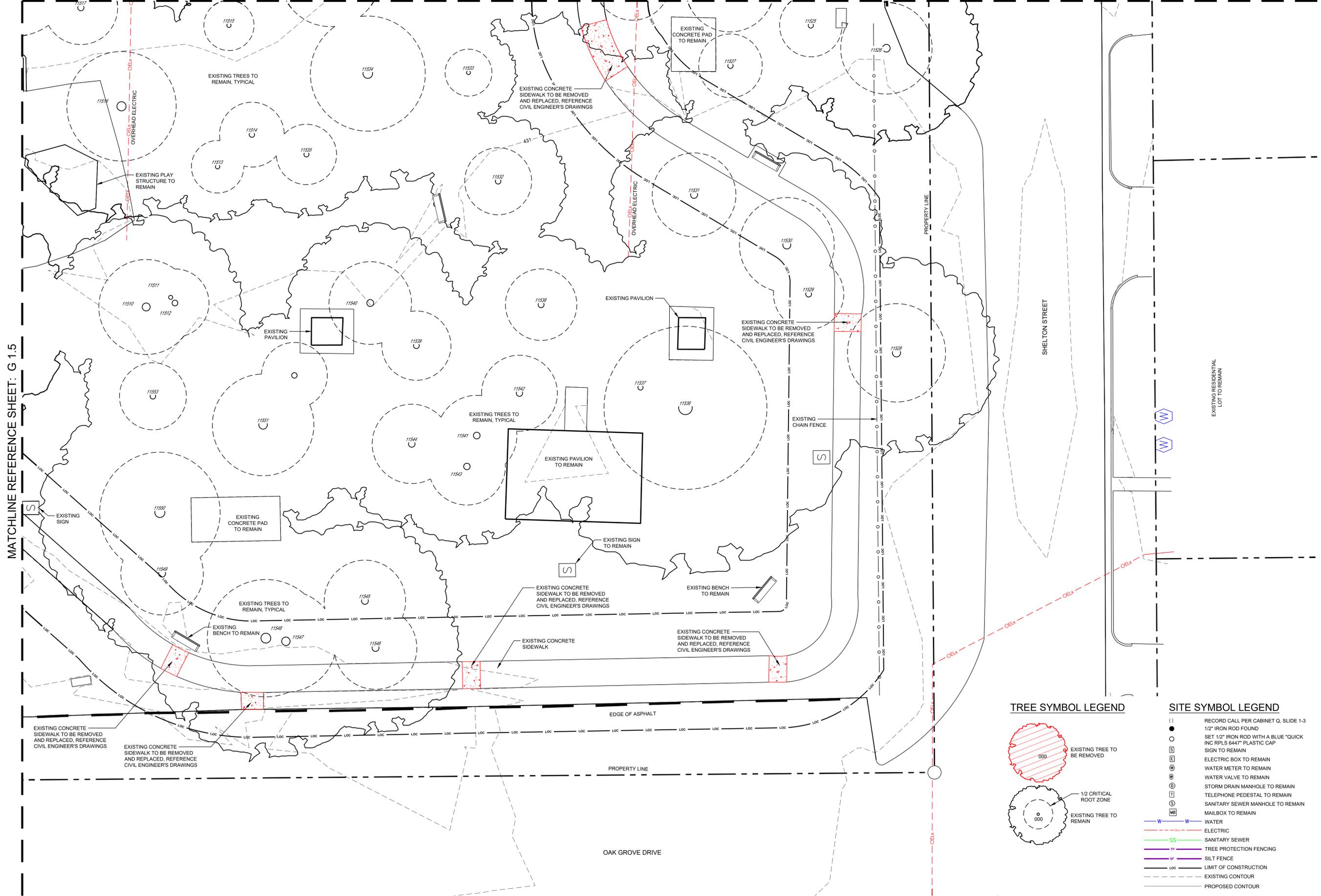
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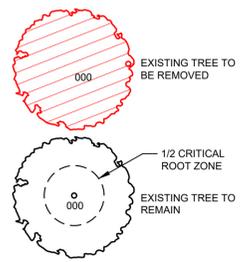
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Application Number:



MATCHLINE REFERENCE SHEET: G 1.5

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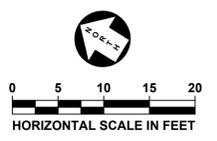


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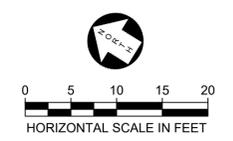
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Application Number:



John A. Simcik
09-10-2025

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Designed: JAS
Drawn: BVB
Reviewed: JAS
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Revisions:

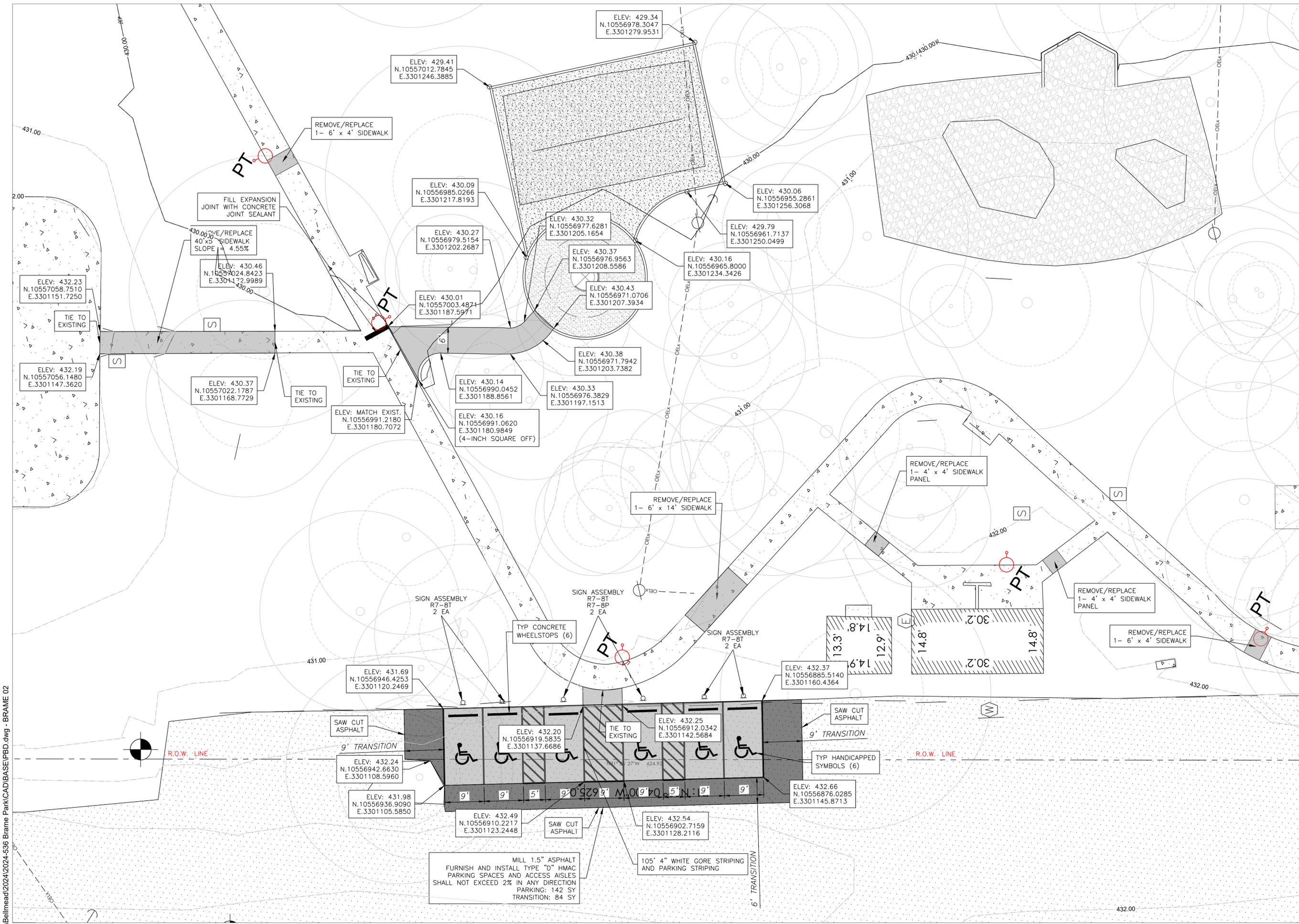
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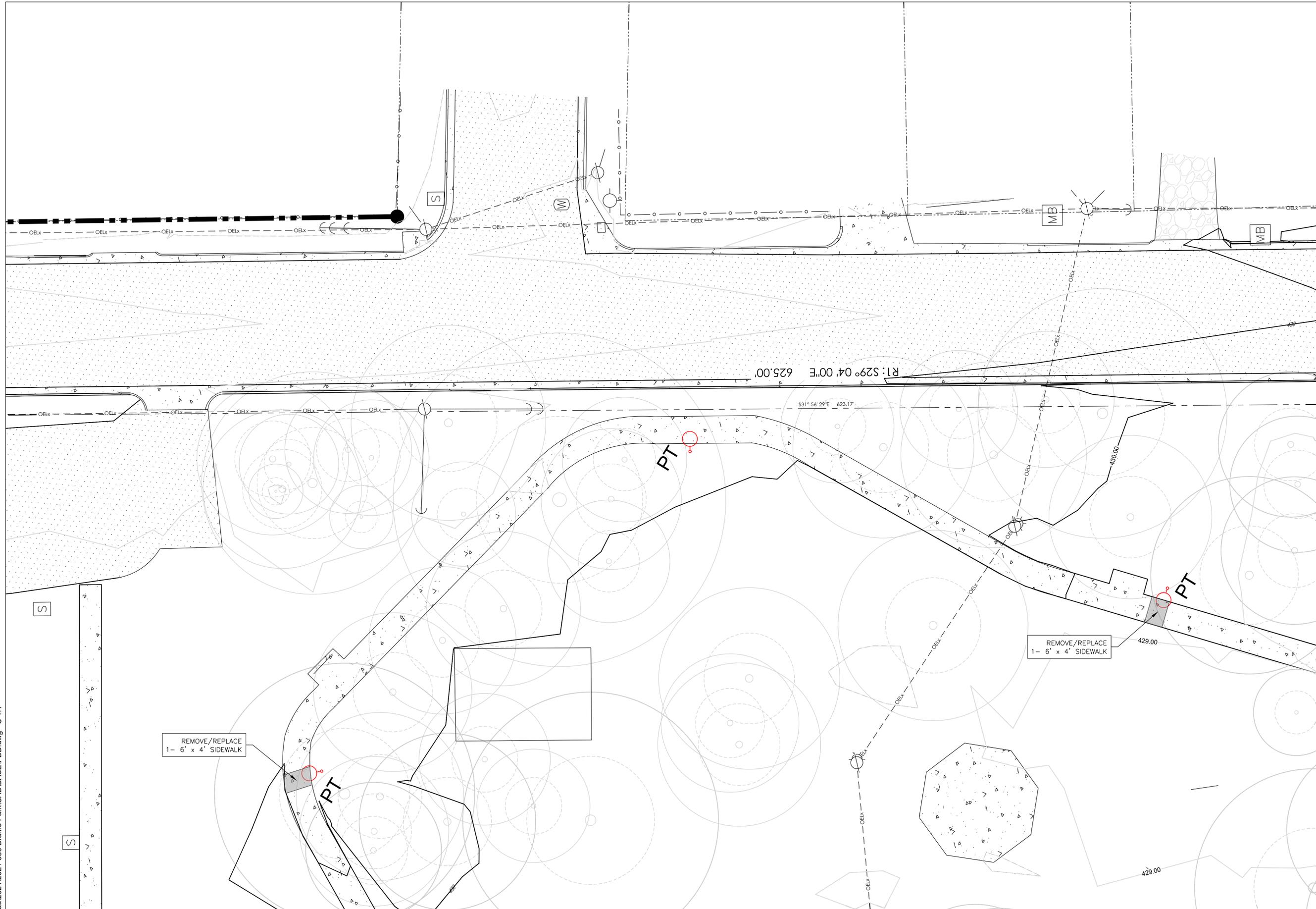
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Application Number:
2023-XX-SDP



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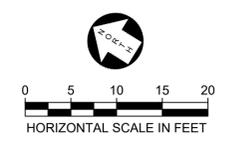
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Reviewed: JAS

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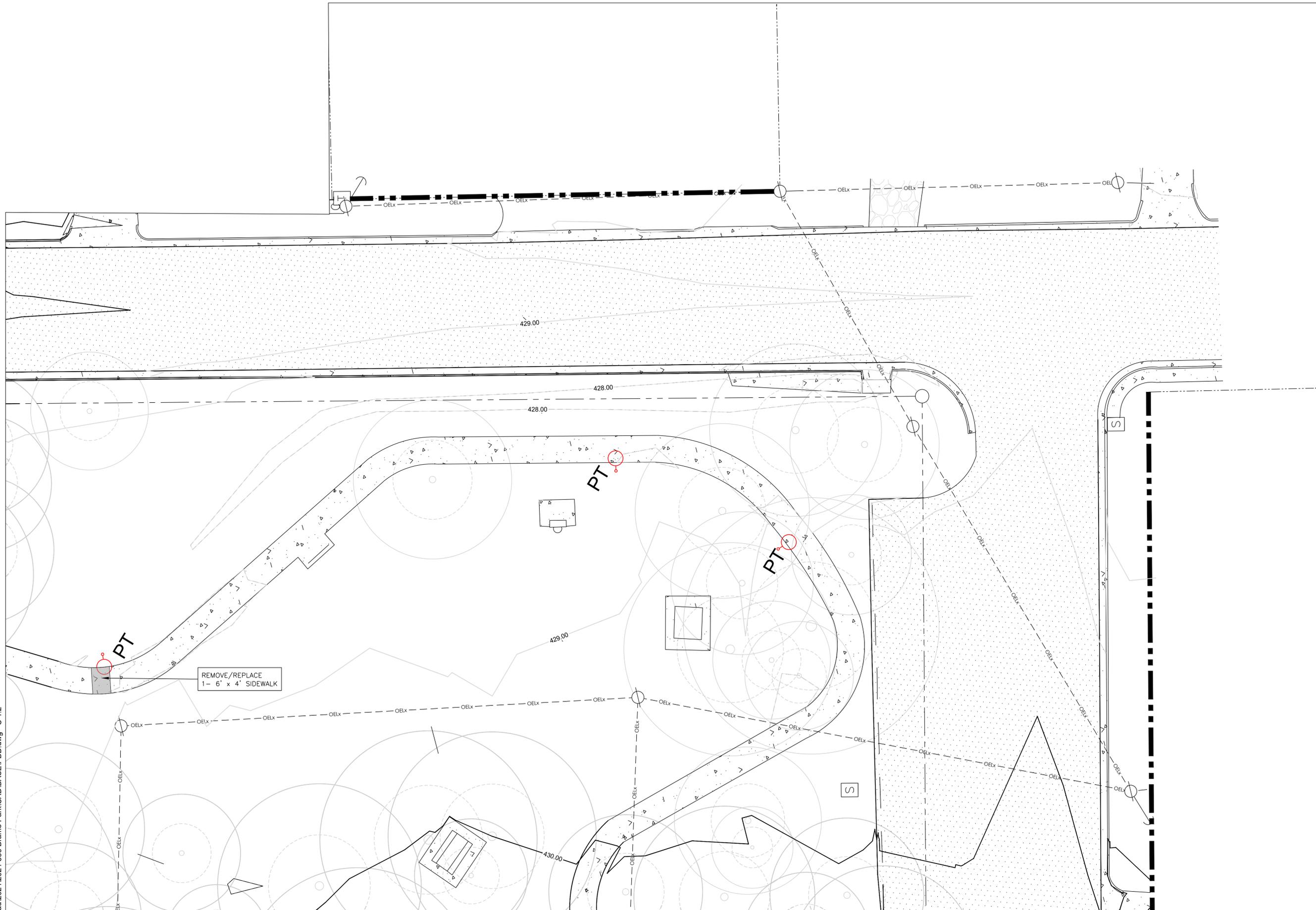
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CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration Number F-510

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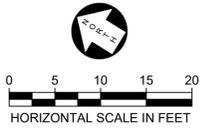
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 09-10-2025

Revisions:

Sheet Title:
CIVIL PLAN



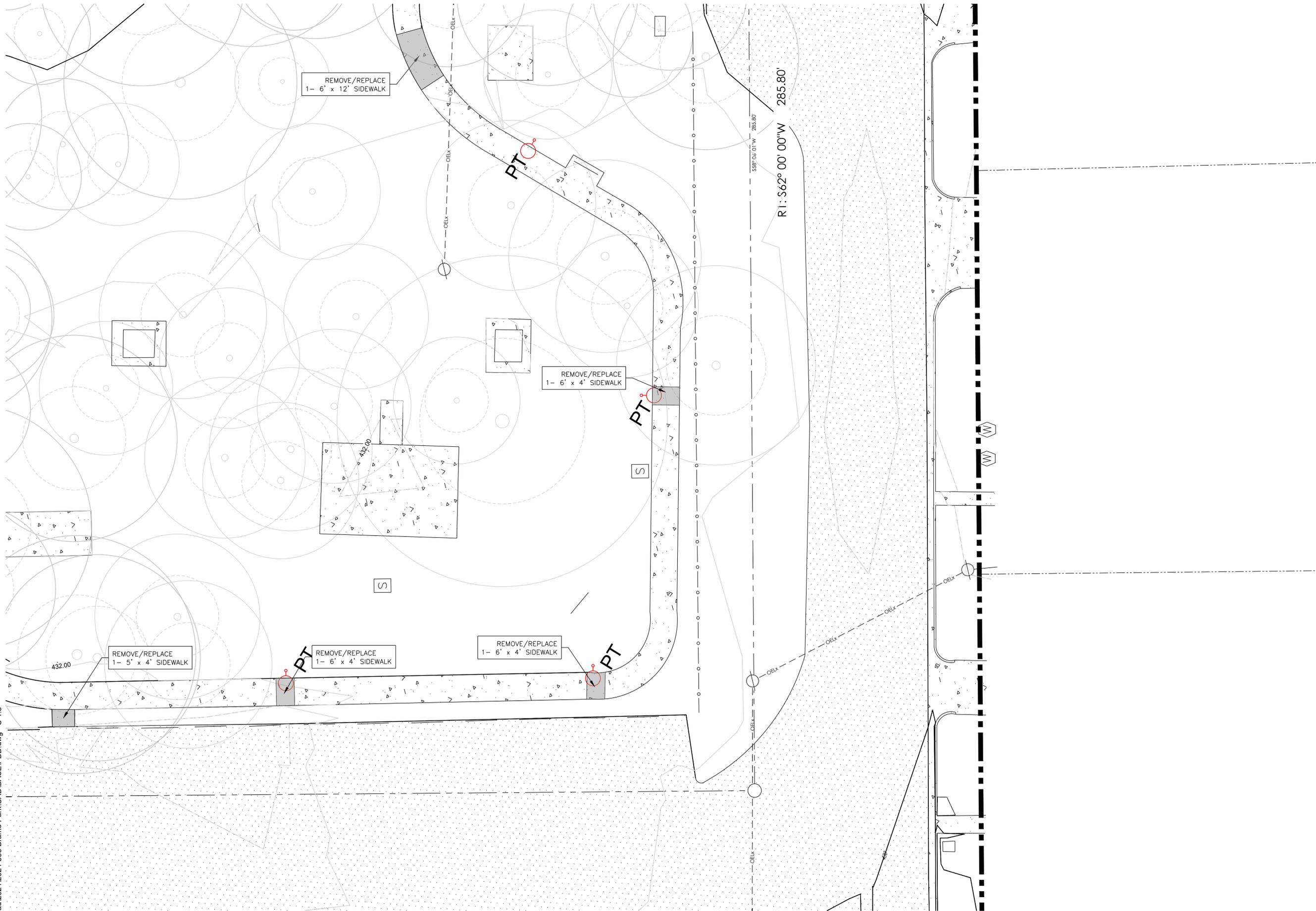
KASBERG, PATRICK & ASSOCIATES, LP
 CONSULTING ENGINEERS
 TEMPLE, TEXAS 76501
 Firm Registration Number F-510

Sheet Number:

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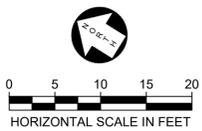
Application Number:
2023-XX-SDP

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John A. Simcik
 09-10-2025

Project:
BRAME PARK IMPROVEMENTS



BELLMead, TEXAS

Project Number:
 2024-CL536



CAUTION!!!
 EXISTING UNDERGROUND UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES ON THE PLANS.

Designed: JAS

Drawn: BVB

Reviewed: JAS

Submittal Date:
 09-10-2025

Revisions:

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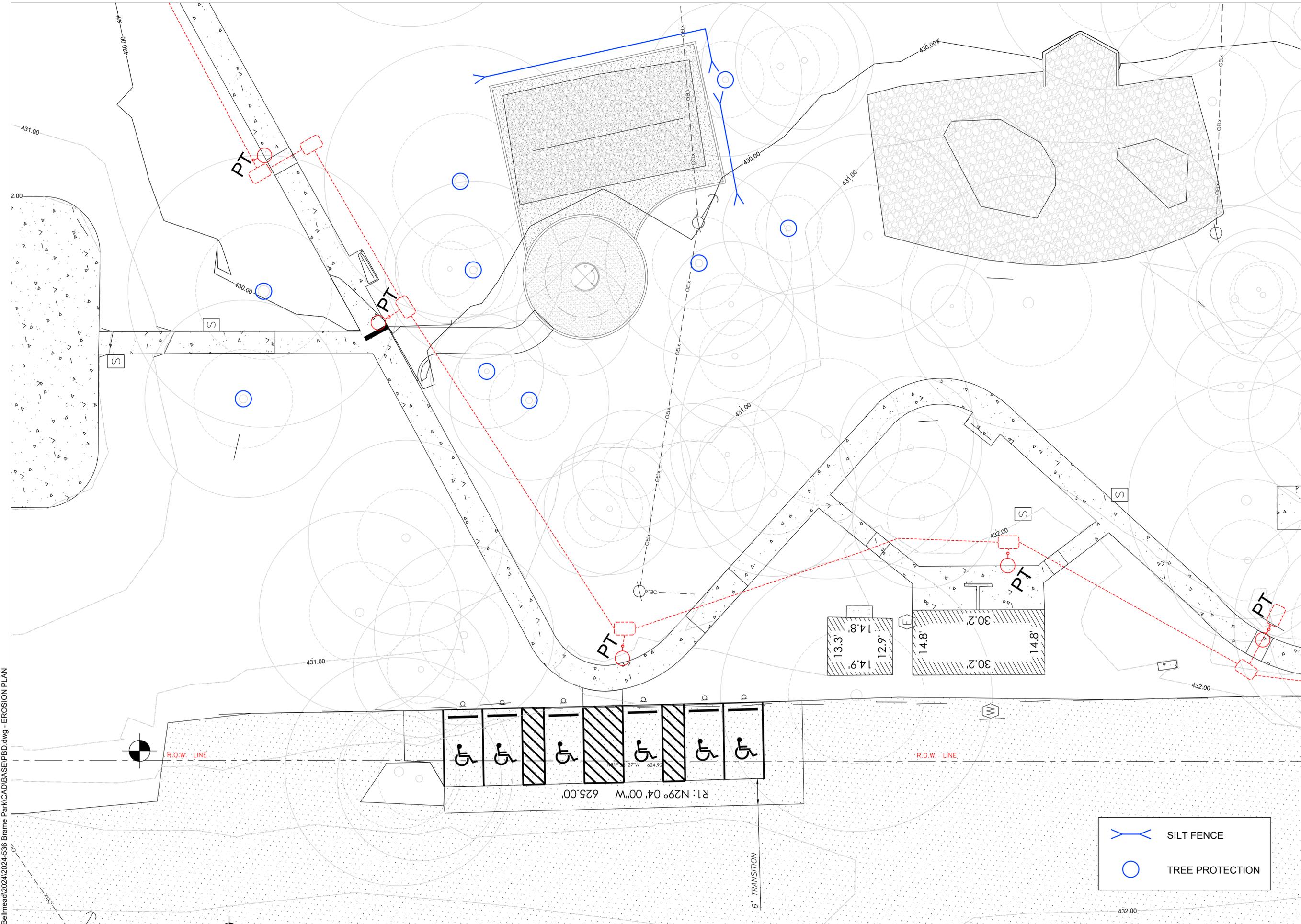


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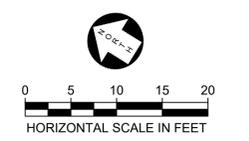
Application Number:
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Project:
BRAME PARK IMPROVEMENTS



BELLMead, TEXAS
 Project Number:
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Sheet Number:
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Application Number:
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Designed: JAS

Drawn: BVB

Reviewed: JAS

Submittal Date:

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Revisions:

Sheet Title:

CIVIL STANDARD DETAILS



KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration Number F-510

Sheet Number:

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Application Number:
2023-XX-SDP

SIDEWALK GENERAL NOTES

- GENERAL**
- ALL CONCRETE AND REINFORCEMENT MATERIALS AND PLACEMENT MUST COMPLY WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION AND WITH ALL NOTES ON SHEET G-7 OF THE CITY OF WACO MANUAL OF STANDARD DETAILS.
 - PROPOSED SIDEWALKS MUST COMPLY WITH THE CITY OF WACO CODES AND ORDINANCES, CHAPTER 22, ARTICLE III, SIDEWALKS.
 - PEDESTRIAN ACCESS ROUTES, SHARED USE PATHS, AND ELEMENTS OF THESE WITHIN THE CITY RIGHT-OF-WAY, AND PUBLIC EASEMENTS SHALL COMPLY WITH THE CURRENT UNITED STATES ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD (ACCESS BOARD) ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG).
 - RETAINING WALLS IN THE RIGHT-OF-WAY AND PUBLIC EASEMENT SHALL BE CAST-IN-PLACE CONCRETE. TRUNCATED DOME BRICK PAVERS ARE REQUIRED FOR DETECTABLE WARNING STRIPS. SAKRETE® PAVES SET POLYMERIC SAND™ OR PRE-APPROVED EQUAL SHALL BE USED.
 - SW-5, SW-6, SW-7, SW-8 SHOW SOME TYPICAL RAMP, ILLUSTRATING REQUIRED SLOPES AND DIMENSIONS AS THEY MIGHT BE APPLIED IN SEVERAL PARTICULAR CIRCUMSTANCES. IF ADEQUATE RIGHT-OF-WAY IS NOT AVAILABLE FOR THESE TYPICAL RAMP, ALTERNATE DESIGNS MUST BE CREATED TO FIT WITHIN AVAILABLE RIGHT-OF-WAY AND STILL SATISFY THE GENERAL SLOPE AND DIMENSIONAL REQUIREMENTS ILLUSTRATED.

- CONFIGURATION**
- SIDEWALKS AND LANDINGS SHALL BE FORMED AT A MAXIMUM CROSS-SLOPE OF 1.5%. FINISHED CROSS-SLOPES EXCEEDING 2% WILL NOT BE ACCEPTED.
 - NEW SIDEWALK SHALL BE CONNECTED TO ALL EXISTING ADJACENT SIDEWALKS AND STEPS.
 - LANDINGS SHALL BE 5 FT. X 5 FT. MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION, GRADED FOR POSITIVE DRAINAGE TO STREET.
 - IF AN EXISTING GUTTER AT THE ENTRANCE TO A NEW RAMP OR LANDING HAS A CROSS SLOPE GREATER THAN 2%, THE EXISTING GUTTER MUST BE REMOVED AND REPLACED WITH GUTTER TIED TO THE 2% CROSS SLOPE ON ONE SIDE AND THE EXISTING STREET ON THE OTHER. THE SLOPE OF THE NEW GUTTER TOWARD THE STREET MAY NOT EXCEED 1:12.
 - SLOPE OF RAMP SHALL NOT EXCEED 1:12 UNLESS OTHERWISE NOTED.
 - MINIMUM RAMP WIDTH IS 5 FT. EXCLUSIVE OF FLARED SIDES, HOWEVER, FOR A SHARED USE PATH THE WIDTH OF THE RAMP SHALL EQUAL THE WIDTH OF THE SHARED USE PATH.
 - NO SKEWED ANGLES ARE ALLOWED WHERE SIDEWALK MEETS LANDING, WHERE LANDING MEETS RAMP, AND WHERE PERPENDICULAR CURB RAMP MEETS CURB.

- CONSTRUCTION**
- PLACE CONSTRUCTION JOINTS WITH EXPANSION MATERIAL AT MINIMUM 50 FT. INTERVALS. EXPANSION JOINTS SHALL EXTEND THROUGH ANY ADJACENT RETAINING WALL OR TRANSITION CURB.
 - REBAR CHAIRS SHALL BE PLACED ON 4 FT. MAX SPACING EACH WAY.
 - PLACE TOOLED, CRACK CONTROL JOINTS AT A SPACING EQUAL TO THE WIDTH OF THE WALK.
 - VERTICAL CHANGES IN LEVEL GREATER THAN 1/4 IN. ARE NOT PERMITTED ALONG SIDEWALKS.
 - WHERE SIDEWALK OR CURB RAMP IS ADJACENT TO BACK OF CURB, DRIVEWAY RADIUS, INLET, OR ANY CONCRETE STRUCTURE, INSTALL CONSTRUCTION JOINT. SEE DETAIL SW-3.
 - WHERE SIDEWALK OR CURB RAMP CONTACTS A POLE OR POLE FOUNDATION, PLACE 1/2 IN. EXPANSION JOINT MATERIAL BETWEEN POLE OR POLE FOUNDATION AND SIDEWALK/RAMP.
 - CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH SECTION 5.1 OF THE CITY OF WACO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 - POOR WORKMANSHIP OR APPEARANCE SHALL BE GROUNDS FOR REMOVAL OR REJECTION.

LOCATIONS WITHIN THE CODE OF ORDINANCES OF MINIMUM REQUIRED WIDTHS OF SIDEWALK AND RELATED BUFFER PRESENTLY INCLUDE THE FOLLOWING:

- SEC. 22-37 - CHANGING OF GRADE OF STREETS, ETC.
- SEC. 22-63 - SAME LOCATION AND WIDTH OF SIDEWALKS.
- SEC. 28-880.11 - PUBLIC SPACES.
- SEC. 28-839 - SIDEWALKS.
- SUBDIVISION ORDINANCE SEC. 5.2 - PERMANENT IMPROVEMENTS 5.207, SIDEWALKS

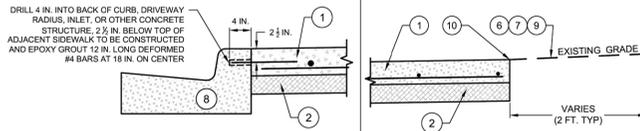
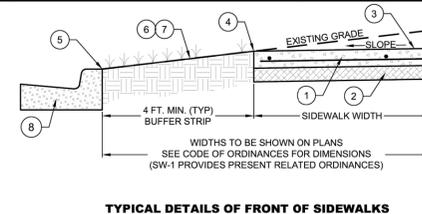
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| | | | | | 01/01/2024 |
| 1 | MODIFY NOTE 12, ADD NOTE 13, RENUMBER 14-21 | | MZ | 11/15/2024 | SW-1 |
| 2 | MODIFY NOTE 3 | | MZ | 04/18/2024 | |

SIDEWALK DETAILS LEGEND

- 5 IN. 3000 PSI CONCRETE WITH REBAR CHAIRS AT 48 IN. OCEW MAX. SIDEWALK SHALL BE 8 IN. THICK WHEN ADJACENT TO RETAINING WALLS. TRANSITION FROM 8 IN. DEPTH AT TERMINUS OF RETAINING WALL (HEIGHT = 0 IN.) TO 5 IN. DEPTH SHALL BE OVER 18 INCHES. UNLESS OTHERWISE NOTED, SIDEWALK REINFORCEMENT SHALL BE #4 BARS @ 18 IN. OCEW.
- 4 INCH BASE, TYPE "A" MATERIAL PER STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 4.2 EXCAVATION AND BACKFILL PART 2: PRODUCT A. MATERIALS 3. TRENCH BACKFILL A. TYPE "A" MATERIAL OR RECYCLED CRUSHED CONCRETE (TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM 247 FLEXIBLE BASE TYPE D GRADE 1-2, EXCLUDING TYPE A MATERIAL WITH MINIMUM F1 OF FOUR), OR PORTLAND CEMENT TREATED BASE (AFTER COMPACTION) COVERED BY 10 MIL. POLYETHYLENE BOND BREAKER MECHANICALLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. DEFINED AS "CURB BACKFILL" IN SELECT DETAILS.
- CROSS-SLOPE OF SIDEWALK SHALL BE 1.5% DESIGNED AND FORMED. ANY CROSS-SLOPE CONSTRUCTED LESS THAN 1% OR EXCEEDING 2% SHALL NOT BE ACCEPTED.
- TOOLED EDGE. MATCH EXISTING GRADE IF EXISTING GRADE IS HIGHER THAN TOP OF CURB. OTHERWISE, AREA BETWEEN CURB AND NEW SIDEWALK MUST BE FILLED AS REQUIRED & GRADED TO DRAIN. FILL SHALL BE COMPACTED TO 85% STANDARD PROCTOR DENSITY, AT OR ABOVE OPTIMUM MOISTURE CONTENT.
- GRADE/SLOPE SHALL BE WITHIN THE RANGE OF 1/4 IN. PER 1 FT. TO 1/2 IN. PER 1 FT.
- SLOPE OF BUFFER/LANDSCAPE AREAS WITHIN THE RIGHT-OF-WAY SHALL NOT EXCEED 4%.
- RESTORE VEGETATION IN KIND TO PRE-PROJECT CONDITIONS. FOR NEW SUBDIVISIONS, COMPLY WITH VEGETATION REQUIREMENTS.
- CURB AND GUTTER PER PLANS AND CITY OF WACO DETAILS.
- IF EXISTING GRADE IS LOWER THAN NEW BACK OF SIDEWALK, FILL SHALL BE PLACED PER ORDINANCE, SEC. 22-73 - DIMENSIONS-PARKWAY. OUTSIDE OF RIGHT-OF-WAY FILL SHALL BE PLACED WITH MAXIMUM SLOPE OF 25% DOWN TO EXISTING GRADE. FILL SHALL BE COMPACTED TO 85% STANDARD PROCTOR DENSITY AT OR ABOVE OPTIMUM MOISTURE CONTENT.
- MATCH EXISTING GRADE.
- CUT TO GRADE.
- 1/2 INCH CHAMFER BOTH SIDES.
- CONTRACTION JOINTS WITH 1/2 IN. CHAMFER ON EACH SIDE SHALL BE PLACED ALONG ENTIRE HEIGHT OF RETAINING WALL AT EQUAL SPACING OF ADJOINING SIDEWALK.
- FRONT OF RETAINING WALL SHALL BE BROOM FINISHED PER ORDINANCE.
- WHERE SIDEWALK WITH RETAINING WALL IS SPECIFIED, RETAINING WALL WILL BE SUBSIDIARY TO THE ITEM, "CONCRETE SIDEWALK (SPECIAL) (RETAINING WALL)", WITH LIMITS OF PAY AS SHOWN HEREON.
- 2 IN. SCH. 40 PVC WEEP HOLES @ 10 FT. OC (TYP) SLOPED 1/2 INCH PER FOOT TO DRAIN TOWARD FRONT OF SIDEWALK.
- 1 CUBIC FOOT AGGREGATE MEETING ASTM 57 SPECIFICATIONS WRAPPED IN FILTER FABRIC.
- 1 IN. DIA X 3 FT. SMOOTH DOWELS AT 1 FT OC.
- 1 IN. PVC PIPE WITH CAPPED END.
- 12 IN. PERMANENT EXPANSION JOINT MATERIAL.

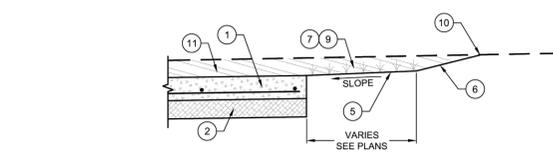
DISCLAIMER: THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF WACO FOR ANY PURPOSE WHATSOEVER. THE CITY OF WACO ASSUMES NO RESPONSIBILITY FOR THE CONVERSION OF THIS STANDARD TO OTHER FORMATS OR FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

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| 2 | MODIFY NOTE 3 | | MZ | 04/18/2024 | |



CONSTRUCTION JOINT OF SIDEWALK ADJACENT TO BACK OF CURB, DRIVEWAY RADIUS, INLET, OR OTHER CONCRETE STRUCTURE

SIDEWALK TO MATCH EXISTING GRADE

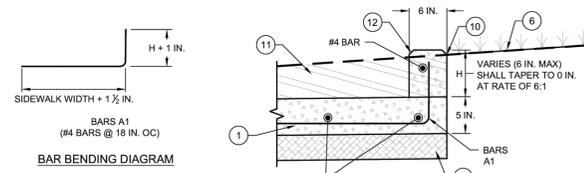


CUT BEHIND SIDEWALK TO MATCH EXISTING GRADE

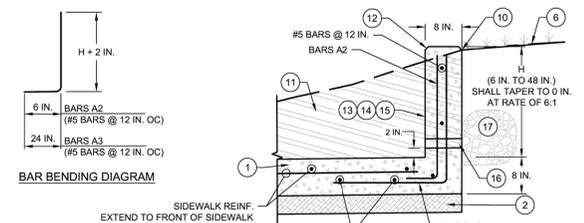
FOR GENERAL NOTES SEE SHEET SW-1
FOR LEGEND DESCRIPTIONS SEE SHEET SW-2

SIDEWALK DETAILS - 1 OF 2
(NO SCALE)

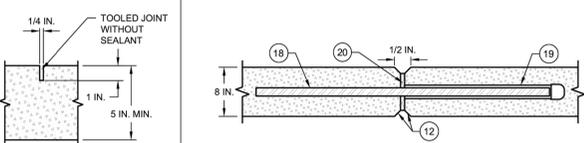
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| 2 | MODIFY NOTE 3 | | MZ | 04/18/2024 | |



CURB TO MATCH EXISTING GRADE



RETAINING WALL MATCH TO EXISTING GRADE



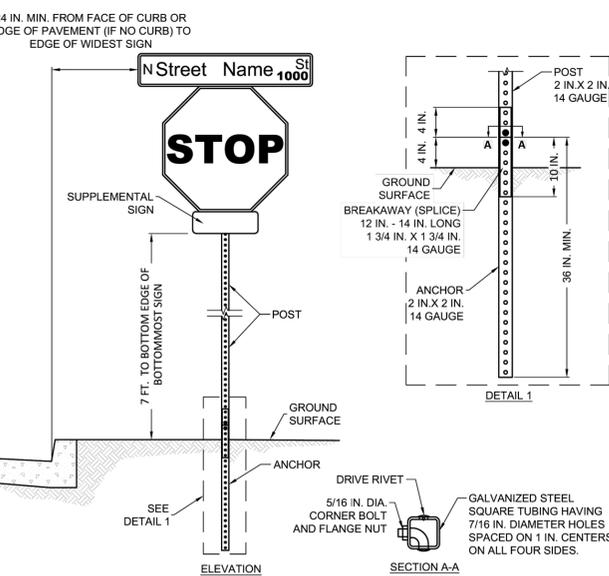
CONTRACTION JOINT

RETAINING WALL EXPANSION JOINT

FOR GENERAL NOTES SEE SHEET SW-1
FOR LEGEND DESCRIPTIONS SEE SHEET SW-2

SIDEWALK DETAILS - 2 OF 2
(NO SCALE)

| NO. | REVISIONS | COMMENTS | BY | DATE | DATE |
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| | | | | | 01/01/2024 |
| 1 | MODIFY NOTE 12, ADD NOTE 13, RENUMBER 14-21 | | MZ | 11/15/2024 | SW-4 |
| 2 | MODIFY NOTE 3 | | MZ | 04/18/2024 | |



SIGN POST INSTALLATION

(NO SCALE)

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| 1 | MODIFY NOTE 12, ADD NOTE 13, RENUMBER 14-21 | | MZ | 11/15/2024 | T-6 |
| 2 | MODIFY NOTE 3 | | MZ | 04/18/2024 | |



R7-8T

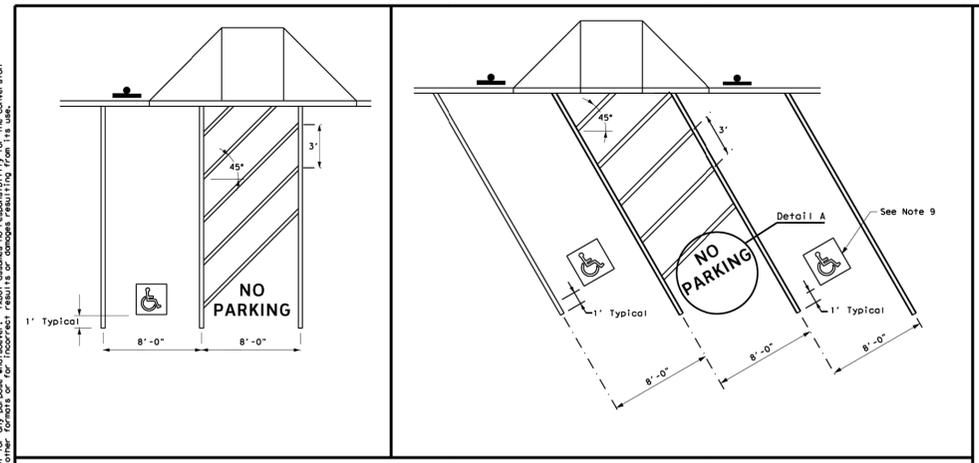


R7-8P

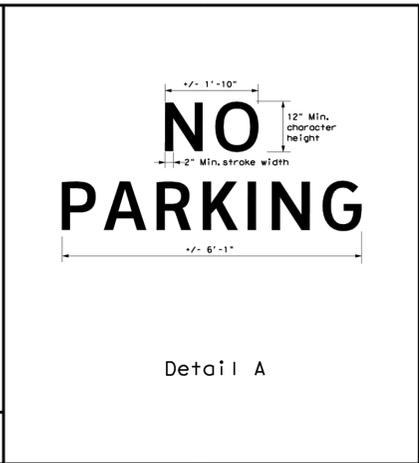
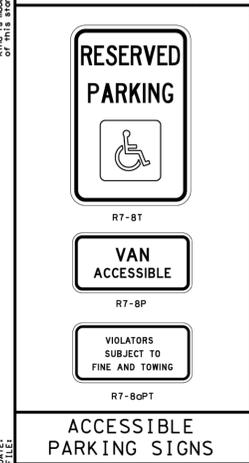
HADICAPPED PARKING SIGNAGE

- NOTES:**
- SIGN AND SIGN POST SHALL BE TWO SEPARATE PAY ITEMS.
 - SIGN POST SHALL BE PLUMB (TRUE VERTICAL) IN ALL DIRECTIONS, AND SIGNS SHALL BE PERPENDICULAR TO POST.
 - SIGN SHALL BE FASTENED TO POST USING JUMBO HEAD DRIVE RIVETS.
 - IF TRAFFIC CONTROL SIGN (E.G., STOP, YIELD) IS REQUIRED, IT SHALL BE LOCATED BELOW THE STREET NAME SIGN.
 - SUPPLEMENTAL SIGN(S) SHALL BE LOCATED BELOW THE TRAFFIC CONTROL SIGN.
 - DRIVE RIVETS SHALL BE JUMBO HEAD, SHALL HAVE 3/8 INCH DIAMETER SHANK, AND SHALL HAVE A 1 INCH DIAMETER HEAD.
 - ANCHOR POST SHALL BE DRIVEN INTO THE GROUND OR SET IN 3000 PSI CONCRETE HAVING 1 FOOT DIAMETER AND A 26 INCH DEPTH. ANCHOR POST SHALL BE WRAPPED IF IT IS SET IN CONCRETE.

DISCLAIMER: This proposal is prepared by the "Texas Engineering Practice Act". No responsibility for any kind is made by the "Texas Engineering Practice Act" for any errors or omissions in this proposal or for any damage or injury resulting from its use.



PERPENDICULAR OR ANGLED ACCESSIBLE PARKING SPACE DIMENSIONS



| ALUMINUM SIGN BLANKS THICKNESS | |
|--------------------------------|-------------------|
| Square Feet | Minimum Thickness |
| Less than 7.5 | 0.080 |
| 7.5 to 15 | 0.100 |
| Greater than 15 | 0.125 |

| DEPARTMENTAL MATERIAL SPECIFICATIONS | |
|---|----------|
| ALUMINUM SIGN BLANKS | DMS-7110 |
| TRAFFIC PAINT | DMS-8200 |
| HOT APPLIED THERMOPLASTIC | DMS-8220 |
| PERMANENT PREFABRICATED PAVEMENT MARKINGS | DMS-8240 |
| SIGN FACE MATERIALS | DMS-8300 |

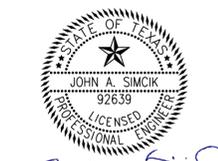
Texas Department of Transportation Traffic Safety Division Standard

PAVEMENT MARKINGS AND SIGNING FOR ACCESSIBLE PARKING

PM (AP) - 21

| | | | | | | | |
|-------|--------------|---------|----|------|------|----|------|
| FILED | PREPARED | DATE | BY | CHKD | DATE | BY | CHKD |
| | PM (AP) - 21 | 07/2021 | | | | | |
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- GENERAL NOTES:**
- All paved accessible parking space limit lines shall be 4" solid white lines.
 - Paved accessible parking spaces must include a white International Symbol of Accessibility applied conspicuously on the surface in a color that contrasts the pavement. A blue background with white border may supplement the symbol for additional contrast.
 - The words "NO PARKING" must be applied on any access aisle adjacent to the parking space. The words must be white, applied:
 - in all capital letters,
 - centered within each access aisle adjacent to the parking space.
 - RESERVED PARKING (R7-BT) sign including the International Symbol of Accessibility,
 - shall be REQUIRED for each accessible parking space,
 - shall NOT be placed between two accessible parking spaces,
 - shall NOT be placed in a location that restricts movement of wheelchairs within the adjacent sidewalk,
 - shall have a mounting height of 7 feet to the bottom of the sign.
 - A sign identifying the consequences of parking illegally in a paved accessible parking space. Must:
 - of a minimum state "VIOLATORS SUBJECT TO FINE AND TOWING" (Plaque) (R7-8aPT),
 - be mounted on a pole, post, wall or freestanding board,
 - be no more than eight inches (8") below sign R7-BT a sign required by the Texas Accessibility Standards, 502.6,
 - be installed so that the bottom edge of the sign is no lower than 48 inches and no higher than 80 inches above the ground level.
 - Signs identifying van parking spaces shall contain the designation "VAN ACCESSIBLE" (R7-BP) Signs shall be 60 inches minimum above the ground level measured to the bottom of the sign.
 - Perpendicular or angled parking spaces shall be 8 feet wide minimum with an access aisle 8 feet minimum wide (van accessible). Two parking spaces are permitted to share a common access aisle.
 - Access aisles shall be at street level, extend the full length of the parking space they serve, follow ADA surface requirements, and marked to discourage parking in the access aisle. Curb ramps shall connect the access aisle to the adjacent pedestrian access route. Curb ramps shall not be located within the access aisle.
 - International Symbol of Accessibility Parking Space Marking and sign details can be found in The Standard Highway Sign Designs for Texas (SHSD) at the following website: <http://www.txdot.gov>



John A. Simcik
09-10-2025

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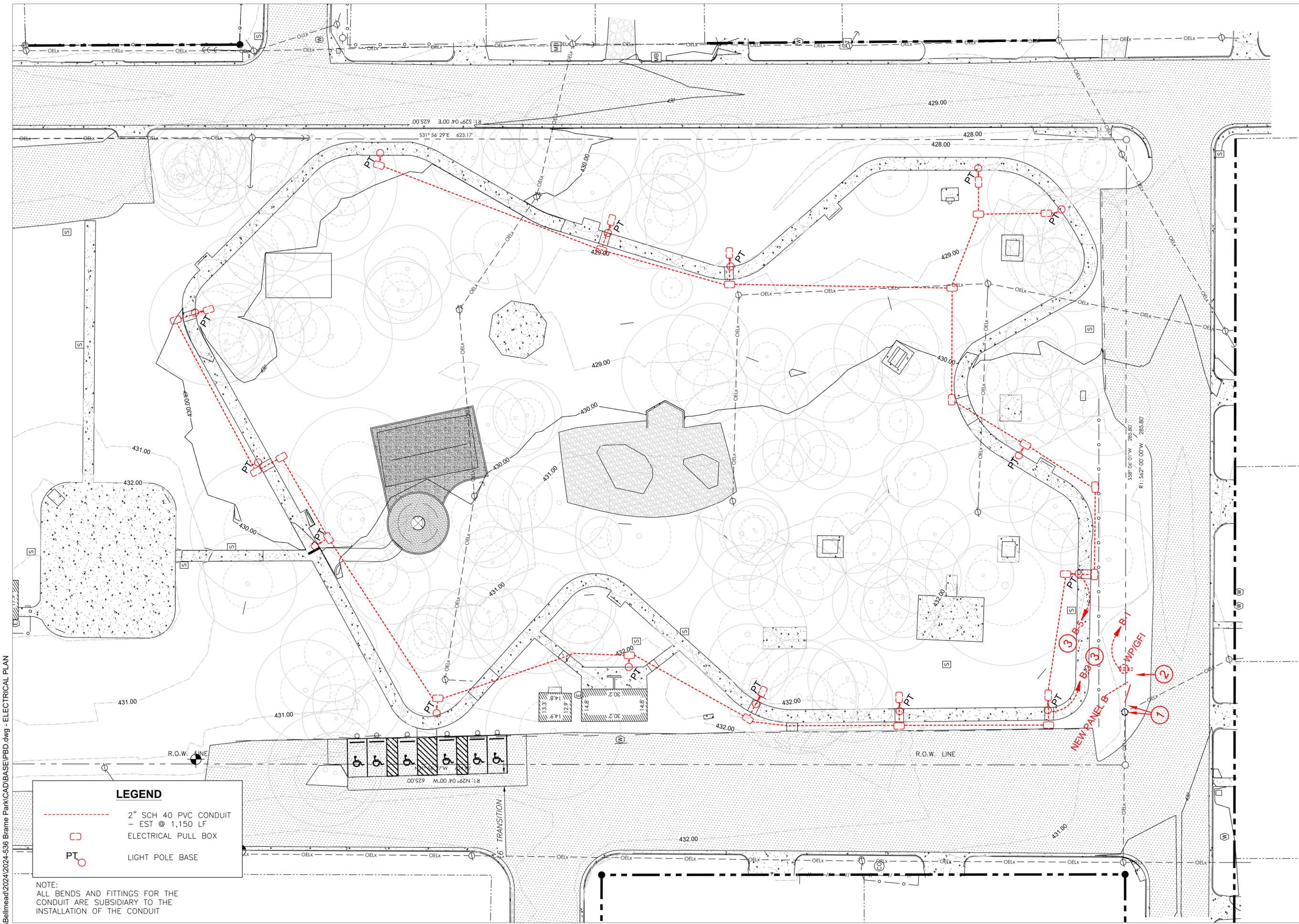


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LEGEND

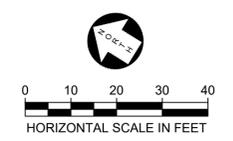
- - - - - 2" SCH 40 PVC CONDUIT - EST @ 1,150 LF
- ELECTRICAL PULL BOX
- PT ○ LIGHT POLE BASE

NOTE:
ALL BENDS AND FITTINGS FOR THE CONDUIT ARE SUBSIDIARY TO THE INSTALLATION OF THE CONDUIT

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John A. Simcik
09-10-2025

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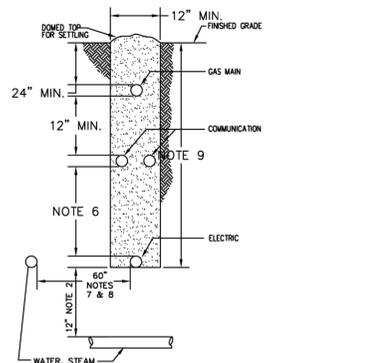
Sheet Title:
ELECTRICAL CONDUIT

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KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
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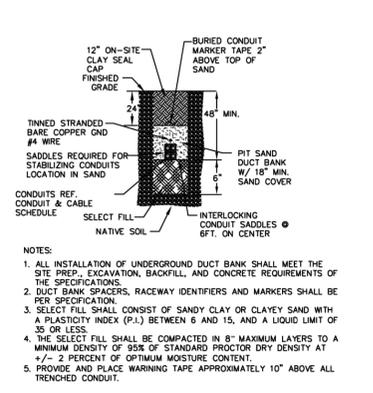
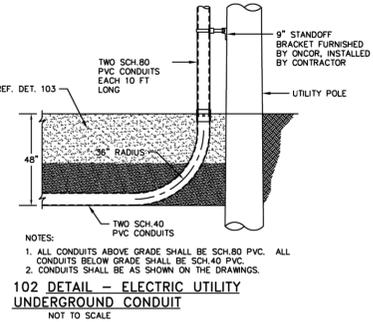
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Application Number:
2023-XX-SDP

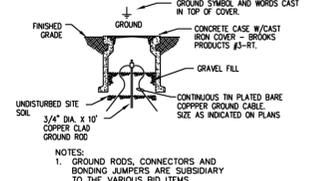
P:\Bellmead\2024\2024-536 Brame Park\CAD\BASE\IPBD.dwg - ELECTRICAL DETAIL



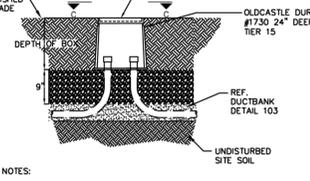
- 101 TRENCH REQUIREMENTS**
NOT TO SCALE
- NOTES:
- TRENCH ALIGNMENT SHALL BE AS STRAIGHT AS CONDITIONS PERMIT. ANY DEVIATIONS FROM PLANNED ALIGNMENT SHALL HAVE PRIOR APPROVAL BY THE PROJECT ENGINEER/INSPECTOR. ALL TRENCH CUTS SHALL BE IN ACCORDANCE WITH EXISTING SAFETY REGULATIONS IN EFFECT.
 - TRENCH BOTTOM SHALL BE UNDISTURBED, TAMPED OR RELATIVELY SMOOTH EARTH. WHERE EXCAVATION IS IN ROCK, THE CONDUIT SHALL BE LAID ON A LAYER OF CLEAN BACKFILL.
 - ALL BACKFILL SHOULD BE FREE OF DEBRIS OR OTHER MATERIAL THAT MAY DAMAGE THE CONDUIT SYSTEM OR CAUSE SETTLING. THE MATERIAL SHALL FILL THE Voids AROUND THE CONDUIT TO PREVENT HOT SPOTS & SETTLING.
 - BACKFILL SHALL BE ADEQUATELY COMPACTED. BACKFILL NOT UNDER PAVEMENT SHALL BE COMPACTED TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL. BACKFILL UNDER PAVEMENT SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE DENSITY OF UNDISTURBED SOIL AS DETERMINED BY ASTM DESIGNATION D-698.
 - EACH CONDUIT RUN SHALL BE CHECKED BY PULLING A MANDREL THROUGH THE ENTIRE LENGTH. A 1/8" NYLON PULLING CORD SHALL BE LEFT IN EACH CONDUIT. CONDUIT SHALL BE PLUGGED AT BOTH ENDS.
 - SUPPLY AND COMMUNICATION CONDUIT SEPARATIONS. CONDUIT SYSTEMS TO BE OCCUPIED BY COMMUNICATIONS CONDUCTORS SHALL BE SEPARATED FROM CONDUIT SYSTEMS TO BE USED FOR SUPPLY SYSTEMS BY:
 - 3 INCHES OF CONCRETE
 - 4 INCHES OF MASONRY
 - 12 INCHES OF WELL COMPACTED EARTH
 EXCEPTION: LESSER SEPARATIONS MAY BE USED WHERE THE PARTIES CONCUR.
 - VERTICAL CROSSING CLEARANCE FROM OTHER UTILITIES SHALL BE 12 INCHES. A 60 INCH LATERAL SEPARATION OF PARALLELING FOREIGN UTILITIES (EXCLUDING COMMUNICATIONS) SHALL BE REQUIRED. AN EXCEPTION WOULD BE TO ALLOW TELEPHONE AND/OR CATV IN THE SAME DITCH AS COMPANY CONDUIT SYSTEM PROVIDING THEIR CIRCUIT IS INSTALLED IN CONDUIT AND MEETS OR EXCEEDS NESC REQUIREMENTS FOR CONDUIT SEPARATION.
 - IT IS UNDERSTOOD THAT ONLY 12 INCH SEPARATION IS REQUIRED ON PUBLIC RIGHTS-OF-WAY. PERSONNEL INVOLVED IN EXCAVATION ON PUBLIC RIGHTS-OF-WAY ARE FULLY AWARE OF THE HAZARDS. THEREFORE, THE 60 INCH LATERAL SEPARATION IS REQUIRED TO HELP PREVENT INJURY TO PERSONNEL DOING EXCAVATION ON PRIVATE PROPERTY.
 - 36" MIN. PLUS NOTE 6 PLUS GAS PIPE AND COMMUNICATION CONDUIT OUTSIDE DIAMS.



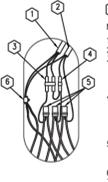
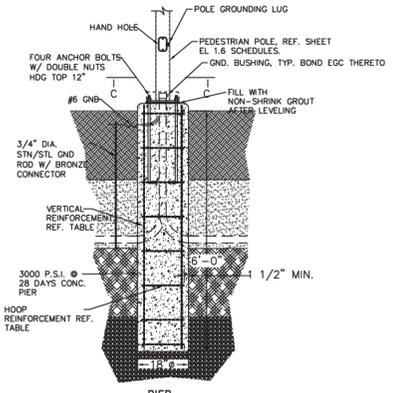
103 DETAIL - UNDERGROUND CONDUIT DUCT BANK
NOT TO SCALE



104 GROUND ROD & WELL
NOT TO SCALE



105 ELECTRICAL HANDHOLE
NOT TO SCALE



PIER REINFORCING SCHEDULE

| NUMBER | SIZE | LENGTH | SHAPE | DIMENSION | |
|--------|------|--------|----------|-----------|-----|
| | | | | A | B |
| 6 | #4 | 5.5' | STRAIGHT | | |
| 6 | #3 | 5.0' | HOOP | 18" | 15" |

301 PIER INSTALLATION
NOT TO SCALE

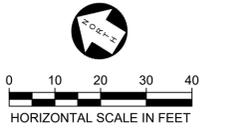
- 302 POLE HANDHOLE DETAIL**
NOT TO SCALE
- NOTES:
- SO CABLE-3C#12 TO LIGHT FIXTURE
 - SO CABLE-3C#12 TO RECEPTACLE
 - BUSSMAN DOUBLE POLE FUSE HOLDER #EY-AA W/ 2A0660 INSULATING BOOTS. PROVIDE 4 INSULATING BOOTS PER HOLDER. PROVIDE 2-3A KTK-R FUSES.
 - BUSSMAN SINGLE POLE FUSE HOLDER #EY-AA W/ 2A0661 TWO CONDUCTOR INSULATING BOOT LINE SIDE AND 2A0660 INSULATING BOOT LOAD SIDE. PROVIDE 1-3A KTK-R FUSE.
 - RAYCHEM GELCAP SL STUB CONNECTION KIT #GELCAP-SL-2/0-3 HOLE. TYP. 3 PER POLE.
 - POLE GROUND LUG. BOND EGG THERETO
 - PROVIDE #12 AWG JUMPERS BETWEEN FUSE HOLDERS AND CONNECTION KITS.



09-10-2025

Project:

BRAME PARK IMPROVEMENTS



BELLMead, TEXAS

Project Number:

2024-CLA536



CAUTION!!!
EXISTING UNDERGROUND UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES ON THE PLANS.

Designed: JAS

Drawn: BVB

Reviewed: JAS

Submission Date:
09-10-2025

Revisions:

Sheet Title:

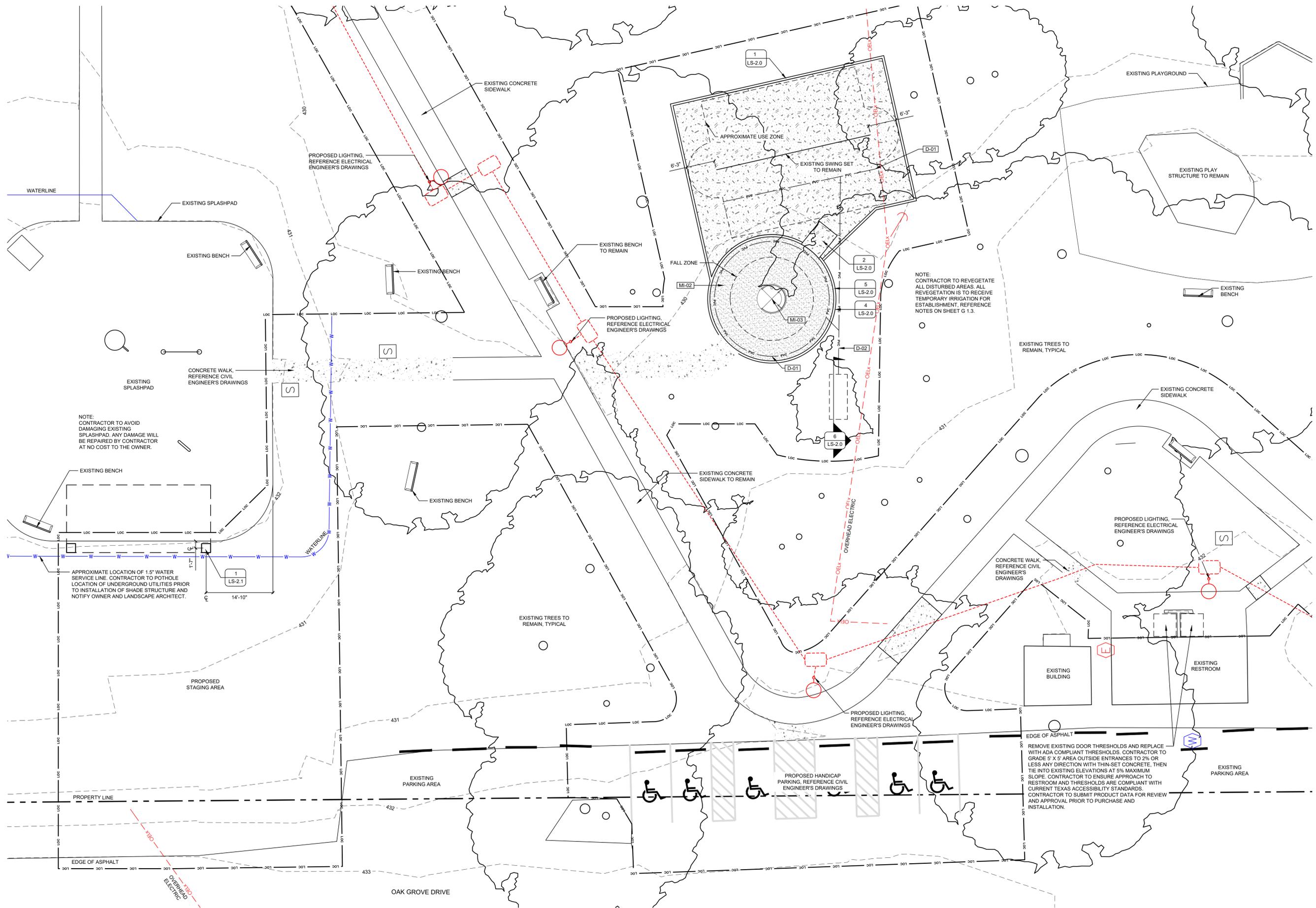
ELECTRICAL DETAILS



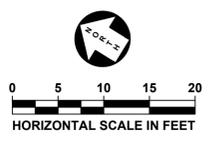
Sheet Number:

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Application Number:
2023-XX-SDP



Project:
BRAME PARK IMPROVEMENTS



BELLMead, TEXAS

Project Number:
2024-CLA536



CAUTION!!!
EXISTING UNDERGROUND UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES ON THE PLANS.

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submission Date:
August 19, 2025

Revisions:

| | |
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Sheet Title:
LANDSCAPE PLAN

Sheet Number:

LS 1.1

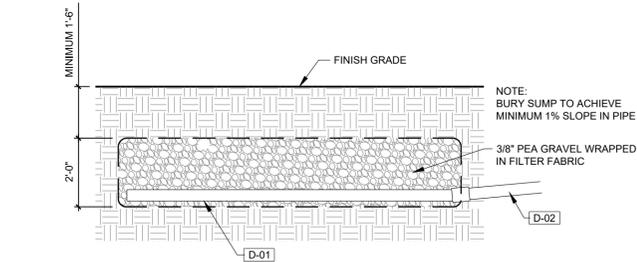
Application Number:

GENERAL NOTES:

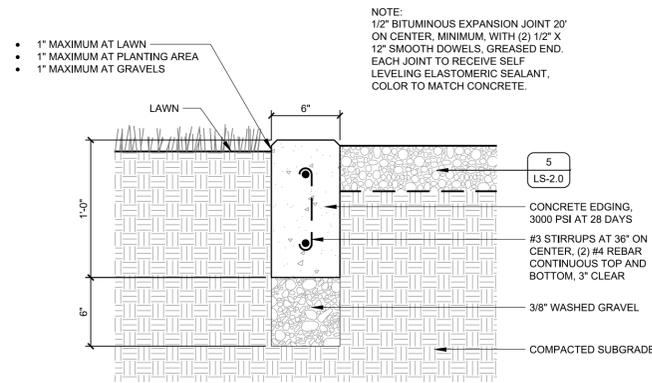
- LOCATE AND VERIFY THE CONDITION OF EXISTING UTILITIES PRIOR TO EXCAVATION. TAKE RESPONSIBILITY OF CONTACTING LINE LOCATION SERVICES AND COST INCURRED FOR BODILY INJURY AND/OR DAMAGE OF OWNER'S PROPERTY OR SAID UTILITIES.
- THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED BY THE CONTRACTOR OF ANY DISCREPANCIES DISCOVERED BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL BE LIABLE FOR ALL MODIFICATIONS AND DAMAGES IF WORK PROCEEDS WITHOUT THIS NOTIFICATION.
- DURING PERFORMANCE OF THE WORK, THE CONTRACTOR SHALL EXERCISE UTMOST CARE TO PREVENT ACCIDENTS TO PERSONS OR PROPERTY AND SHALL PROVIDE AND MAINTAIN BARRIERS AND SAFEGUARDS NECESSARY FOR THE PREVENTION OF ACCIDENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING IMPROVEMENTS BOTH ON SITE AND ADJACENT TO THE WORK SITE AND SHALL REPAIR AND DAMAGE DONE TO THESE IMPROVEMENTS TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL NOTIFY THE OWNER AND LANDSCAPE ARCHITECT 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.
- ANY CHANGES TO THE DRAWINGS OR SPECIFICATIONS RESULTING FROM THE ACCEPTANCE OF CONTRACTOR'S ALTERNATES AND/OR SUBSTITUTIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF TRASH ON A DAILY BASIS BY END OF WORK DAY.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE ORDINANCES. PRIOR TO CONSTRUCTION, ALL PERMITS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROJECT SHALL BE APPLIED, PAID AND SECURED BY THE CONTRACTOR.
- COORDINATE WORK WITH SUBCONTRACTORS TO ACCOMPLISH THE SCOPE OF WORK AS SHOWN AND NOTED IN THE CONTRACT DOCUMENTS AS WELL AS, COORDINATE CONSTRUCTION WITH OTHER CONTRACTORS WORKING ON THE SITE.
- THE CONTRACTOR SHALL COORDINATE THE STORING OF MATERIALS, PARKING OF VEHICLES AND RESTRICTIONS OF WORK AND ACCESS WITH THE OWNER. UNDER NO CIRCUMSTANCES SHALL ANY CONTRACTOR STORE MATERIALS OR PARK VEHICLES UNDER THE CANOPY OF EXISTING TREES.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND SERVICING TEMPORARY TOILET FACILITIES.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND PAYING ALL TEMPORARY UTILITIES AND SERVICES NECESSARY TO COMPLETELY INSTALL ALL WORK AS SHOWN AND NOTED IN THE CONTRACT DOCUMENTS, UNLESS SPECIFIED BY THE LANDSCAPE ARCHITECT / OWNER.
- ALL SAFETY EXPOSURES OR VIOLATIONS SHALL BE RECTIFIED IMMEDIATELY BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LEGAL OFF-SITE DISPOSAL OF SURPLUS MATERIAL AND CONSTRUCTION DEBRIS.
- UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL APPROVAL, CONTRACTOR SHALL THOROUGHLY CLEAN UP THE PROJECT SITE OF ALL TRASH, REPAIR ALL DAMAGE TO FINISH GRADING INCLUDING TAILING FROM EXCAVATIONS, WHEEL RUTS OR ANY SETTLING OR EROSION OCCURRING PRIOR TO COMPLETION. ALL AREAS OF THE PROJECT SITE SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION SATISFACTORY TO THE OWNER PRIOR TO SUBMITTAL OF THE FINAL PAYMENT.

**MATERIAL SCHEDULE
(REFERENCE TECHNICAL SPECIFICATIONS FOR REQUIREMENTS)**

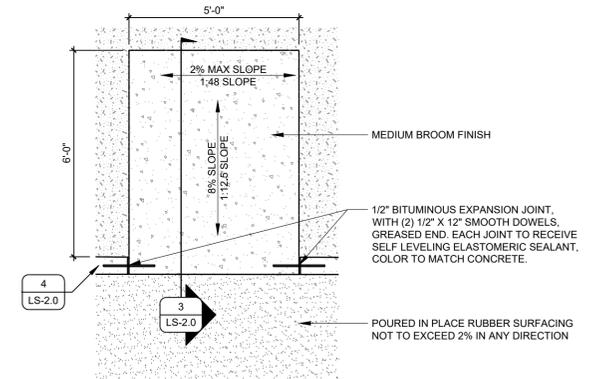
| CODE | ITEM | DESCRIPTION | SUPPLIER | REMARKS |
|-------|----------------------------------|--|---|--|
| D-01 | 4" PERFORATED PVC PIPE | SCHEDULE 40 PVC | LOCAL SOURCE | REFERENCE TECHNICAL SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS |
| D-02 | 4" SOLID PVC PIPE | SCHEDULE 40 PVC | LOCAL SOURCE | REFERENCE TECHNICAL SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS |
| ME-01 | ANCHOR SPIKE | STEEL ANCHOR SPIKE 10" LENGTH x 3/8" DIAMETER PART NUMBER: 1989S-45C | GRAINGER WACO BRANCH #196 1-800-472-4643 OR APPROVED SUBSTITUTE | REFERENCE TECHNICAL SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS |
| MI-01 | FILTER FABRIC | MIRAFI 140N | LOCAL SOURCE | REFERENCE TECHNICAL SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS |
| MI-02 | POURED IN PLACE RUBBER SURFACING | GAMETIME MODEL: PIP1 COLOR: BLUE | CUNNINGHAM RECREATION TRACEY EDGAR (512) 676 2780 Tracey@cunninghamrec.com | CITY OF BELLMEAD TO PURCHASE AND INSTALL |
| MI-03 | INCLUSIVE WHIRL | GAMETIME MODEL: 6262 COLOR: RED & YELLOW BASE, RED HANDRAILS | CUNNINGHAM RECREATION TRACEY EDGAR (512) 676 2780 Tracey@cunninghamrec.com | CITY OF BELLMEAD TO PURCHASE AND INSTALL |
| MI-04 | SHADE STRUCTURE | 2-POST CANTILEVER WING SIZE: 15' X 30' X 10.5' EAWE COLOR: SAIL - BLUE, POST - WHITE MODEL: TX0125JK18973 | USA SHADE MICHELLE BOTHA (512) 937 6430 michelle@capitalshade.com | CONTRACTOR TO SUBMIT PRODUCT DATA FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLATION |
| W-01 | ENGINEERED WOOD FIBER MULCH | KIDDIE KUSHION PRODUCT: SKU #251575 | WHITILESEY LANDSCAPE SUPPLIES NORTH ALUSTIN & ROUND ROCK YARD PHONE: 512-989-7625 OR APPROVED EQUIVALENT | CONTRACTOR TO SUBMIT PRODUCT DATA FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLATION |
| W-02 | WOOD EDGE | 4" x 4" x 16' CEDAR APPLY BOTTOM FACE OF ALL WOOD WITH COPPER NAPHTHENATE | HEIGHTS LUMBER & SUPPLY (254) 699-3491 | CONTRACTOR TO SUBMIT PRODUCT DATA FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLATION |



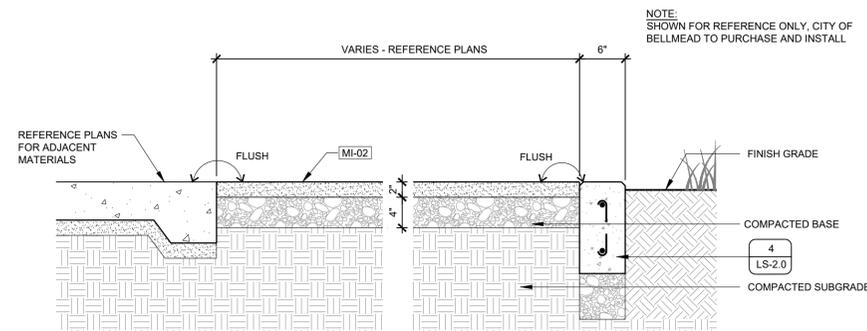
6 DRAINAGE SUMP
PLAN AND SECTION SCALE: 3/8" = 1'-0"



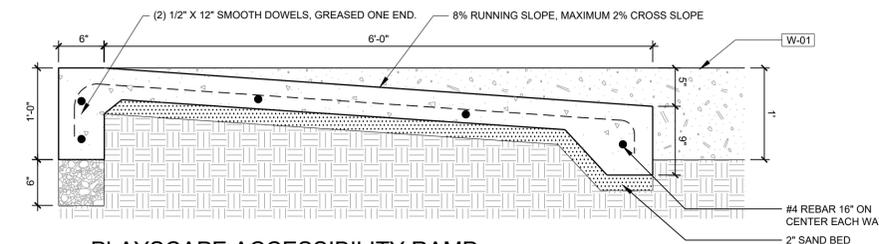
4 6" WIDE CONCRETE EDGING
SECTION SCALE: 1 1/2" = 1'-0"



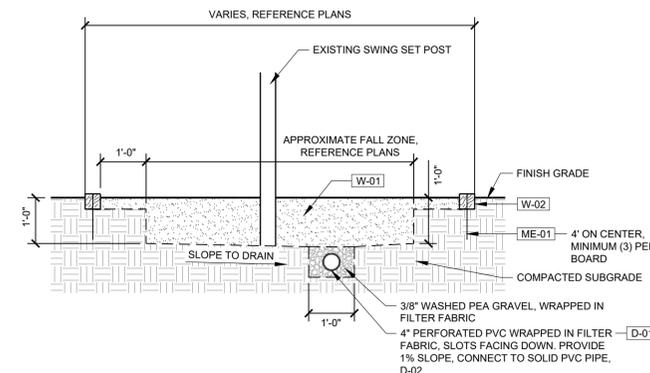
2 PLAYScape ACCESSIBILITY RAMP
PLAN SCALE: 3/8" = 1'-0"



5 POURED IN PLACE RUBBER SURFACING OVER COMPACTED BASE
SECTION SCALE: 1" = 1'-0"



3 PLAYScape ACCESSIBILITY RAMP INTO PLAYScape FALL SURFACE
SECTION SCALE: 1" = 1'-0"



1 SWING SET EDGE AND SURFACING
SECTION SCALE: 1/2" = 1'-0"



Project:
BRAME PARK IMPROVEMENTS

BELLMEAD, TEXAS

Project Number:
2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submittal Date:

September 11, 2025

Revisions:

Sheet Title:
LANDSCAPE MATERIAL SCHEDULE AND NOTES

Sheet Number:

LS 2.0

Application Number:



Project:

BRAME PARK IMPROVEMENTS

BELLMead, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submittal Date:

September 11, 2025

Revisions:

Sheet Title:

SHADE STRUCTURE DETAILS

Sheet Number:

LS 2.1

Application Number:

CUSTOMER:
CAPITAL SHADE

PROJECT NAME:
BRAME PARK - BELLMead

LOCATION:
BELLMead, TX 76705

STRUCTURE TYPE:
CANTI WING

SIZE:
15' X 30' X 10.5'e

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF
USA SHADE AND FABRIC STRUCTURES
AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.



USA SHADE & Fabric Structures
CORPORATE HEADQUARTERS
2580 ESTERS BLVD., SUITE 100
DFW AIRPORT, TX 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER
CERTIFICATION NUMBER (NEVADA): 355

| REV | DESCRIPTION | DATE | DRW | CHK | ENG |
|-----|-------------|------|-----|-----|-----|
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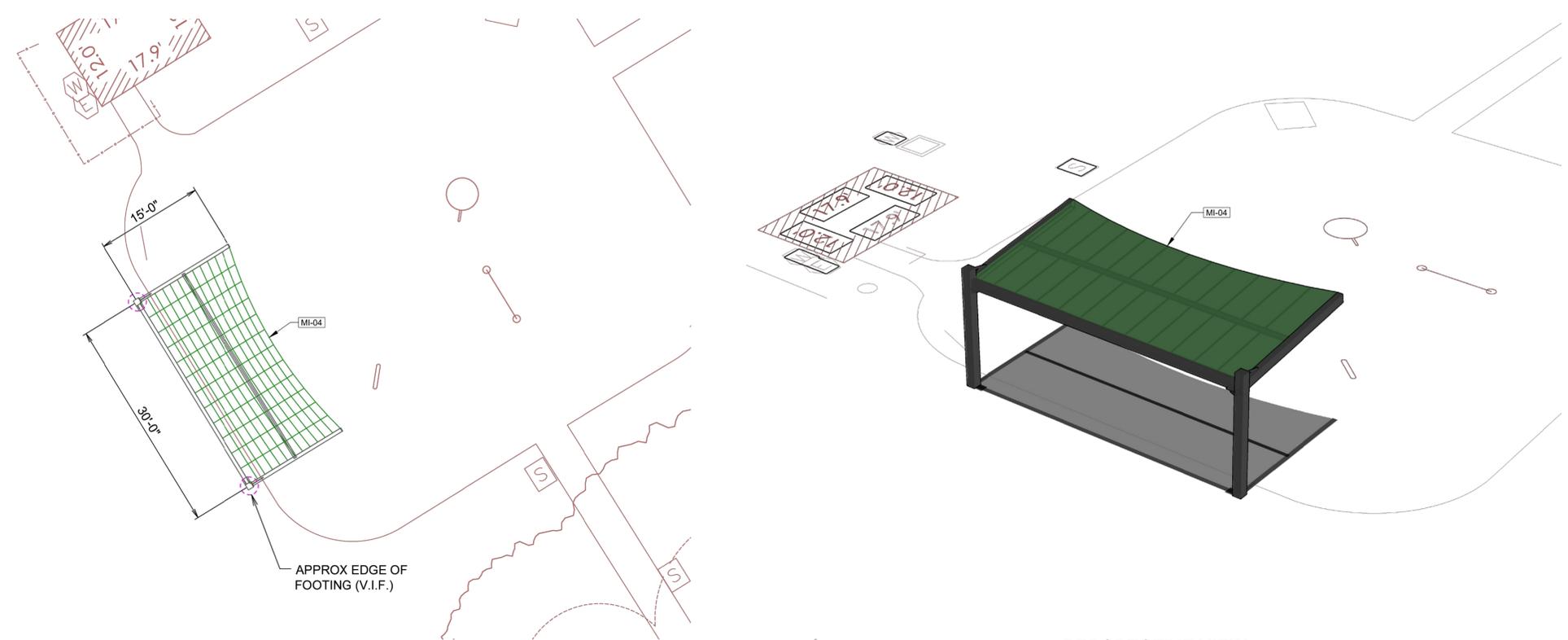
Drawn By : YH 03/27/25
Checked By : YH 03/27/25
Approved By : YH 03/27/25

DRAWING DESCRIPTION:
OPTION #3

DWG. **TX0125JK18973**

PAGE **1003**

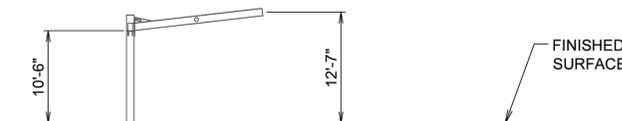
REV.



PLAN VIEW
PLAN NORTH

PERSPECTIVE VIEW

NOTE:
SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR TO
PROVIDE SHOP DRAWINGS SIGNED AND SEALED BY A
STATE OF TEXAS LICENSED ENGINEER FOR FOOTINGS



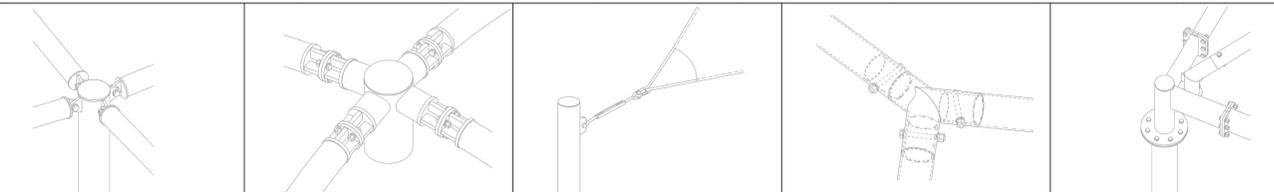
SOUTHEAST ELEVATION



SOUTHWEST ELEVATION

As manufactured and installed by:
USA SHADE & CAPITAL SHADE.

Michelle Botha - Capital Shade
(512) 937-6430
michelle@capitalshade.com



Notes:
-All structures will have bolted connections for shipping and installations purposes.
-Standard details being shown as an example. Final details t.b.d. during final Engineering phase.
-All dimensions and heights must be field verified prior to any final design, fabrication or installation work



SEPTEMBER 11, 2025

Project:

BRAME PARK IMPROVEMENTS

BELLMead, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submittal Date:

September 11, 2025

Revisions:

Sheet Title:

SHADE STRUCTURE SPECIFICATIONS

Sheet Number:

LS 2.2

Application Number:

SECTION 13 31 23 PRE-ENGINEERED SHADE STRUCTURES

PART 1 – GENERAL

- 1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections apply to this section.
- 1.2 SUMMARY
A. The shade structure contractor shall be responsible for the design, engineering, fabrication, supply, and installation (including foundations) of the work specified herein. The intent of this specification is to have only one single contractor be responsible for all the above functions.
- 1.3 REFERENCES
A. Shade Structures must comply with the latest revision of applicable codes and regulations including IBC 2021.
B. American Society for Testing Materials (ASTM)
C. American Welding Society. Structural Welding Code AWS D1.1: Symbols for Welding and Nondestructive Testing AWS 2.3.
D. International Accreditation Services (IAS)
E. American Institute of Steel Construction (AISC): Specifications for the design, fabrication, and erection of structural steel.
- 1.4 SUBMITTALS
A. Provide proof of installed reference sites with six structures for similar scope of project and installation that are engineered to IBC 2021 Specifications.
B. Provide proof of a minimum of 3 separate permitted shade structure projects of similar scope.
C. Provide a minimum of 13 fabric samples to demonstrate fabric color range and powder color selections.
D. Provide proof of all quality assurance items including:
1. A list of at least three reference projects of similar type structures that have been installed in the last 10 years as described below in 2.1 General. Scope.
2. Proof of general liability, professional liability, and umbrella insurance
3. Proof of IAS Certification per Section 1.5 F.
4. Proof of current status as an ISNetworld Member Contractor.
5. Proof of a Corporate Safety Program along with an Injury & Illness Prevention Program.
6. Proof of Corporate Quality Control Manual as per Section 1.5 H
7. Proof of Maintenance Program and 3 reference projects where maintenance has been provided, where necessary, during the duration of the warranty.
- 1.5. QUALITY ASSURANCE
Fabrication and erection are limited to firms with proven experience in design and construction of fabric shade structures and such firms shall meet the following minimum requirements. No substitutions shall be allowed for the following.
- A. A single shade contractor shall design, engineer, manufacture, and erect the fabric shade structures.
B. All bidders shall have at least 12 years' experience in the design, engineering, manufacturing, and installation of shade structures.
C. All bidders shall engineer to IBC 2021 requirements with similar scope.

Brame Park Shade Structures
Bellmeade, TX
pg. 1

- D. All bidders shall be able to provide proof of \$3,000,000 general/public liability insurance, \$1,000,000 professional liability (PL) insurance, \$1,000,000 business automobile liability
E. Steel manufacturer shall be accredited by IAS (International Accreditation Service) for Structural Steel Fabrication under UBC 97 & 2000 Section 1701.7 and IBC 2021 Section 1704.2.2.
F. Proof of current status as an ISNetworld Member Contractor.
G. The shade contractor shall have a Corporate Quality Control program and manual describing their complete quality assurance program.
H. All bidders must have an in-house warranty & service department and local office to assist in repairs and service calls within 48 hours.
- 1.7 WARRANTY
A. The successful bidder shall provide a 12-month warranty on all labor and materials.
B. A supplemental warranty from the manufacturer shall be provided for a period of 10 years on fabric and 10 years on the structural integrity of the steel from the date of substantial completion.
C. The warranty shall not deprive the Owner of other rights under the provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

PART 2 – PRODUCTS

2.1 GENERAL: BASE BID

1. Scope:
Provide (1) one 15' x 30' Custom Cant Wing Shade Structures, measuring 15' x 30' with 108" entry each height. Columns shall measure a minimum of HSS 10.00 x 10.00 x 0.375 and upper framing extensions shall measure a minimum of HSS 8.0 x 6.0 x 0-375. The framing shall support one fabric top. No exceptions.
- A. Basis of Design:
The structures are to be provided by CAPITAL SHADE, manufactured by Shade Structures, Inc. dia USA SHADE & Fabric Structures, or approved equivalent and include the structural steel frame, fabric roof, steel cables, all fasteners, and installation. Scope shall include the design, engineering, fabrication, supply, and installation (including foundations) of the work specified herein. Scope is to include site specific permit submittal, close out.
- Contact:
CAPITAL SHADE, LLC
15511 Hwy 71 W, Suite 110-128
Austin, Texas 78768
Contact Name: Michelle Botha – Phone: 512-937-6430
michelle@capitashade.com
- B. To qualify as an approved equivalent, please submit product documentation, fabric samples and all quality assurance criteria as per Section 1.4 & 1.5 at least 10 days prior to bid date. Approved equals will be issued per addendum prior to bid date.
C. The shade structure shall conform to the current adopted version of the International Building Code 2021 and local agency additions and amendments.
D. All shade structures are engineered and designed to meet a minimum of 115 mph wind load, Exposure C, live load of 5 lbs/sqft and a 5 lbs/sqft snow load. When ASD Steel Design Method is used based on IBC 2021 Section 1605.3.1, the Dead + 0.75 of Live + 0.75 of Wind Load cases must be combined. NO EXCEPTIONS.

Brame Park Shade Structures
Bellmeade, TX
pg. 2

E. Steel:

1. All steel members of the shade structure shall be designed in strict accordance with the requirements of the American Institute of Steel Construction (AISC) Specifications and the American Iron and Steel Institute (AISI) Specifications for Cold Formed Members and manufactured in a IAS (International Accreditation Service) accredited facility for Structural Steel Fabrication as per IBC 2021 Section 1704.2.2.
2. All connections shall have a maximum internal sleeving tolerance of .0625 inches using high tensile strength steel sections with a minimum sleeve length of 6 inches.
3. All non-hollow structural steel members shall comply with ASTM A-36. All hollow structural steel members shall be cold formed, high strength steel and comply with ASTM A-500, Grade C. All steel plates shall comply with ASTM A-572, Grade 50. All galvanized steel tubing shall be triple coated for rust protection using an in-line electro-plating coat process. All galvanized steel tubing shall be internally coated with zinc and organic coatings to prevent corrosion.
4. All columns shall be hot-dip galvanized for additional corrosion prevention due to close proximity to pool and irrigated areas.
- F. Welding:
1. All shop-welded connections of the shade structure shall be designed and performed in strict accordance with the requirements of the American Welding Society (AWS) Specifications. Structural welds shall be made in compliance with the requirements of the "Prequalified" welded joints where applicable and by certified welders. No onsite or field welding shall be permitted.
2. All full penetration welds shall be continuously inspected by an independent inspection agency and shall be tested to the requirement of IBC 2021 and local agency additions and amendments.
- G. Powder Coating:
1. Galvanized steel tubing preparation prior to powder coating shall be executed in accordance to solvent cleaning SSPC-SP1. Solvent such as water, mineral spirits, xylol, toluol, which are to be used to remove foreign matter from the surface. A mechanical method prior to solvent cleaning prior to surface preparation shall be executed according to Power Tool Cleaning SSPC-SP3 and utilizing wire brushed abrasive wheels and needle gun, etc.
2. Carbon structural steel tubing preparation prior to powder coating shall be executed in accordance to commercial blast cleaning SSPC-SP6 or NACE #3. A commercial blast cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, mill scale, rust, coating, oxides, corrosion, products and other foreign material.
3. Powder coating shall be sufficiently applied, with a minimum three mils thickness and cured at the recommended temperature to provide proper adhesion and stability to meet salt spray and adhesion tests as defined by the American Society of Testing Materials.
4. Powder used in the powder coat process shall have the following characteristics:
a. Specific Gravity: 1.77 +/- 0.05 g/cm³
b. Coverage at 1.0 mils: 10Sq ft/lb/mil
c. Storage: 80° F
d. Interpran 800 HR is a series of high durability TGIC powder coatings designed for exterior exposure. Tested against the most severe specifications, Interpran 800 HR gives significantly improved gloss retention and resistance to color change.
e. Rust Protection Powder Under Coat Primer will be required on all structures in close proximity to water or chemicals. POWDURA® Epoxy Powder Coating Z.R. Primer shall be applied in accordance with the manufacturers' specifications.

Brame Park Shade Structures
Bellmeade, TX
pg. 3

- H. Tension Cable: Steel cable is determined based on calculated engineering loads.
1. For light and medium loads, 1/2" (nominal) galvanized 7 x 19 strand cable to be used.
2. For heavy loads, 3/8" (nominal) galvanized 7 x 19 cable to be used.

- I. Fabric Roof Systems
1. UV shade fabric is made of UV stabilized Shadesure® cloth as manufactured by MultiKint Ltd and made of a UV stabilized high-density polyethylene mesh. Mesh shall be raschel knitted with monofilament and tape yarn filler to ensure that material will not unravel if cut.
Panels to be 10ft. wide.
2. Fabric Properties:
a. Life Expectancy: A minimum of 8 years continuous exposure to the sun
b. Fading: Minimum fading after 5 years (3 years for red)
c. Fabric Mass: 2.43-2.68 oz/sqft (190-200g/sqm)
d. Fabric Width: 9.8425 (3m)
e. Roll Length: 164.04 (50m)
f. Roll Dimensions: 62.99"x16.5354" (160 cm x 42 cm)
g. Roll Weight: +/- 66 lbs (+/-30 kg)
h. Minimum Temperature: -13°F (-25° C)
i. Maximum Temperature: +176°F (80° C)
3. Stitching & Thread:
a. All sewing threads are to be double stitched.
b. Thread shall be GORE Tenara Sewing Thread manufactured from 100% expanded PTFE (Teflon); mildew resistant exterior approved thread. Thread shall hold a 10 (ten) year warranty. Thread shall meet or exceed the following:
i. Flexible temperature range
ii. Very low shrinkage factor
iii. Extremely high strength, durable in outdoor climates
iv. Resists flex and abrasion of fabric
v. Unaffected by cleaning agents; acid rain, mildew, salt water and rot resistant, unaffected by most industrial pollutants
vi. Treated for prolonged exposure to the sun

2.2 SHIPPING AND HANDLING

- A. All steel surfaces touched by tie down straps are to be padded before final clinching. This can be accomplished by using carpet pads or factory manufactured padding.
B. All dunnage must be padded before painted products are set in place. Smaller and loose pieces must be padded and totally separate from paint padding.
C. Unloading: Lift forks to be covered with padding. All dunnage must be padded vertically and horizontally to prevent damage to painted surfaces. When unloading, take care to prevent tools and other hard surface items from making contact.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Installation of shade structures shall be performed by manufacturer or manufacturer-approved contractor, which shall be bonded and holding a current contractor's license with the State of Texas Contractors State License Board. All installation personnel must have and show proof of experience in the erection of tensioned fabric structures.
B. The contractor installing the structure shall comply with manufacturers instructions for assembly, installation, and erection per approved drawings.

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C. Concrete:

1. Unless noted otherwise for footing and piers by General Contractor's Engineer, concrete specification for footings, piers, slabs, curbs and walkways shall meet a minimum 2,500 psi at 28-day strength.
2. Concrete work is executed in strict accordance with the latest American Concrete Institute Building Code (ACI 318-99).
3. Slump: 4" maximum.
4. Whenever daily ambient temperatures are below 80 degrees Fahrenheit, the contractor may have mix accelerators and hot water added at the batch plant.
a. Temperature range between 75-80 degrees, 1% accelerator High Early (non-calcium)
b. Temperature range between 70-75 degrees, 2% accelerator High Early (non-calcium)
c. Temperature range below 70 degrees, 3% accelerator High Early (non-calcium)
5. The contractor shall not pour any concrete when daily ambient temperature is below 55 degrees Fahrenheit.

| Temperature Range | % Accelerator | Type Accelerator |
|-------------------|---------------|--------------------------|
| 75-80 degrees | 1% | High Early (non-calcium) |
| 70-75 degrees | 2% | High Early (non-calcium) |
| Below 70 degrees | 3% | High Early (non-calcium) |

D. Foundations:

1. All Anchor Bolts set in new concrete shall be ASTM F-1554 GR 55
2. All Anchor Bolts shall be Hot Dipped Galvanized
3. Pier Footings:
Structure 1 - Minimum footing size shall be 30" diameter x11' depth and placed in accordance with/ and conform to manufacturers engineered specifications and drawings.

END OF SECTION 13 31 23

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Bellmeade, TX
pg. 5



Project:

BRAME PARK IMPROVEMENTS

BELLMead, TEXAS

Project Number:

2024-CLA536

Designed: TWR

Drawn: CMB

Reviewed: RWS

Submittal Date:

September 11, 2025

Revisions:

Sheet Title:

LANDSCAPE SPECIFICATIONS

Sheet Number:

LS 2.3

Application Number:

Brame Park Improvements
Bellmead, Texas

July 25, 2025
Covey Planning + Landscape Architecture

DOCUMENT 00 0107
SEALS PAGE

Covey Planning + Landscape Architecture
Temple, Texas
Tyler Richburg
Texas Registration Number 3252

LANDSCAPE ARCHITECTURAL RESPONSIBILITY

SPECIFICATION SECTIONS:

03 3000 Cast in Place Concrete
33 4600 Subdrainage

SEALS PAGE

00 0107 -1

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SECTION 03 3000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

- 1.1 SUMMARY
 - A. Section Includes:
 1. Concrete forming.
 2. Concrete reinforcing.
 3. Cast-in-place concrete.
 4. Concrete finishing.
- 1.2 REFERENCES
 - A. American Concrete Institute (ACI):
 1. 301 - Structural Concrete for Buildings.
 2. 305R - Hot Weather Concreting.
 3. 306R - Cold Weather Concreting.
 4. 308 - Standard Practice for Curing Concrete.
 5. 318 - Building Code Requirements for Structural Concrete.
 - B. ASTM International (ASTM):
 1. A615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 2. C33 - Standard Specification for Concrete Aggregates.
 3. C94 - Standard Specification for Ready-Mixed Concrete.
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 8. C494 - Standard Specification for Chemical Admixtures for Concrete.
 9. C618 - Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete.
 - C. Concrete Reinforcing Steel Institute (CRSI): Manual of Practice.
- 1.3 SUBMITTALS
 - A. Submittals for Review:
 1. Product Data: Provide data on joint filler, admixtures, and curing compound.
 2. Shop Drawings: Indicate reinforcing sizes, spacings, laps, locations, and quantities of reinforcing bars, wire fabric, and accessories. Show complete layout plan for each lay or reinforcing.
 3. Concrete Mix Designs: Include:
 - a. Proportions of cement, fine and coarse aggregates, and water.
 - b. Water/cement ratio, design strength, slump, and air content.
 - c. Type of cement and aggregates.
 - d. Type and proportion of admixtures.
 - e. Range of ambient temperature and humidity for which design is valid.
- 1.4 QUALITY ASSURANCE
 - A. Concrete Mix Design: In accordance with ACI 301, Method 1 or 2.
 - B. Design formwork in accordance with ACI 301 and 347.
 - C. Obtain cementitious materials from same source throughout.
- 1.5 DELIVERY, STORAGE AND HANDLING
 - A. Deliver reinforcing to project site in bundles marked with tags indicating bar size, length, and mark.
 - B. Store reinforcing above ground in dry, well drained area; protect from corrosion.
 - C. Mix and deliver concrete to project ready mixed in accordance with ASTM C94.
 - D. Schedule delivery so that pours will not be interrupted for over 15 minutes.

CAST-IN-PLACE CONCRETE

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- E. Place concrete on site within 90 minutes after proportioning materials at batch plant.
- 1.6 PROJECT CONDITIONS
 - A. Cold Weather Placement - Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures. Comply with ACI 306R and following requirements:
 1. Air temperature at or expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 degrees F at point of placement.
 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 3. Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.
 - B. Hot Weather Placement - Place concrete in accordance with ACI 305R and following requirements:
 1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F. Use chilled mixing water or chopped ice if water equivalent of ice is calculated in total amount of mixing water.
 2. If required, cover reinforcing steel with water soaked burlap so that steel temperature will not exceed ambient air temperature.
 3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
 4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions.

PART 2 - PRODUCTS

- 2.1 FORMING MATERIALS
 - A. Forms:
 1. Wood, metal, glass fiber, or other approved material that will not adversely affect surface of concrete and will provide or facilitate obtaining specified surface finish.
 - B. Wood:
 - a. Concealed surfaces:
 - 1) Lumber, No. 2 Common or better, dressed to smooth contact surfaces, or:
 - 2) APA Rated Plyform Class 1.
 - b. Exposed surfaces: Non absorptive medium density overlay plywood.
 - C. Metal: Minimum 16 gage steel, tight fitting, stiffened to support concrete.
 - D. Form Ties: Snap off type, adjustable length, 1 inch back break dimension, free of defects that could leave holes larger than 1/8 inch in concrete.
 - E. Form Release Agent: Nonstaining, colorless mineral oil that will not absorb moisture, stain concrete, or impair adhesion of coatings to be applied to concrete.
 - F. Anchors and Fasteners: Size as required, sufficient strength to maintain forms in place while concrete is placed.
- 2.2 REINFORCING MATERIALS
 - A. Reinforcing Bars: ASTM A615/A615M, deformed billet steel, Grade 60, plain finish.
 - B. Welded Wire Fabric: Not permitted.
 - C. Spacers, Chairs, Bolsters, and Bar Supports:
 1. Sized and shaped for strength and support of reinforcement during curing placement.
 2. Galvanized or plastic coated steel for surfaces exposed to weather.
 - D. Tie Wire: Annealed minimum 16 gage.
- 2.3 CONCRETE MATERIALS
 - A. Portland Cement: ASTM C150, Type I or III, gray color (unless noted in drawings).
 - B. Aggregates:

CAST-IN-PLACE CONCRETE

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SECTION 03 3000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

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 - C. Concrete Reinforcing Steel Institute (CRSI): Manual of Practice.
- 1.3 SUBMITTALS
 - A. Submittals for Review:
 1. Product Data: Provide data on joint filler, admixtures, and curing compound.
 2. Shop Drawings: Indicate reinforcing sizes, spacings, laps, locations, and quantities of reinforcing bars, wire fabric, and accessories. Show complete layout plan for each lay or reinforcing.
 3. Concrete Mix Designs: Include:
 - a. Proportions of cement, fine and coarse aggregates, and water.
 - b. Water/cement ratio, design strength, slump, and air content.
 - c. Type of cement and aggregates.
 - d. Type and proportion of admixtures.
 - e. Range of ambient temperature and humidity for which design is valid.
- 1.4 QUALITY ASSURANCE
 - A. Concrete Mix Design: In accordance with ACI 301, Method 1 or 2.
 - B. Design formwork in accordance with ACI 301 and 347.
 - C. Obtain cementitious materials from same source throughout.
- 1.5 DELIVERY, STORAGE AND HANDLING
 - A. Deliver reinforcing to project site in bundles marked with tags indicating bar size, length, and mark.
 - B. Store reinforcing above ground in dry, well drained area; protect from corrosion.
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 - D. Schedule delivery so that pours will not be interrupted for over 15 minutes.

CAST-IN-PLACE CONCRETE

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Brame Park Improvements
Bellmead, Texas

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3. Provide keys and dowels in joints.
- G. Form Release Agent:
 1. Apply form release agent to formwork prior to placing reinforcing, anchoring devices, and embedded items; follow manufacturer's instructions.
 2. Do not allow agent to puddle in forms or to contact hardened concrete against which fresh concrete is to be placed.
- H. Inserts and Embedded Parts:
 1. Before concrete is placed, install inserts, anchor slots, anchor bolts, and embedded parts required for attachment of work.
 2. Provide formed openings where required for pipes, conduits, sleeves, and other work passing through concrete members.
 3. Maintain in position during concrete placement.
- I. Installation Tolerances: Construct formwork to maintain tolerances required by ACI 301.
- 3.3 INSTALLATION OF REINFORCING
 - A. Before placing in work, thoroughly clean reinforcing of loose rust, mill scale, dirt, oil, and other materials that could reduce bonding.
 - B. Inspect reinforcing left protruding for future bonding or following delay in work, and clean if necessary.
 - C. Install reinforcing in accordance with ACI 301, and CRSI Manual and Publications 63 and 65.
 - D. Accurately position reinforcing; securely tie at intersections.
 - E. Locate splices not indicated on Drawings at points of minimum stress.
- 3.4 PLACEMENT OF CONCRETE
 - A. Place concrete in accordance with ACI 301 and ACI 318.
 - B. Ensure reinforcement, inserts, and embedded parts are not disturbed during concrete placement.
 - C. Deposit concrete as nearly as possible in its final position to minimize handling and flowing.
 - D. Place concrete continuously between predetermined expansion, control, and construction joints.
 - E. Do not place partially hardened, contaminated, or retempered concrete.
 - F. Do not allow concrete to free fall over 8 feet; provide tremies, chutes, or other means of conveyance.
 - G. Consolidate concrete with mechanical vibrating equipment. Hand compact in corners and angles of forms.
 - H. Screed slabs level, to flatness tolerance of 1/4 inch in 10 feet.
- 3.5 FORM REMOVAL
 - A. Remove formwork in manner that will not damage surfaces of concrete; patch work damaged during form removal operations.
 - B. Do not remove formwork until concrete has attained sufficient strength to resist dead loads plus applied live loads.
- 3.6 FINISHING
 - A. Formed Surfaces:
 1. Concealed surfaces: Leave texture imparted by forms.Exposed surfaces:
 - a. After form removal and while concrete is still green, patch voids over 1/2 inch in diameter or depth.
 - b. Chip away defective concrete; form edges perpendicular to surface. Wet area to be patched with clean water.
 - c. Apply bonding agent in accordance with manufacturer's instructions.
 - d. Press mortar into place; strike off slightly higher than surrounding surface. Allow initial shrinkage to occur before finishing.
 - e. Finish to match texture and color of adjacent surfaces.
 - f. Remove fins and other protrusions by rubbing with carborundum stone while concrete is still green.

CAST-IN-PLACE CONCRETE

03 3000-4

Brame Park Improvements
Bellmead, Texas

July 25, 2025
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SECTION 03 3000 - CAST-IN-PLACE CONCRETE

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 - d. Type and proportion of admixtures.
 - e. Range of ambient temperature and humidity for which design is valid.
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CAST-IN-PLACE CONCRETE

03 3000-5

| LEGEND OF ELECTRICAL SYMBOLS | | | |
|------------------------------|---|----------------------|---|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
| | CONDUIT RUN CONCEALED IN WALLS OR ABOVE CEILING. ARROW INDICATES HOMERUN TO PANEL. CONDUCTOR DESIGNATIONS ARE AS FOLLOWS: LONG HATCH INDICATES NEUTRAL, SHORT HATCH INDICATES PHASE, "DOT" INDI- CATES INSULATED OR ISOLATED GROUND, AND NO HATCHES INDICATES TWO CONDUCTORS. | MISCELLANEOUS | |
| | CONDUIT RUN CONCEALED IN FLOOR SLAB, BELOW FLOOR SLAB OR BELOW GRADE. WIRING SAME AS ABOVE. | | REMOTE LIGHTING BALLAST/TRANSFORMER FOR LIGHTING |
| | SCREENING SHADE INDICATES FIXTURE CONNECTION ON EMERGENCY OR NIGHT LIGHT CIRCUIT. | | TELEPHONE GROUND BUS |
| | EXIT LIGHT. PROVIDE ARROWS AS INDICATED ON DRAWINGS. | | MAIN TELEPHONE GROUND BUS |
| | SIMPLEX RECEPTACLE OUTLET; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE. | | MAIN ELECTRICAL GROUND BUS |
| | DUPLEX RECEPTACLE OUTLET; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE. | | TRANSFORMER W/ NEC CLEARANCES; REFER TO DWG FOR VOLTAGE/KVA |
| | QUADRUPLEX RECEPTACLE OUTLET GANGED WITH A COMMON WALL PLATE; (2)-20 AMP, 125V, 3 WIRE, GROUNDED TYPE. | | SURFACE PANELBOARD W/ NEC CLEARANCES; 120/208 VOLT. |
| | DUPLEX RECEPTACLE OUTLET LOCATED ABOVE SPLASH ABOVE COUNTER; 20 AMP, 125V, 3 WIRE GROUNDED TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT HEIGHT | | SURFACE PANELBOARD W/ NEC CLEARANCES; 277/480 VOLT. |
| | DUPLEX RECEPTACLE OUTLET WITH GROUND FAULT INTERRUPTER; 20 AMP, 125V., 3 WIRE GROUNDED TYPE. | | RECESS PANELBOARD W/ NEC CLEARANCES; 120/208 VOLT. |
| | DUPLEX RECEPTACLE OUTLET W/ WEATHERPROOF WHILE IN USE COVER; GROUND FAULT INTERRUPTER, 20 AMP, 125V., 3 WIRE, GROUNDED TYPE. | | RECESS PANELBOARD W/ NEC CLEARANCES; 277/480 VOLT. |
| | SPECIAL RECEPTACLE OUTLET: SEE DRAWINGS FOR NEMA CONFIGURATION AND VOLTAGE/COORDINATE WITH MANUFACTURER. | ABBREVIATIONS | |
| | FLUSH MOUNTED FIRE RATED POKE THRU DEVICE FOR FURNITURE FEED. SEE DRAWINGS FOR SPECIFICATIONS. | | EXISTING TO REMAIN |
| | FLUSH MOUNTED FIRE RATED POKE THRU DEVICE W/ RECEPTACLE(S) AND/OR DATA AND/OR TELEPHONE. SEE DRAWINGS FOR SPECIFICATIONS. | | NEW |
| | POWER POLE PROVIDED BY OTHERS. RE: DRAWINGS FOR MORE INFORMATION. | | ITEM NOTED TO BE RELOCATED |
| | TELEPHONE OUTLET. | | ITEM NOTED TO BE DEMOLISHED |
| | CABLE T.V. OUTLET | | ABOVE FINISHED FLOOR |
| | COMBINATION TELEPHONE / DATA OUTLET. | | AUTOMATIC DAMPER |
| | DATA OUTLET | | AMPERE INTERRUPTING CAPACITY |
| | TELEPHONE TERMINAL BOARD, 4'x8'x3/4" FIRE RATED PLYWOOD. | | ALUMINIUM |
| | SINGLE POLE, SINGLE-THROW SWITCH; 20 AMP, 120/277V. | | AMPERAGE |
| | 3-WAY SWITCH: 20 AMP, 120/277V. | | AUTOMATIC TRANSFER SWITCH |
| | 4-WAY SWITCH: 20 AMP, 120/277V. | | AMERICAN WIRE GAUGE |
| | KEY SWITCH | | BREAKER |
| | DIMMER SWITCH. SEE DRAWINGS FOR SPECIFICATIONS. | | CONDUIT |
| | WALL MOUNTED OCCUPANCY SENSOR AS SPECIFIED; 120/277VAC | | CIRCUIT |
| | CEILING MOUNTED OCCUPANCY SENSOR AS SPECIFIED; 120/277VAC | | CURRENT TRANSFORMER |
| | EMERGENCY POWER OFF SWITCH (E.P.O.) | | COPPER |
| | PUSH BUTTON | | DIRECT CURRENT |
| | BUZZER | | DISCONNECT |
| | JUNCTION BOX MOUNTED ABOVE ACCESSIBLE CEILING. | | ELECTRICAL CONTRACTOR |
| | JUNCTION BOX - WALL MOUNTED | | ELECTRICAL METALLIC TUBING |
| | DISCONNECT IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES, & FUSE SIZE. (IF REQUIRED) 30 AMP, 3 POLE, NON-FUSED - U.O.N. | | EMERGENCY POWER OFF |
| | SINGLE PHASE MOTOR | | FIRE ALARM |
| | THREE PHASE MOTOR | | FIRE ALARM CONTROL PANEL |
| | MOTOR STARTER / DISCONNECT IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES, FUSE SIZE (IF REQUIRED), AND SIZE. 30 AMP, 3 POLE, NON-FUSED, SIZE "0"-U.O.N. | | FOOT CANDLE |
| | MOTOR STARTER/VFD IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES AND SIZE. | | FULL LOAD AMPS |
| | CONTACTOR IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE AND NUMBER OF POLES. | | GENERAL CONTRACTOR |
| | PHOTO-ELECTRIC CELL | | GROUND FAULT INTERRUPTER |
| | TIMECLOCK IN NEMA 1 ENCLOSURE, OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE AND NUMBER OF POLES. | | GROUND |
| | CARD READER JUNCTION BOX WITH 3/4" TO ACCESSIBLE CEILING U.N.O. | | HEAVY DUTY |
| | GROUND | | HAND-OFF-AUTO |
| FIRE ALARM SYMBOLS | | | HORSEPOWER |
| | SMOKE DETECTOR (IONIZATION) | | ISOLATED GROUND |
| | HEAT DETECTOR | | THOUSAND CIRCULAR MILS |
| | DUCT DETECTOR WITH SAMPLING TUBE. | | KILOWATT |
| | TAMPER SWITCH | | METAL CLAD |
| | WATER FLOW SWITCH. | | MAIN CIRCUIT BREAKER |
| | MAGNETIC DOOR HOLD OPEN. | | METAL HALIDE |
| | SMOKE FIRE DAMPER | | MAIN SWITCHBOARD |
| | SECURITY CAMERA | | MAIN LUG ONLY |
| | FIREMAN'S PHONE JACK. | | NATIONAL ELECTRICAL CODE |
| | FIREMAN'S TELEPHONE HANDSET. | | NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION |
| | FIRE ALARM CONTROL PANEL. | | NATIONAL FIRE PROTECTION ASSOCIATION |
| | FIRE ALARM REMOTE ANNUNCIATOR. | | NOT IN CONTRACT |
| | | | NON-FUSED |
| | | | NIGHT LIGHT |
| | | | NOT TO SCALE |
| | | | PHASE |
| | | | PANEL OR PANELBOARD |
| | | | POLYVINYL CHLORIDE |
| | | | REMOTE ANNUNCIATOR CONTROL PANEL |
| | | | REFLECTED CEILING PLAN |
| | | | REFERENCE |
| | | | SMOKE/FIRE DAMPER |
| | | | SPECIFICATIONS |
| | | | SQUARE FEET |
| | | | TIME SWITCH |
| | | | TELEPHONE TERMINAL BOARD |
| | | | TYPICAL |
| | | | UNDERGROUND |
| | | | UNLESS NOTED OTHERWISE |
| | | | UNINTERRUPTIBLE POWER SUPPLY |
| | | | VOLTAGE |
| | | | VARIABLE FREQUENCY DRIVE |
| | | | WEATHER PROOF |
| | | | WEATHER PROOF IN USE COVER |
| | | | WEATHER RESISTANT |
| | | | TRANSFORMER |

| ELECTRICAL GENERAL NOTES | |
|--------------------------|---|
| A. | REFER TO ELECTRICAL PLANS FOR DEMOLITION, NEW WORK, AND ADDITIONAL INFORMATION FOR RELOCATED ITEMS. |
| B. | REFER TO ELECTRICAL SPECIFICATIONS, SCHEDULES, AND DETAIL DRAWINGS FOR ADDITIONAL INFORMATION. |
| D. | CONTRACTOR SHALL FIELD VERIFY ACTUAL LOCATIONS OF ALL DEVICES, PANELS, & CIRCUITING PRIOR TO SUBMITTING A BID. COORDINATE COMPLETELY WITH ALL OTHER TRADES. |
| E. | THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING AND NEW ELECTRICAL DEVICES AND DISTRIBUTION EQUIPMENT ARE MOUNTED SO THAT ALL REQUIRED CODE AND MANUFACTURER'S SERVICES CLEARANCES ARE MAINTAINED. COORDINATE COMPLETELY WITH ALL NEW WALLS AND RELOCATE AS REQUIRED TO MAINTAIN PROPER CLEARANCES. |
| F. | DUE TO DRAWING SCALE, IT IS NOT POSSIBLE TO INDICATE ALL CONDUIT AND FITTINGS WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL EXAMINE FIELD CONDITIONS AND FURNISH THE NECESSARY COMPONENTS WHICH MAY BE REQUIRED TO COMPLETE THE INSTALLATION. |
| G. | IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO BRING TO THE ATTENTION OF THE ELECTRICAL ENGINEER ANY SAFETY OR CODE CONCERNS WITH THE PROPOSED PLAN PRIOR TO ROUGH IN. |
| H. | ELECTRICAL CONTRACTOR SHALL VERIFY THAT LOCATION OF CEILING, FLOOR, AND WALL MOUNTED ELECTRICAL DEVICES OR DISTRIBUTION EQUIPMENT SHOWN ON THE DRAWINGS ARE ACCEPTABLE TO THE ARCHITECT PRIOR TO INSTALLATION. |
| I. | THE CONTRACTOR SHALL REPLACE ANY DAMAGED OR NON-FUNCTIONING LIGHT SWITCHES, RECEPTACLES, OR COVERS. NEW DEVICES AND COVERS SHALL MATCH BUILDING STANDARD. |
| J. | ALL EQUIPMENT LOCATED OUTSIDE OR EXPOSED TO UNCONDITIONED AIR SHALL BE INSTALLED OR PROVIDED WITH NEMA 3R RATED ENCLOSURES. |
| K. | NEW EXPOSED TO VIEW DISCONNECTS, CONDUIT, OR DISTRIBUTION EQUIPMENT SHALL BE PAINTED TO MATCH BUILDING EXTERIOR. REFER TO THE ARCHITECT FOR FINISH OF EQUIPMENT. |

| ELECTRICAL DRAWING LIST | |
|-------------------------|---------------------------------------|
| DRAWING # | DESCRIPTION |
| E0.0 | ELECTRICAL COVER SHEET |
| E0.1 | ELECTRICAL NOTES AND SPECIFICATIONS |
| E0.2 | ELECTRICAL NOTES AND SPECIFICATIONS |
| E1.0 | ELECTRICAL - SITE PLAN |
| E2.0 | ELECTRICAL DETAILS AND PANEL SCHEDULE |

| LIGHT FIXTURE SCHEDULE | | | | | |
|------------------------|--|---------|----------|------------------|---------|
| TYPE | DESCRIPTION | VOLTAGE | MOUNTING | LAMPS | REMARKS |
| PT | POLE LIGHT ANP LIGHTING #SBW20-M037LDD-W-40K-PM10-FINISH PT POLE: #BD4S12-FINISH-GFI1S | 120V | POLE | 30W LED 4000K | |

NOTE:
1. COORDINATE WITH ARCHITECT AND OWNER ON FINAL LIGHT FIXTURE SELECTIONS PRIOR TO PURCHASING.

| VOLTAGE DROP SCHEDULE MAIN FEEDER (2% MAX DROP REQUIRED) | |
|---|--------|
| WIRE MATERIAL | COPPER |
| WIRE SIZE | #10 |
| CONDUIT MATERIAL | STEEL |
| POWER FACTOR (PF) | 0.85 |
| VOLTAGE | 120 |
| PHASE | 1 |
| NUMBER OF SETS | 1 |
| ESTIMATED LENGTH | 570 |
| LOAD CURRENT | 2 |
| VOLTAGE DROP | 2.5 |
| VOLTAGE DROP % | 2.1 |
| VOLTAGE AT THE END | 117.5 |
| PRIOR TO BID: CONTRACTOR TO FIELD VERIFY EXACT FEEDER LENGTH OF FEEDER AND IF LENGTH IS OVER THE ESTIMATED LENGTH NOTED ABOVE, CONTRACTOR IS RESPONSIBLE TO PERFORM AN UPDATED VOLTAGE DROP CALCULATION AND UPGRADE FEEDER SIZE AS REQUIRED. | |

COVEY

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ENGINEERS

PILLAR
ARCHITECTURE STUDIO

Project:

**BRAME PARK
IMPROVEMENTS**

BELLMead, TEXAS

Project Number:

2024-CLA536



Designed: TCN

Drawn: TCN

Reviewed: MEF

Submission Date:

JULY 29, 2025

Revisions:

Sheet Title:

**ELECTRICAL
COVER SHEET**

Sheet Number:

E0.0

Application Number:

2023-XX-SDP

GENERAL PROVISIONS

- FURNISH AND INSTALL ALL ITEMS, INCLUDING EVERY ARTICLE, DEVICE, OR ACCESSORY REASONABLY NECESSARY TO FACILITATE EACH SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT SPECIFIED. ELEMENTS OF THE WORK SHALL INCLUDE, BUT ARE NOT LIMITED TO, MATERIALS, LABOR, SUPERVISION, SUPPLIES, EQUIPMENT, TRANSPORTATION, HOISTING/RIGGING, STORAGE, UTILITIES, AND ALL REQUIRED PERMITS AND LICENSES.
- WORK SHALL COMPLY WITH THE MOST RECENT VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IN THE EVENT OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY, THE LATTER SHALL RULE. ANY MODIFICATION RESULTING THEREFROM SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT ANY SUCH MODIFICATIONS TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING. SHOULD THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THEY ARE NOT IN CONFLICT WITH THOSE CODES.
- DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT NECESSARILY REFLECT ALL WORK REQUIRED TO COMPLETE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT AS REQUIRED TO COMPLETE PROJECT WITHIN DESIGN INTENT AT NO ADDITIONAL COST TO OWNER/TENANT OR TENANT. CONTRACTOR SHALL REQUEST ADDITIONAL INFORMATION IN CASES OF DOUBT.
- IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE GREATER AMOUNT OF TOTAL COST SHALL BE PRICED. BRING THE CONFLICT TO THE ATTENTION OF THE ENGINEER AND REQUEST DIRECTION.

PRE-CONSTRUCTION

- BEFORE SUBMITTING A BID, CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET IN INSTALLING THE WORK AND MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL PRICE. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.
- CONSIDERATION SHALL NOT BE GRANTED FOR MISUNDERSTANDING OF THE SCOPE OR AMOUNT OF WORK TO BE PERFORMED, TENDER OF A PROPOSAL CONVEYS FULL CONTRACTOR AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED AND/OR INDICATED, SCHEDULED, OR IMPLIED ON THE CONTRACT DOCUMENTS, AND/OR REQUIRED BY THE NATURE OF THIS WORK.
- CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS.

DEMOLITION

- ALL EXISTING CONDUIT AND CONDUCTORS SERVING THE AREA UNDER CONTRACT NOT TO BE RE-USED SHALL BE TERMINATED AT LAST PORTION OF CIRCUIT REQUIRING ENERGIZATION BEFORE THE DEMOLITION AREA. IF A CIRCUIT SERVICES ONLY THE DEMOLITION AREA, REMOVE ALL CONDUITS AND CONDUCTORS BACK TO THE PANELBOARD OR BASE BUILDING GRID BOX AND DE-ENERGIZE THE CIRCUIT BREAKER, MAKING IT A SPARE. NOTE "SPARE" OR "GRID-SPARE" ACCORDINGLY ON PANELBOARD DIRECTORY.
- REMOVE ALL ABANDONED "LOW VOLTAGE" CABLING INCLUDING FIRE ALARM CABLING, TELEPHONE/DATA CABLING, AND SECURITY CABLING, REMOVE ALL EXISTING CONDUIT AND WIRING THAT IS SUPPORTED FROM THE CEILING GRID. REMOVE ALL EXISTING UNUSED ELECTRICAL EQUIPMENT, CONTROLS, CONDUIT, HANGERS, WIRING, ETC.
- RELOCATE AND RECONNECT ACTIVE PORTIONS OF THE ELECTRICAL SYSTEM OUTSIDE OF THE SCOPE OF DEMOLITION, AS REQUIRED TO MAINTAIN A COMPLETE AND OPERATING SYSTEM THAT IS FUNCTIONALLY EQUIVALENT TO THE PRE-EXISTING SYSTEM PRIOR TO DEMOLITION.
- ELECTRICAL PLANS INDICATE FINAL WIRING DEVICE, DATA/COMMUNICATIONS OUTLET AND SWITCH LOCATIONS. ALL OTHER EXISTING WIRING DEVICES, DATA/COMMUNICATIONS OUTLETS AND SWITCHES SHALL BE REMOVED AND WALLS SHALL BE PATCHED.
- ALL EXISTING JUNCTION BOXES, OUTLETS, PULL BOXES, ETC., LOCATED ABOVE NON-ACCESSIBLE CEILINGS INSTALLED UNDER THIS TENANT IMPROVEMENT PROJECT SHALL BE RELOCATED AS NECESSARY TO A LOCATION ABOVE AN ACCESSIBLE CEILING. WHERE EXISTING JUNCTION BOXES ARE NOT PRACTICAL TO RE-LOCATE, ELECTRICAL CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER PRIOR TO SUBSTANTIAL START OF CONSTRUCTION.
- REMOVE ALL EXISTING UNUSED ELECTRICAL EQUIPMENT, CONTROLS, CONDUIT, HANGERS, WIRING, ETC., FROM ABOVE CEILINGS.
- REFER TO ARCHITECTURAL DRAWINGS FOR LIGHT FIXTURES TO BE RELOCATED. RELOCATE AND RE-CIRCUIT FIXTURES AS SHOWN. PROVIDE ADDITIONAL FIXTURES TO MATCH FIXTURE QUANTITIES SHOWN. FIELD VERIFY EXISTING CONDITIONS.
- REFER TO ARCHITECTURAL PLANS FOR WALL AND PARTITIONS TO BE REMOVED. CONTRACTOR SHALL PROVIDE ELECTRICAL DEMOLITION AS PREVIOUSLY DESCRIBED.
- REFER TO ARCHITECTURAL DRAWINGS FOR RECEPTACLES AND VOICE/DATA OUTLETS TO BE REMOVED. FIELD VERIFY EXISTING CONDITIONS.
- CONTRACTOR SHALL REMOVE AND REPLACE ALL WIRING DEVICES NOT CONFORMING TO BUILDING STANDARDS.
- REMOVE ALL EXISTING CONDUIT AND WIRING THAT IS SUPPORTED FROM THE CEILING GRID VIA CADDY CLIPS, ETC. AND REPLACE EXISTING CONDUIT THAT IS TO BE REUTILIZED WITH MATCHING CONDUIT AND WIRING PROPERLY SUPPORTED FROM STRUCTURE ABOVE.
- REMOVE ALL EXISTING CONDUIT AND WIRING THAT IS SUPPORTED FROM THE CEILING GRID VIA CADDY CLIPS, ETC. AND REPLACE EXISTING CONDUIT THAT IS TO BE REUTILIZED WITH MATCHING CONDUIT AND WIRING PROPERLY SUPPORTED FROM STRUCTURE ABOVE.
- RE-SUPPORT AND/ RE-ROUTE ANY REMAINING PIPING OR DEVICES THAT WERE SUPPORTED BY DEMOLISHED WALLS.

SUBMITTALS

- ALL EQUIPMENT AND MATERIAL TO BE FURNISHED AND INSTALLED ON THIS PROJECT SHALL BE UL OR ETL LISTED, IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SUITABLE FOR ITS INTENDED USE ON THIS PROJECT.
- MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD CONDITION. THE COMMERCIALY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES INDICATED ARE INTENDED TO IDENTIFY STANDARDS OF QUALITY AND PERFORMANCE NECESSARY FOR THE PROPER FUNCTIONING OF THE WORK. MATERIALS AND EQUIPMENT, WHICH ARE FOUND TO HAVE FACTORY DEFECTS SHALL BE REPLACED OR REPAIRED IN A MANNER ACCEPTABLE TO THE OWNER/TENANT AND ENGINEER AT NO ADDITIONAL COST TO THE OWNER/TENANT.
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL NEW EQUIPMENT, CONTROLS, AND FIXTURES TO BE PROVIDED. SUBMIT .PDF FORMAT FILE FOR APPROVAL.
- THE FOLLOWING SUBMITTAL DATA SHALL BE FURNISHED AND SHALL INCLUDE BUT NOT BE LIMITED TO:
 - ALL NEW EQUIPMENT, CONTROLS, SPECIALTY WIRING DEVICES, AND LIGHT FIXTURES
 - LIGHTING CONTROL SHOP DRAWINGS - WHERE DIMMING CONTROL PANELS OR NLIGHT CONTROLS ARE UTILIZED
 - COORDINATION DRAWINGS
 - FIRE ALARM MATERIAL AND SHOP DRAWINGS
 - FIRE STOP MATERIALS AND INSTALLATION DETAILS

CONSTRUCTION

- ALL WORK SHALL BE ARRANGED IN A NEAT, WELL ORGANIZED MANNER. ALL SERVICES SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE PRIMARY LINES OF THE BUILDING. LOCATE ALL OPERATING AND CONTROL EQUIPMENT PROPERLY TO PROVIDE EASY ACCESS AND ARRANGE ENTIRE WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND FOR PROPER CODE AND/OR MANUFACTURERS CLEARANCES.
- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COORDINATE THE INSTALLATION OF DUCTWORK, PIPING, CONDUIT, CABLE, ETC., WITH LIGHTING FIXTURES, SPECIAL CEILING CONSTRUCTION, AIR DISTRIBUTION EQUIPMENT, AND THE STRUCTURE. PROVIDE ADDITIONAL RISES AND OFFSETS AS REQUIRED. IF, AFTER INSTALLED, NEW DUCTWORK, PIPING, CONDUIT, CABLE, ETC., IS FOUND TO BE IN CONFLICT WITH THE ARCHITECTURE, STRUCTURE OR OTHER TRADE WORK, WHICH IS EITHER EXISTING OR SHOWN ON THE CONTRACT DOCUMENTS, THE DUCTWORK, PIPING, CONDUIT, CABLE, ETC., SHALL BE RELOCATED WITHOUT ADDITIONAL COST TO THE OWNER/TENANT. COORDINATE ALL WORK COMPLETELY WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL PROTECT THE WORK, EQUIPMENT, AND MATERIALS FROM DAMAGE BY HIS WORK OR HIS PERSONNEL, AND SHALL CORRECT ALL DAMAGE THUS CAUSED WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS, AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER. PROTECT ALL WORK AGAINST THEFT, INJURY, OR DAMAGE AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. THE CONTRACTOR SHALL CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT THE ENTRY OF DUST, DIRT, AND OBSTRUCTING MATERIAL. THE CONTRACTOR SHALL PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE DUE TO WATER, SPRAY-ON FIREPROOFING, CONSTRUCTION DEBRIS, ETC. IN A MANNER ACCEPTABLE TO THE ENGINEER AND/OR OWNER.
- AREAS OF THE EXISTING BUILDING WILL BE OCCUPIED DURING CONSTRUCTION OF THIS PROJECT. NOISY, DUSTY, AND/OR OTHER CONSTRUCTION OPERATIONS REQUIRED FOR WORK WHICH DISTURB OR CAUSE COMPLAINTS BY THE EXISTING BUILDING OCCUPANTS SHALL NOT BE ACCEPTABLE. ALL AFTER-HOUR OR OVERTIME WORK REQUIRED BY THE CONTRACTOR TO AVOID DISRUPTION OF EXISTING OCCUPANTS WILL BE PROVIDED AT NO COST TO THE OWNER/TENANT. THE CONTRACTOR SHALL USE CONSTRUCTION METHODS AND MATERIALS WHICH SHALL NOT ADVERSELY AFFECT THE INDOOR AIR QUALITY OF THE EXISTING OCCUPIED AREAS.
- ALL BUILDING SERVICES, UTILITIES, POWER, FIRE PROTECTION, AND DOMESTIC COLD AND HOT WATER MAY NOT BE DISRUPTED FOR ANY REASON WITHOUT PRIOR COORDINATION WITH A REPRESENTATIVE OF BUILDING OPERATIONS.
- THIS BUILDING MAY HAVE A STRUCTURAL SYSTEM UTILIZING POST-TENSIONED CABLES. THE CONTRACTOR SHALL DETERMINE THE EXISTING STRUCTURAL SYSTEM PRIOR TO CUTTING, DRILLING, OR CORING. THE CONTRACTOR SHALL SCAN ALL PENETRATIONS PRIOR TO CUTTING THE FLOOR SLAB.
- PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIREFASED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE LOCAL AUTHORITY HAVING JURISDICTION.

PROJECT CLOSE-OUT

THE ELECTRICAL CONTRACTOR SHALL PERFORM THE FOLLOWING TASKS UPON PROJECT COMPLETION. ALL REQUIRED REPORTS AND AS-BUILTS SHALL BE SUBMITTED WITHIN TWO (2) WEEKS OF DATE OF SUBSTANTIAL COMPLETION OR OWNER OCCUPANCY.

- SUBMIT "AS-BUILT" RECORD DRAWINGS INDICATING ACTUAL AS-BUILT CONDITIONS TO THE ARCHITECT/ENGINEER FOR REVIEW. RECORD DRAWINGS SHALL BE STAMPED "AS-BUILT" AND SHALL HAVE THE NAME, ADDRESS, AND TELEPHONE NUMBER OF THE CONTRACTOR. ALL ENGINEERS' SEALS SHALL BE REMOVED FROM THE DRAWINGS. PROVIDE FOUR (4) BLACK AND WHITE DIGITAL COPIES AND ONE (1) ELECTRONIC FILE.
- EXISTING CIRCUITRY SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY EXACT CIRCUITRY AND INDICATE ANY DEVIATIONS ON THE "AS BUILT" DRAWINGS. "AS BUILT" DRAWINGS SHALL ACCURATELY INDICATE THE LOCATION OF ALL NEW AND EXISTING JUNCTION BOXES WITH THE RESPECTIVE PANEL AND CIRCUIT NUMBERS.
- SUBMIT TWO (2) COPIES OF OPERATION AND MAINTENANCE MANUALS. THE MANUALS SHALL INCLUDE RATINGS, CAPACITIES, PARTS LISTS, WIRING DIAGRAMS, SERVICE/MAINTENANCE RECOMMENDATIONS, AND WARRANTIES.
- SUBMIT WRITTEN RESPONSE TO ALL FIELD REPORTS INDICATING CORRECTIVE ACTIONS TAKEN AND DATE CORRECTIVE ACTION WAS TAKEN TO THE ARCHITECT/ENGINEER FOR REVIEW.

WARRANTY

- THE WARRANTY PERIOD SHALL BE NO LESS THAN ONE (1) FULL YEAR, UNLESS SPECIFIED OTHERWISE AND SHALL INCLUDE AT LEAST ONE (1) FULL HEATING SEASON AND ONE (1) FULL COOLING SEASON. DURING THE WARRANTY PERIOD THE CONTRACTOR SHALL GUARANTEE THE FOLLOWING IN A FORM SATISFACTORY TO THE OWNER/TENANT:
 - ALL WORK INSTALLED SHALL BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS.
 - ALL APPARATUS WILL DEVELOP CAPACITIES AND PERFORMANCE CHARACTERISTICS SPECIFIED.
 - THE SYSTEMS SHALL OPERATE WITHOUT MALFUNCTION.
- THE START OF THE CONTRACTOR'S WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF "SUBSTANTIAL COMPLETION" AS AGREED TO BY THE OWNER/TENANT.

CONDUIT

- ALL CONDUITS SHALL BE CONCEALED IN PIPE CHASES, WALLS, FURRED SPACED, OR ABOVE THE CEILING OF THE BUILDING UNLESS OTHERWISE INDICATED. CONDUIT SHALL NOT BE EMBEDDED IN ANY STRUCTURAL SLAB OR STRUCTURAL MEMBER UNLESS APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- CONDUIT MAY BE RUN EXPOSED IN MECHANICAL ROOMS, DUCT AND PIPING CHASES, BUT ONLY WHERE NECESSARY. ALL EXPOSED CONDUIT SHALL BE RUN IN THE NEAREST, MOST INCONSPICUOUS MANNER, AND PARALLEL OR PERPENDICULAR TO THE BUILDING LINES.
- ALL CONDUIT AND SURFACE RACEWAYS SHALL BE ADEQUATELY AND PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE BY MEANS RECOMMENDED BY THE MANUFACTURER, OR BY THE USE OF HANGER RODS OR CLAMPS.
- ALL CONDUITS THROUGHOUT THE BUILDING SHALL BE SUPPORTED AT MINIMUM 10 FEET ON CENTERS HORIZONTALLY AND SUPPORTED 6 FEET ON CENTERS VERTICALLY. SUPPORT CONDUIT WITHIN 3' OF ALL CONNECTIONS TO BOXES.
- CONDUIT SHALL NOT BE SUPPORTED FROM DUCTWORK, PIPING, OR EQUIPMENT.
- THE LOAD AND SPACING ON EACH HANGER AND/OR INSERT SHALL NOT EXCEED THE SAFE ALLOWABLE LOAD FOR ANY COMPONENT OF THE SUPPORT SYSTEM, INCLUDING THE CONCRETE WHICH HOLDS THE INSERTS. CONFIRM WITH STRUCTURAL ENGINEER WHERE REQUIRED.
- ALL ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN CONDUIT, OR SURFACE METAL RACEWAYS. IN ADDITION, EMPTY CONDUIT OR SURFACE METAL RACEWAYS SHALL BE INSTALLED FOR THE VOICE/DATA SYSTEM, AND FOR OTHER SYSTEMS AS INDICATED ON THE DRAWINGS.
- GALVANIZED RIGID METAL CONDUIT (RMC) SHALL BE USED WHERE CONDUIT IS IN A CONCRETE SLAB WITH A VAPOR BARRIER (PROVIDE TAPE WRAP), WHERE SUBJECT TO PHYSICAL DAMAGE, OR IN SIZES GREATER THAN 4" IN DIAMETER.
- RMC CONDUIT SHALL BE JOINED WITH THREADED COUPLINGS AND SHALL BE SECURED IN CABINETS, OUTLETS, ETC., WITH DOUBLE LOCK NUTS AND SHALL BE PROVIDED WITH INSULATED THROAT BUSHINGS AS MANUFACTURED BY STEEL CITY OR EQUAL. COUPLINGS, ETC., SHALL BE THREADED.
- RIGID STEEL CONDUIT SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUT. FULL LENGTHS OF PIPE SHALL HAVE GALVANIZED OR ZINC-COATED THREADS ON BOTH ENDS.
- EMT MAY BE USED INDOORS WHERE CONCEALED OR EXPOSED ABOVE GRADE, EXCEPT WHERE RIGID STEEL CONDUIT IS REQUIRED. ELECTRICAL METALLIC TUBING SHALL BE MADE OF THIN-WALL STEEL TUBING UP TO 4" CONDUIT SIZE, AND SHALL BE GALVANIZED INSIDE AND OUTSIDE.
- EMT SHALL BE JOINED WITH STEEL SET SCREW TYPE COUPLINGS AND CONDUITS SHALL BE SECURED WITH STEEL SET SCREW TYPE CONNECTORS AT PANELS, JUNCTION BOXES, OUTLETS, ETC. DIE-CAST TYPE CONNECTORS ARE NOT ACCEPTABLE.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, CONDUIT MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: ALLIED, REPUBLIC, WHEATLAND.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: MIDWEST, T & B.

FLEXIBLE METAL CONDUIT

- FLEXIBLE METAL CONDUIT SHALL BE HOT-DIPPED GALVANIZED STEEL STRIP, SPIRAL WOUND AND INTERLOCKED, AND SHALL BE PROVIDED WITH INSULATED ANTI-SHORT BUSHINGS AT ALL TERMINATIONS.
- FLEXIBLE METAL CONDUIT SHALL BE SECURED WITH GALVANIZED OR SHERADIZED CONNECTORS SUITABLE FOR CONNECTION TO THE ASSOCIATED BOXES AND CONDUITS. DIE CAST CONNECTORS ARE NOT ACCEPTABLE.
- FLEXIBLE METAL CONDUIT SHALL BE USED INDOORS AT ANY HEIGHT, IN LENGTHS NOT TO EXCEED 48 INCHES, TO EXTEND CONDUIT CONNECTIONS TO MOTORS, TRANSFORMERS, BUSWAY SWITCHES, AIR DISTRIBUTION TERMINAL UNITS, LIGHTING FIXTURES NOT CONNECTED BY RIGID CONDUIT, CONTROL EQUIPMENT AND DEVICES, PERMANENTLY CONNECTED EQUIPMENT OR APPLIANCES, OR FOR EQUIPMENT AND DEVICES REQUIRING ADJUSTMENT AND/OR REMOVAL FOR MAINTENANCE. FLEXIBLE METAL CONDUIT SHALL NOT BE USED FOR CONNECTIONS IN ELEVATOR MACHINE ROOMS. LIQUID-TIGHT FLEXIBLE CONDUIT SHALL BE USED IN ALL OF THE ABOVE AREAS WHERE FLEXIBLE METAL CONDUIT IS NOT PERMITTED. A "GREEN" INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED WITH THE CIRCUIT CONDUCTORS AND SIZED IN ACCORDANCE WITH TABLE 250-122 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- FLEXIBLE METAL CONDUIT (MINIMUM 3/8" DIAMETER) MAY BE USED FOR FIXTURE-TAILS, FOR CONNECTION OF INDIVIDUAL LIGHTING FIXTURES TO THEIR ASSOCIATED LIGHTING SYSTEM JUNCTION BOXES LENGTHS NOT TO EXCEED 6 FEET, AND PROVIDED THE CIRCUIT CONDUCTORS CONTAINED THEREIN ARE PROTECTED BY OVER CURRENT DEVICES RATED AT 20 AMPERES OR LESS. A "GREEN" INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED WITH THE CIRCUIT CONDUCTORS AND SIZED IN ACCORDANCE WITH TABLE 250-122 OF THE LATEST EDITION OF THE NATION ELECTRICAL CODE.
- CONTINUITY OF THE EQUIPMENT GROUND ACROSS FLEXIBLE METAL CONDUIT CONNECTIONS SHALL BE MAINTAINED. THE CONTINUITY SHALL BE MAINTAINED BY INSTALLING A BARE COPPER BONDING CONDUCTOR SIZED IN ACCORDANCE WITH TABLE 250-95 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. THE BARE COPPER BONDING CONDUCTOR SHALL BE INSTALLED OUTSIDE THE FLEXIBLE AND SHALL BE CONNECTED ON ONE END OF THE FLEXIBLE CONDUIT BY A SUITABLE BINDING POST AN SIMILARLY CONNECTED ON THE OPPOSITE END WITH ANOTHER SUITABLE BINDING POST.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, CONDUIT MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: AMERICAN FLEXIBLE CONDUIT COMPANY, ANACONDA, CERRO, OR ELECTRI-FLEX.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: MIDWEST, APPLETON.

TYPE "MC" METAL CLAD CABLE

- IF ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AND THE BUILDING OWNER, TYPE "MC" CABLE MAY BE USED IN WALL PARTITIONS IN FINISHED AREAS AND CONNECTION OF LIGHT FIXTURE TAILS, AND WIRING DEVICES. MC CABLE SHALL NOT EXCEED 8' IN LENGTH ABOVE THE CEILING LINE. MC CABLE SHALL BE TYPE 2-#12 OR 3-#12 "THIN" SOLID COPPER INSULATED PHASE CONDUCTORS, AND BARE GROUNDING CONDUCTOR. MC CABLE SHALL BE PROVIDED WITH INSULATED ANTI-SHORT BUSHINGS AT ALL TERMINATIONS. MC CABLE CONNECTORS SHALL BE STEEL GALVANIZED OR SHERADIZED, SUITABLE FOR CONNECTION TO ASSOCIATED BOXES. DIE CAST CONNECTORS ARE NOT ACCEPTABLE.
- IF IT COMPLIES WITH THE SPECIFICATIONS, ARMORED CABLE MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: AMERICAN FLEXIBLE CONDUIT, BRAND-REX.
- IF IT COMPLIES WITH THE SPECIFICATIONS, CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: THOMAS & BETTS, MIDWEST.

CONDUIT INSTALLATION

- METAL CONDUIT SHALL BE OF AMPE SIZE TO PERMIT THE EASY INSERTION OR WITHDRAWAL OF CONDUCTORS WITHOUT ABRASION. ALL JOINTS SHALL BE CUT SQUARE, REAMED SMOOTH AND DRAWN UP TIGHT. NO NON-FLEXIBLE METAL CONDUIT SHALL BE SMALLER THAN 1/2".
- SO FAR AS PRACTICABLE, ALL EXPOSED METAL CONDUIT SHALL RUN WITHOUT TRAPS. WHERE TRAPS OR DIPS ARE UNAVOIDABLE, A JUNCTION OR PULL BOX SHALL BE PLACED AT EACH LOW POINT.
- EACH ENTIRE METAL CONDUIT SYSTEM SHALL BE INSTALLED COMPLETE BEFORE ANY CONDUCTORS ARE DRAWN IN. TO GUARD AGAINST OBSTRUCTIONS AND OMISSIONS, EACH RUN OF CONDUIT SHALL BE FINISHED BEFORE PLASTERING IS INSTALLED. ALL METAL CONDUIT SHALL BE SWABBED AFTER PLASTER IS FINISHED AND DRY.
- AS SOON AS CONDUIT HAS BEEN PERMANENTLY INSTALLED IN PLACE, CONDUIT SHALL BE CAPPED OR PLUGGED WITH STANDARD ACCESSORIES.
- METAL CONDUIT FOR TELEPHONE, SIGNAL, COMMUNICATION, AND TEMPERATURE CONTROL SYSTEMS SHALL BE PROVIDED WITH PULL BOXES OF APPROVED SIZES AT INTERVALS NOT EXCEEDING 70 FEET IN LENGTH OR AFTER TWO RIGHT ANGLE BENDS. BOXES SHALL BE SIZED IN ACCORDANCE WITH THE PERCENT FILL REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, AND AS INDICATED ON THE DRAWINGS.
- ALL EMPTY CONDUIT SYSTEM SHALL HAVE A 1/8" BRAIDED POLYPROPYLENE ROPE OR #14 GALVANIZED STEEL PULL WIRE INSTALLED. AT LEAST 12" OF PROPERLY SECURED ROPE OR WIRE SHALL BE FOLDED BACK INTO EACH END OF THE EMPTY CONDUITS.
- WHERE PERMITTED BY THE LOCAL AUTHORITY - ARMORED CABLE MAY BE USED INDOORS WHERE CONCEALED ABOVE GRADE, FOR FIXTURE-TAILS OF INDIVIDUAL LIGHTING FIXTURES IN SUSPENDED ACCESSIBLE TYPE CEILINGS. THESE FIXTURE-TAILS SHALL IN LENGTHS NOT TO EXCEED 6 FEET FOR CONNECTION TO THEIR ASSOCIATED LIGHTING JUNCTION BOXES. THE POINT OF CONNECTION OF THE ARMORED CABLE TO THE INDIVIDUAL LIGHTING FIXTURES SHALL NOT BE MORE THAN 3" FROM THE FIXTURE BALLASTS..
- FLEXIBLE METAL CONDUIT, LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ARMORED CABLE SHALL BE SECURED NO LESS THE EVERY 54" AND WITHIN 12" OF A JUNCTION BOX. IT IS NOT ACCEPTABLE TO LAY CABLES ON CEILING, DUCTWORK, ETC.
- WHERE PERMITTED BY THE LOCAL AUTHORITY - ARMORED CABLE MAY BE USED INDOORS FOR INDIVIDUAL DROPS TO OUTLETS AND SWITCHES, WHERE CONCEALED IN WALLS AND PARTITIONS - PROVIDED THE FOLLOWING CONDITIONS ARE MET:
 - THE BRANCH CIRCUIT HOMERUN WIRING IS INSTALLED IN THE ACCESSIBLE CEILING PLENUM USING METAL CONDUIT.
 - JUNCTION BOXES ARE LOCATED IN THE ACCESSIBLE CEILING PLENUM ADJACENT TO THE ASSOCIATED WALLS OR PARTITIONS IN WHICH OUTLETS OR SWITCH LEGS ARE INSTALLED.
 - LENGTH OF ARMORED CABLE DROP IS NOT GREATER THAN 12'-0" FROM JUNCTION BOXES TO WIRING DEVICES WITHIN WALL.
- MC CABLE SHALL NOT BE USED FOR HOMERUN WIRING. HOMERUNS SHALL BE HARD PIPED WITH METAL CONDUIT.
- IN STANDARD PARTITIONS, WHERE 1/2", 3/4", AND 1" CONDUITS ARE EMPLOYED; 4" SQUARE BY 2-1/8" DEEP BOXES WITH 1-GANG OR 2-GANG PLASTER COVERS SHALL BE USED UNLESS NOTED OTHERWISE.
- IN THIN PARTITIONS MEASURING 3-1/2" OR LESS; 4" SQUARE BY 1-1/2" DEEP BOXES WITH 1-GANG OR 2-GANG PLASTER COVERS SHALL BE USED UNLESS NOTED OTHERWISE.
- IN STANDARD PARTITIONS, WHERE 1-1/4" CONDUITS ARE EMPLOYED; 4-11/16" SQUARE BY 2-1/8" DEEP BOXES WITH 1-GANG OR 2-GANG PLASTER COVERS SHALL BE USED UNLESS NOTED OTHERWISE.
- OUTLET BOXES SHALL BE SECURELY ATTACHED TO THE PARTITION STUDS, WITH AT LEAST ONE (1) PARTITION STUD PREPARATING THE OUTLET BOXES. IT IS NOT ACCEPTABLE TO SECURE OUTLET BOXES ONLY TO DRYWALL PARTITION.
- OUTLET, SWITCH AND JUNCTION BOXES FOR VARIOUS USES SHALL BE AS MANUFACTURED BY THOMAS & BETTS OR AN APPROVED EQUAL.
- PROVIDE EXTRA DUTY COVERS FOR ALL 15 AND 20 AMP, 125 AND 250 VOLT RECEPTACLES IN ALL WET LOCATIONS PER NEC 406.9(B)(1).
- WHERE OCCUPANCY SENSORS/LIGHT SWITCHES ARE INSTALLED AT END OF DOOR SWING, GENERAL CONTRACTOR TO INSTALL STUD AT 42" FROM HINGE WALL. INSTALL SWITCHES ON EITHER SIDE OF STUD.
- WHERE MULTI-GANG BACK BOXES ARE REQUIRED THE BACK BOX SHALL CONSIST OF A SINGLE UNIT - SINGLE BACK BOX WITH MUDRING OR MASONRY STYLE JUNCTION BOX. GANGABLE STYLE BACK BOXES ARE NOT ACCEPTABLE.

GROUNDING

- THE ELECTRICAL DISTRIBUTION SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NEC), AS SHOWN AND SPECIFIED, AND RECOGNIZED INDUSTRIAL PRACTICES TO ENSURE THAT PRODUCTS SERVE THE INTENDED FUNCTIONS. ALL CONDUIT SHALL HAVE AN EQUIPMENT GROUND

WIRING DEVICES

- PROVIDE BUILDING STANDARD WIRING DEVICES, WHERE A BUILDING STANDARD IS NOT ESTABLISHED, ELECTRICAL RECEPTACLES SHALL BE LEVITON 120 VOLT, 20 AMP, #16362-W SERIES, DECORATOR STYLE, BACK/SIDE WIRED WITH MATCHING COVER PLATE UNLESS OTHERWISE INDICATED. LIGHTING SWITCHES SHALL BE LEVITON #5621-2W OR #5623-2W WITH MATCHING COVER PLATES. DEVICES SHALL BE WHITE UNLESS OTHERWISE INDICATED. COVER PLATES SHALL BE NYLON UNLESS OTHERWISE NOTED. EQUAL DEVICES BY HUBBELL, LEGRAND ARE ACCEPTABLE.
- ALL WIRING DEVICES SHALL BE RATED 20-AMP MINIMUM. EXISTING 15-AMP DEVICES SHALL BE REPLACED WITH 20-AMP WHERE NEW CIRCUITING IS INDICATED/REQUIRED.
- ALL NEW AND EXISTING GFI RECEPTACLES INDICATED ON THE PLANS SHALL MEET THE REVISED LATEST U.L. #943 REQUIREMENTS. WEATHERPROOF RECEPTACLES SHALL BE LISTED WEATHER RESISTANT TYPE. REPLACE EXISTING DEVICES AS REQUIRED.
- ALL WIRING DEVICES (EXCLUDING LIGHT SWITCHES) SHALL BE LABELED WITH SELF-ADHESIVE, LAMINATED TAPE INDICATING THE CIRCUIT NUMBER AND PANEL DESIGNATIONS. UTILIZE CLEAR TAPE WITH BLACK LETTERS UNLESS NOTED OTHERWISE. PROVIDE SAMPLE OF LABELS TO ARCHITECT AND LANDLORD FOR APPROVAL PRIOR TO INSTALLATION.

CONDUCTORS

- ALL CONDUCTORS FURNISHED AND INSTALLED SHALL COMPLY WITH THE REQUIREMENTS AND LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE (NESC), STANDARDS OF THE UNDERWRITER'S LABORATORIES (UL), NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION (NEMA), INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
- ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE SOFT DRAWN, ANNEALED COPPER, HAVING A CONDUCTIVITY OF NOT LESS THAN 98% OF THAT OF PURE COPPER, AND MEETING BEFORE STRANDING, THE REQUIREMENTS OF ASTM B-3, "STANDARD SPECIFICATIONS FOR SOFT OR ANNEALED COPPER WIRE FOR ELECTRICAL PURPOSES", LATEST EDITION.
- UNLESS OTHERWISE SPECIFIED OR NOTED, ALL CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID COPPER THHN WITH AN INSULATING OUTER JACKET SUITABLE FOR CONDUCTOR TEMPERATURES OF 90°C, EXCEPT FOR NEC CLASS 1, 2, 3. CONDUCTORS WHICH MAYBE STRANDED IF TERMINATED AS REQUIRED HEREIN.
- UNLESS OTHERWISE SPECIFIED OR NOTED, ALL CONDUCTORS NO. 8 AND LARGER SHALL BE THWN-2/THHN, 600 VOLT, STRANDED WITH A THERMOPLASTIC INSULATING COMPOUND AND AN OUTER JACKET (THWN-2/THHN ONLY) SUITABLE FOR CONDUCTOR TEMPERATURES OF 90°C. STRANDED WIRE SHALL BE TERMINATED AS SPECIFIED HEREIN.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, THE FOLLOWING CONDUCTOR MANUFACTURERS WILL BE ACCEPTABLE: ESSEX, GENERAL CABLE, ENCORE, SOUTHWIRE OR APPROVED EQUAL.
- IF IT COMPLIES WITH THESE SPECIFICATIONS, CABLE LUGS AND TERMINATION FITTINGS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: BLACKBURN, BURNDY, IDEAL, THOMAS & BETTS OR APPROVED EQUAL.
- NO SPLICES OR TAPS SHALL BE MADE IN ANY CONDUCTOR EXCEPT IN OUTLET BOXES, JUNCTION BOXES, SPLICE BOXES, OR OTHER DEVICES AND EQUIPMENT IN EXPOSED AND ACCESSIBLE LOCATIONS APPROVED FOR THE PURPOSE BY THE LATEST EDITION OF THE NEC.
- ALL NO. 10 AWG AND SMALLER SOLID CONDUCTORS SHALL BE SPLICED WITH PRE-INSULATED SPRING CONNECTORS. ALL NO. 10 AWG AND SMALLER STRANDED CONDUCTORS FOR NEC CLASS 1, 2, 3 WIRING SHALL BE TERMINATED WITH AMP "PIDG" UL LISTED PREMIUM GRADE INSULATED FORK CONNECTORS, OR APPROVED EQUAL, AND SHALL BE SPLICES IN A JUNCTION BOX WITH AMP "PLASTIC-GRIP" UL LISTED STANDARD GRADE INSULATED BUUT SPLICES, OR APPROVED EQUAL.
- ALL 120 VOLT, 20 AMP HOME RUNS LONGER THAN 50 FEET AND ALL 277 VOLT, 20 AMP HOME RUNS LONGER THAN 100 FEET SHALL BE #10 MINIMUM.
- EMT CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE PERCENT FILL REQUIREMENTS OF THE NEC AND AS INDICATED ON THE DRAWINGS AND SHALL BE OF AMPLS SIZE TO PERMIT THE READY INSERTION AND WITHDRAWAL OF CONDUCTORS WITHOUT ABRASION. GROUPING OF "HOME RUNS" IS ACCEPTABLE ONLY WHERE THE NUMBER OF CONDUCTORS INDICATED ON THE DRAWINGS IS MAINTAINED AND THE PROPER NEC DE-RATING FACTORS ARE APPLIED BASED ON FULL RATING OF THE BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICES. FOR 20 AMP CIRCUITS, NOT MORE THAN NINE(9) - #12 THHN OR #10 THHN CURRENT CARRYING (PHASE & NEUTRAL) CONDUCTORS SHALL BE INSTALLED IN EACH RACEWAY.
- THE USE OF "PUSH-IN" STYLE WIRE CONNECTORS (WAGO OR SIMILAR) ARE STRICTLY PROHIBITED FOR TERMINATIONS OF BRANCH CONDUCTORS. CONDUCTORS SHALL BE TWISTED AND TERMINATED WITH APPROVED WIRE NUT CONNECTION. THE USE OF "PUSH-IN" WIRE CONNECTORS ARE ACCEPTABLE ONLY WHEN PROVIDED BY MANUFACTURER AND PRE-TERMINATED WITHIN A LIGHT FIXTURE.

PANELBOARDS

- CONTRACTOR SHALL PROVIDE ACCURATE TYPE WRITTEN PANEL SCHEDULES. SCHEDULES SHALL INDICATE DEVICES AND/OR EQUIPMENT SERVED, LOCATION AND/OR ROOM NUMBERS FOR NEW AND EXISTING CIRCUITS. PROVIDE NEW SCHEDULES FOR ALL NEW AND EXISTING PANELS.
- WHERE PANELBOARDS HAVE MULTIPLE PANEL SECTIONS, A BONDING JUMPER SIZED PER NEC, SHALL BE USED TO BOND EACH PANEL ENCLOSURE. USE OF CONDUIT AS ONLY MEANS FOR CONTINUITY IS UNACCEPTABLE.

LIGHTING AND LIGHTING CONTROLS

- FURNISH AND INSTALL LIGHTING FIXTURES OF THE TYPES SCHEDULED ON THE DRAWINGS. FIXTURE MANUFACTURES SHALL BE AS SCHEDULED ON THE DRAWINGS. ALTERNATE MANUFACTURERS WILL BE CONSIDERED IF SUBMITTED 7 DAYS PRIOR TO BID. FIXTURES SHALL BE FURNISHED WITH ALL REQUIRED ACCESSORIES AND TRIM AS REQUIRED FOR A COMPLETE INSTALLATION IN THE CEILING TYPE SHOWN ON THE ARCHITECTURAL DRAWINGS.
- A SEPARATE NEUTRAL SHALL BE PULLED FOR EACH DIMMED CIRCUIT.
- FOR LED FIXTURES, LAMPS, DRIVERS, AND COMPONENTS, PROVIDE A COMPLETE WARRANTY FOR PARTS AND LABOR FOR A MINIMUM OF FIVE (5) YEARS FROM DATE OF SUBSTANTIAL COMPLETION.
- FOR EXISTING LIGHT FIXTURES WITH BATTERY PACKS, ELECTRICAL CONTRACTOR SHALL ASSUME NEW BATTERY PACKS WILL BE REQUIRED UNLESS FIELD VERIFICATION PROVES OTHERWISE.

IDENTIFICATION/LABELING

- EXISTING CIRCUITRY IS SHOWN FOR INFORMATION ONLY. EXISTING CIRCUITRY INFORMATION TAKEN FROM COMBINATION OF FIELD SURVEY AND PREVIOUS TENANT DRAWINGS. CONTRACTOR SHALL FIELD VERIFY EXACT CIRCUITRY AND INDICATE ANY DEVIATIONS ON THE "AS BUILT" DRAWINGS. "AS BUILT" DRAWINGS SHALL ACCURATELY INDICATE THE LOCATION OF ALL NEW AND EXISTING JUNCTION BOXES WITH THE RESPECTIVE PANEL AND CIRCUIT NUMBERS.
- ALL PANELBOARDS, MOTOR STARTERS, CONTROL PANELS, CONTROL REMOTE STATIONS, DISCONNECT SWITCHES, CIRCUIT BREAKERS OR OTHER EQUIPMENT IN SEPARATE ENCLOSURES SHALL BE EQUIPPED WITH NAMEPLATES. THE NAMEPLATES SHALL BE ENGRAVED RIGID PLASTIC LAMINATE OR APPROVED EQUAL, WHITE LETTERING ON BLACK BACKGROUND FOR EQUIPMENT 480/277 VOLT, AND BE ATTACHED TO THE EQUIPMENT SECURELY WITH SCREWS. EACH NAMEPLATE SHALL GIVE THE NUMBER DESIGNATION OF THE EQUIPMENT AS SHOWN ON THE ONE LINE DIAGRAM AND ALSO THE SOURCE. UTILIZE SIMILAR RED AND WHITE NAMEPLATES FOR ALL EMERGENCY POWERED EQUIPMENT.
- ALL WIRING DEVICES (EXCLUDING LIGHT SWITCHES) SHALL BE LABELED WITH SELF-ADHESIVE, LAMINATED TAPE INDICATING THE CIRCUIT NUMBER AND PANEL DESIGNATIONS. UTILIZE CLEAR TAPE WITH BLACK LETTERS UNLESS OTHERWISE. PROVIDE SAMPLE OF LABELS TO ARCHITECT AND LANDLORD FOR APPROVAL PRIOR TO INSTALLATION.
- NEW AND EXISTING CIRCUITRY SHALL BE ACCURATELY IDENTIFIED AT THE RESPECTIVE ABOVE CEILING JUNCTION BOXES, THE ASSOCIATED PANEL, CIRCUITS, AND VOLTAGE SHALL BE IDENTIFIED ON ALL JUNCTION BOX COVERS.

Project:

**BRAME PARK
IMPROVEMENTS**

BELLMEAD, TEXAS

Project Number:

2024-CLA536



07/29/2025

Designed: TCN

Drawn: TCN

Reviewed: MEF

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Sheet Title:

**ELECTRICAL
NOTES AND
SPECIFICATIONS**

Sheet Number:

E0.1

Application Number:

2023-XX-SDP

POWER

- COORDINATE THE INSTALLATION OF ELECTRICAL AND COMMUNICATION CONDUIT TO FURNITURE SYSTEMS WITH THE ARCHITECT PRIOR TO THE INSTALLATION OF ELECTRICAL ITEMS. VERIFY IN WRITING WITH THE ARCHITECT THAT THE QUANTITY OF WIRES AND CIRCUITS CORRESPONDS TO THE FURNITURE SYSTEMS THAT WILL BE SUPPLIED TO THIS PROJECT.
- PROVIDE HEAVY DUTY DISCONNECTS AS REQUIRED FOR THE PLUMBING AND MECHANICAL EQUIPMENT. COORDINATE WITH ALL TRADES.
- WHERE SEPARATE HOME RUNS ARE INDICATED ON THE PLANS, DO NOT UTILIZE THE NEUTRAL OR GROUND CONDUCTOR FOR ANY OTHER CIRCUITS. TERMINATE ONLY AT DEVICES AND PANELBOARD AS INDICATED.
- ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH DEDICATED NEUTRALS PER NEC 210.4(B) UNLESS NOTED OTHERWISE. MULTIWIRE BRANCH CIRCUITS MAY BE UTILIZED FOR BREAK ROOM APPLIANCE LOADS, EXISTING MULTIWIRE BRANCH CIRCUITS TO BE RE-UTILIZED, AND FOR LOADS WHERE DEDICATED NEUTRALS ARE NOT POSSIBLE (I.E. FURNITURE SYSTEMS). WHERE MULTIWIRE BRANCH CIRCUITS ARE UTILIZED, PROVIDE HANDLE-TIES IN LIEU OF MULTI-POLE BREAKERS.
- PROVIDE AN EMPTY BOX AND PULL STRING TO ACCESSIBLE CEILING SPACE FOR ALL COMMUNICATION AND A/V DEVICES UNLESS NOTED OTHERWISE. ALL COMMUNICATION DEVICES LOCATED ON WALLS TO DECK AND/OR SOUND INSULATED WALLS SHALL BE PROVIDED WITH 3/4" EMT CONDUIT AND PULL STRING INTO ACCESSIBLE CEILING SPACE.
- ALL EXISTING JUNCTION BOXES, OUTLETS, PULL BOXES, ETC., LOCATED ABOVE NON-ACCESSIBLE CEILING INSTALLED UNDER THIS TENANT IMPROVEMENT PROJECT SHALL BE RELOCATED AS NECESSARY TO A LOCATION ABOVE AN ACCESSIBLE CEILING. WHERE EXISTING JUNCTION BOXES ARE NOT FEASIBLE TO RE-LOCATE, ELECTRICAL CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER.
- AT ALL EXPOSED CEILING AREAS, UTILIZE 3/4" MINIMUM EMT CONDUIT FOR ALL BRANCH CIRCUITING, FIRE ALARM, AND CONTROLS CABLING. COORDINATE ALL CONDUIT ROUTING WITH THE ARCHITECT PRIOR TO INSTALLATION AND PROVIDE A SHOP DRAWING FOR REVIEW THAT INDICATES ALL PROPOSED CONDUIT ROUTING AT EXPOSED CEILING AREAS. ALL CONDUIT SHALL BE INSTALLED PARALLEL AND PERPENDICULAR TO THE LINES OF THE BUILDING AND SHALL BE PAINTED TO MATCH THE FINISH OF THE STRUCTURE.
- NEUTRAL CONDUCTORS SHALL BE PROPERLY GROUPED IN AT LEAST ONE(1) LOCATION WITHIN ANY ENCLOSURE PER NEC 200.4(B).
- PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRESAFED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE LOCAL AUTHORITY HAVING JURISDICTION.

FIRE ALARM - FIRE ALARM CONTRACTOR SCOPE OF WORK

- THE FIRE ALARM CONTRACTOR SHALL FIELD VERIFY EXISTING SYSTEM CAPACITIES AND SHALL EXPAND SYSTEM AS REQUIRED. FIRE ALARM CONTRACTOR SHALL PROVIDE ALL FIRE ALARM EQUIPMENT, DEVICES, AND APPURTENANCES AS REQUIRED FOR A COMPLETE SYSTEM PER NFPA 72 AND THE AHJ REQUIREMENTS AT NO ADDITIONAL COST TO OWNER OR TENANT.
- PROVIDE CEILING MOUNT NOTIFICATION DEVICES UNLESS DIRECTED OTHERWISE BY ARCHITECT.
- PROVIDE WALL MOUNTED NOTIFICATION DEVICES AT MECHANICAL AND ELECTRICAL ROOMS.
- PROVIDE DUCT MOUNTED SMOKE DETECTORS AS REQUIRED FOR MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR.
- FIRE ALARM CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING THE COMPLETE SYSTEM LAYOUT OF THE FIRE ALARM SYSTEM TO THE AUTHORITIES HAVING JURISDICTION AND THE ARCHITECT FOR ADA REVIEW.
- FIRE ALARM CABLING INSTALLED IN RETURN AIR PLENUMS SHALL BE PLENUM RATED.
- PROVIDE A MINIMUM ONE(1) YEAR FULL PARTS AND LABOR WARRANTY FOR ALL FIRE ALARM WORK UNDER THIS CONTRACT.
- FIRE ALARM CONTRACTOR SHALL FURNISH, ACCORDING TO THE CONDITIONS OF THE CONSTRUCTION CONTRACT, SHOP DRAWINGS INCLUDING THE COMPLETE LAYOUT OF FIRE PROTECTION SYSTEMS TO THE AUTHORITIES HAVING JURISDICTION, LOCAL FIRE DEPARTMENT, THE OWNER'S INSURANCE CARRIER, AND LANDLORD FOR APPROVAL.

FIRE ALARM - ELECTRICAL CONTRACTOR SCOPE

- ASSUME CEILING MOUNTED NOTIFICATION DEVICES UNLESS DIRECTED OTHERWISE BY ARCHITECT. PROVIDE T-BAR HANGERS (WHERE REQUIRED) AND JUNCTION BOX.
- FOR MECHANICAL AND ELECTRICAL ROOMS, ASSUME WALL MOUNTED FIRE ALARM DEVICES. PROVIDE 4" SQ. X 2-1/8"D BACKBOX AND 3/4" EMT TO ABOVE ACCESSIBLE CEILING.
- COORDINATE DEVICE LOCATIONS WITH FIRE ALARM SHOP DRAWINGS, THE ARCHITECT AND ALL TRADES PRIOR TO START OF CONSTRUCTION.
- ELECTRICAL DRAWINGS REFLECT ONLY SMOKE DETECTORS FOR CONTROL OF MECHANICAL SYSTEMS AND SMOKE/FIRE DAMPER POWER CONNECTIONS.
- FOR APPROXIMATE QUANTITY OF NOTIFICATION DEVICES, PROVIDE BACK-BOXES FOR THE FOLLOWING LOCATIONS:
 -STORAGE ROOMS, JANITOR CLOSETS
 -RESTROOMS
 -MULTI-OCCUPANT OFFICES
 -BREAK ROOMS
 -CONFERENCE, TRAINING, TEAM, HUDDLE ROOMS
 -RECEPTION, WAITING, LOBBY AREAS
 -OPEN OFFICE AND LARGE ENCLOSED ROOMS. (1) BACK-BOX PER 50'X50' AREA

PRE-CONSTRUCTION FUNCTIONAL TEST

PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL FUNCTIONALLY TEST ALL ELECTRICAL AND FIRE ALARM EQUIPMENT THAT IS EXISTING TO REMAIN OR RELOCATED IN THIS PROJECT. THE CONTRACTOR SHALL PROVIDE A WRITTEN DESCRIPTION OF ANY AND ALL DEFICIENCIES TO THE OWNER/TENANT. ANY DEFICIENCIES FOUND AFTER THE START OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER/TENANT. THE EQUIPMENT TO BE TESTED INCLUDES, BUT IS NOT LIMITED TO: RECEPTACLES, LIGHT FIXTURES, EXIT SIGNS, OCCUPANCY SENSORS, PANEL BOARDS, TRANSFORMERS, EMERGENCY LIGHTING BATTERY UNITS, AND SWITCHES.

APPLICABLE CODES AND STANDARDS

- BUILDING CODE - 2018 IBC WITH CITY OF BELLMEAD AMENDMENTS
- FIRE CODE - 2018 IFC WITH CITY OF BELLMEAD AMENDMENTS
- ELECTRICAL CODE - 2020 NEC WITH CITY OF BELLMEAD AMENDMENTS.
- MECHANICAL CODE - 2018 IMC WITH CITY OF BELLMEAD AMENDMENTS
- PLUMBING CODE - 2018 IPC WITH CITY OF BELLMEAD AMENDMENTS
- OTHER - 2018 INTERNATIONAL ENERGY CONSERVATION CODE WITH CITY OF BELLMEAD AMENDMENTS
- OTHER - LIFE SAFETY CODE (NFPA 101) 2018 EDITION
- OTHER - FEDERAL DEPARTMENT OF JUSTICE AMERICANS WITH DISABILITIES ACT AND TEXAS ACCESSIBILITY STANDARDS.
- ALL APPLICABLE CITY OF BELLMEAD ORDINANCES

COVEY

Planning + Landscape Architecture

19 N Main Street
Temple, Texas 76501
512.887.5311



Project:

BRAME PARK IMPROVEMENTS

BELLMEAD, TEXAS

Project Number:

2024-CLA536



Designed: TCN

Drawn: TCN

Reviewed: MEF

Submittal Date:

JULY 29, 2025

Revisions:

Sheet Title:

ELECTRICAL NOTES AND SPECIFICATIONS

Sheet Number:

E0.2

Application Number:

2023-XX-SDP



GENERAL NOTES:

1. REFER TO E000, E001 AND E002 FOR ADDITIONAL INFORMATION.
2. COORDINATE WITH OWNER AND ARCHITECT FOR FINAL LIGHT LOCATIONS PRIOR TO INSTALLATION.

DRAWING NOTES

- ① PROPOSED LOCATION FOR NEW 120/208V, 3Ø POLE MOUNTED TRANSFORMER AND METER.
- ② NEW 60A, 120/208V, 3Ø, NEMA 3R PANELBOARD TO BE STANCHION MOUNTED. PROPOSED LOCATION FOR NEW TIMECLOCK AND LIGHTING CONTACTOR. SEE DETAIL ON E2.0.
- ③ ROUTE THIS LIGHTING CIRCUIT THROUGH TIMECLOCK/CONTACTOR. SEE LIGHTING CONTROL DIAGRAM ON SHEET E2.0.

1 ELECTRICAL - LIGHTING PLAN
SCALE: 3/8" = 1'-0"

Project:

BRAME PARK IMPROVEMENTS

BELLMead, TEXAS

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Revisions:

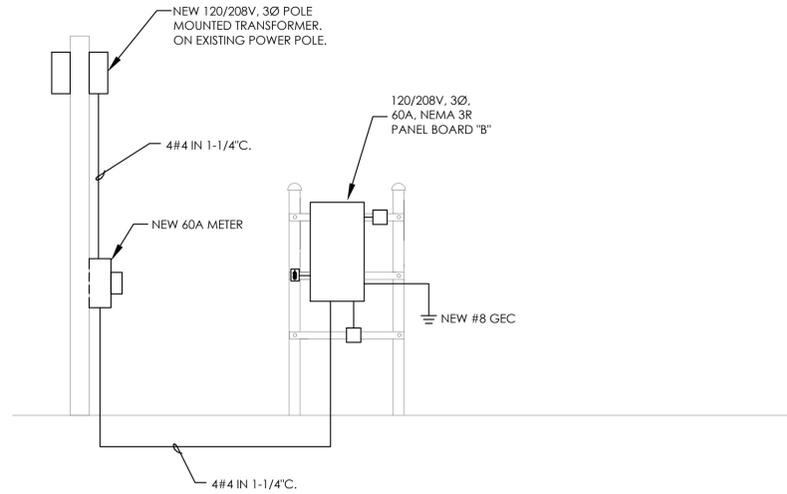
Sheet Title:

ELECTRICAL SITE PLAN

Sheet Number:

EI.0

Application Number:
2023-XX-SDP

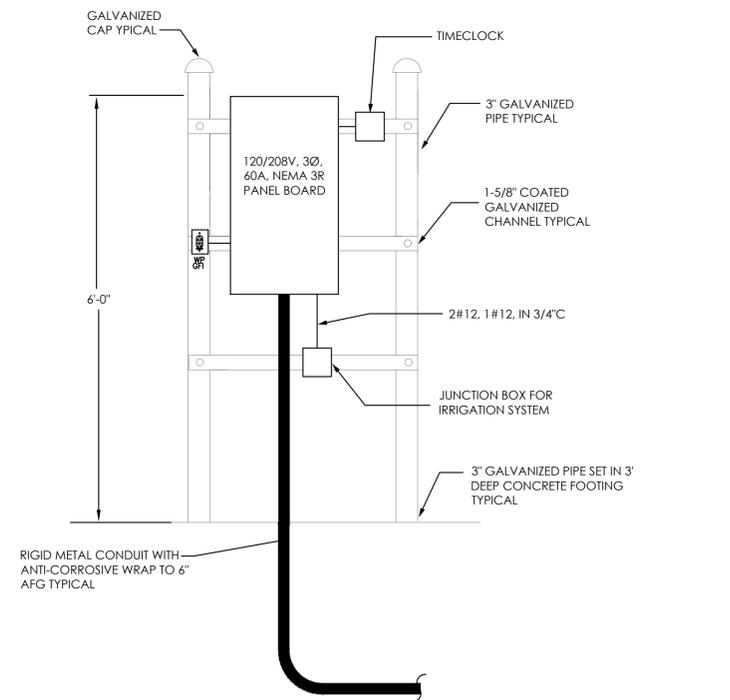


1 ELECTRICAL RISER DIAGRAM
SCALE: NONE

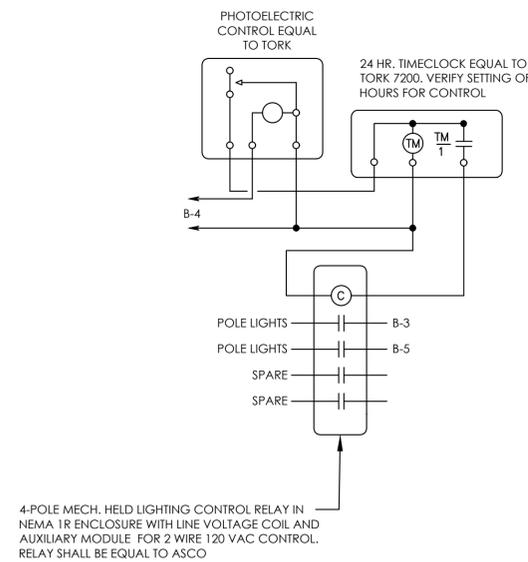
MAINS: 60 A, MCB
VOLTAGE: 120/208 V., 3 PH, 4 W
BUSSING: 100 A, W/ FTL & EQUIPT. GROUND
AIC RATING: 65K RMS SYM, FULLY RATED

| DESCRIPTION | BKR SIZE | PHASE LOAD (VA) | | | CIRC. NO. | CIRC. NO. | PHASE LOAD (VA) | | | BKR SIZE | DESCRIPTION |
|------------------|----------|-----------------|------------|------------|-----------|-----------|-----------------|------------|----------|----------|-------------------|
| | | A | B | C | | | A | B | C | | |
| MAINT. RCPTS | 20/1 | 180 | | | 1 | 2 | 500 | | | 20/1 | FUTURE IRRIGATION |
| SITE POLE LIGHTS | 20/1 | 240 | | | 3 | 4 | 200 | | | 20/1 | TIMECLOCK |
| SITE POLE LIGHTS | 20/1 | | 210 | | 5 | 6 | | 0 | | - | SPACE |
| SPACE | - | 0 | | | 7 | 8 | 0 | | | - | SPACE |
| SPACE | - | | 0 | | 9 | 10 | 0 | | | - | SPACE |
| SPACE | - | | | 0 | 11 | 12 | 0 | | | - | SPACE |
| SUBTOTAL | | 180 | 240 | 210 | | | 500 | 200 | 0 | | SUBTOTAL |

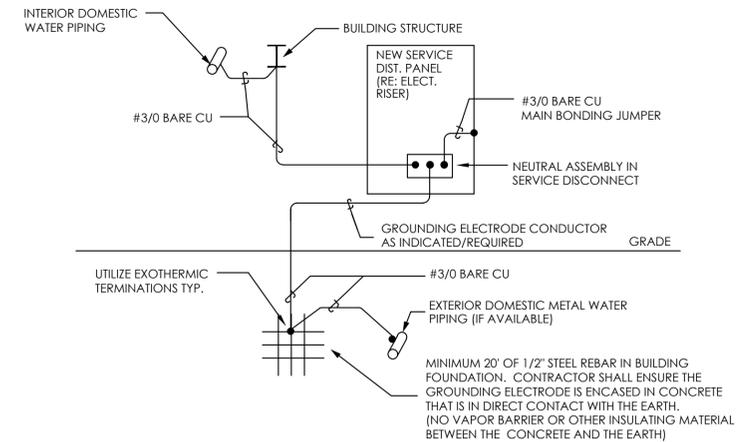
| CONNECTED LOAD | PANELBOARD LOAD ANALYSIS (VOLT-AMPS) | | | | | | | |
|-------------------------|--------------------------------------|-----------------|------|---------|------|------------|------|----------------------|
| | LOAD TYPE | LIGHT | RCPT | COOLING | HEAT | MOTOR | MISC | KITCHEN |
| PHASE A (VA): | 680 | | | | | | | |
| PHASE B (VA): | 440 | | | | | | 700 | 0 |
| PHASE C (VA): | 210 | | | | | | 700 | 0 |
| TOTAL LOAD (VA): | 1,330 | | | | | | | |
| | NEC DEMAND: | 1,443 VA | | | | 4.0 | | AMPS, 3 PHASE |



2 STANCHION MOUNTED PANEL DETAIL
SCALE: NONE



3 LIGHTING CONTROL DIAGRAM - GAS STATION EXTERIOR LIGHTS
SCALE: NONE



4 ELECTRICAL SERVICE GROUND DETAIL
SCALE: NONE



ISSUE DATE: September 22, 2025
PROJECT: City of Bellmead – Brame Park Improvements
BID DATE: September 25, 2025
OWNER: City of Bellmead
3015 Bellmead Drive, Bellmead, Texas 76705
COPY TO: Tyler Richburg
Ronnie Stafford
John Simcik
Karen Evans
Cory Sugg

trichburg@coveylandscape.com
rstafford@coveylandscape.com
jsimcik@kpaengineers.com
kevans@bellmeadtx.gov
csugg@bellmeadtx.gov

The construction plans and specifications for the Bellmead – Brame Park Improvements Project, on which bids **are** to be received until 2:00 p.m. on September 25, 2025, are hereby modified as follows:

General

1. The Bid Schedule has been updated.
2. Pre-Bid Meeting Notes have been issued.
3. Pre-Bid Sign-In Sheet has been issued.

Description:

1. Bid Schedule was revised with the following:
 - a. **Item A-35** to "*Furnish and Install Class "A" Miscellaneous Concrete, Complete For*" with a quantity of 80 Square Yards has been added to the bid schedule.
 - b. **Item A-36** to "*For a Registered Surveyor to locate all Site Improvements per the Plans, Complete For*" with a quantity of 100% Lump Sum has been added to the bid schedule.
 - c. **Item A-37** to "*Furnish & Install 4' x 8' Project Sign as specified by the Owner, Complete For*" with a quantity of 4 Each has been added to the bid schedule.

Attachments:

1. Pre-Bid Meeting Notes
2. Pre-Bid Sign-In Sheet
3. Bid Schedule – Addendum Number 01 (PDF)
4. Bid Schedule – Addendum Number 01 (Fillable Excel File)

Please contact Tyler Richburg at trichburg@coveylandscape.com for additions or revisions.

BY: Tyler Richburg

DATE: September 22, 2025

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-1 | 100% | LS | Mobilization, Bonds and Insurance, not-to-exceed 5% of the Base Bid Amount, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-2 | 100% | LS | For Preparing and Implementing Vehicular and Pedestrian Control Plan, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-3 | 100% | LS | Implement and Administer Stormwater Pollution Prevention Plan, Including Submission to and Receiving Permits from Texas Commission on Environmental Quality (TCEQ), Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-4 | 100% | LS | Provide DVD of Right-of-Way Pre-Construction and Post Construction Site Conditions for the Total Project, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|----------------------------|
| A-5 | 100 | SY | For Furnishing, Installing, Maintaining, & Removing Stabilized Construction Exit, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-6 | 100% | LS | Provide Labor, Equipment, Tools & Supervision to Complete Site Preparation, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-7 | 100 | LF | Provide, Install, Maintain and Remove Silf Fence, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-8 | 100 | LF | Provide, Install, Maintain and Remove Tree Protection, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-9 | 11 | CY | For Excavating and Preparing the Area for the Poured in Place Rubber Surfacing, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-10 | 90 | LF | For Furnishing and Installing 6" Wide Concrete Edging, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-11 | 65 | CY | For Excavating and Hauling Off Existing Swingset Base Material, _____ Dollars and _____ Cents per Cubic Yard. | \$ _____ | \$ _____ |
| A-12 | 0 | LF | For Removing and Replacing Existing Swingset Edge Material, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-13 | 160 | LF | For Furnishing and Installing Wood Edge, Including All New Appertenances, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-14 | 0 | CY | For Furnishing and Installing Engineered Wood Fiber Muleh, Complete For _____ Dollars and _____ Cents per Cubic Yard. | \$ _____ | \$ _____ |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|------------|-------------------------------|
| A-15 | 1 | EA | For Furnishing and Installing Playscape Accessibility Ramp, Complete For _____ Dollars and _____ Cents per Each. | \$ _____ | \$ _____ |
| A-16 | 1 | EA | For Furnishing and Installing Drainage Sump, Including all Appertenances and Items for a Fully Functional System, Complete For _____ Dollars and _____ Cents per Each. | \$ _____ | \$ _____ |
| A-17 | 185 | LF | For Excavating and Installing 4" PVC Pipe Including all Appertenances and Items to Create a Fully Functional System, Complete For _____ Dollars and _____ Cents per Linear Foot. | \$ _____ | \$ _____ |
| A-18 | 1 | EA | For Furnishing and Installing Shade Structure, Including all Appertenances and Items to Create a Fully Functional System, Complete For _____ Dollars and _____ Cents per Each. | \$ _____ | \$ _____ |
| A-19 | 67 | SY | Remove and Dispose of Existing Sidewalk, Complete For _____ Dollars and _____ Cents per Square Yard. | \$ _____ | \$ _____ |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-20 | 115 | SY | Construct New Sidewalk, Per Sidewalk Details SW-1, SW-2, and SW-3 on Sheet C1.0, C1.1, C1.2, C1.3 Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-21 | 5 | LF | Fill Expansion Joint with Concrete Joint Sealant Material in Accordance with TxDOT DMS-6310, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |
| A-22 | 226 | SY | Mill and Dispose 1.5" Asphalt, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-23 | 226 | SY | Grade Parking Lot to Meet ADA Standards (Max. 2% Slope in All Directions), As Shown on Sheet C1.0, Including Haul Off of Any Excess Material, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|------------|----------------------------|
| A-24 | 226 | SY | Furnish and Install HMAC, Type D, 1.5" Thickness, Including Prime and Tack Coat, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Square Yard. | | |
| A-25 | 6 | EA | Furnish and Install Concrete Wheelstops, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-26 | 105 | LF | Furnish and Install 4" Wide Parking/Gore Thermoplastic Striping, 100 mil Thickness, As Shown on Sheet C1.0, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Linear Foot. | | |
| A-27 | 6 | EA | Furnish and Install Thermoplastic Handicap Symbols, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-28 | 2 | EA | Furnish and Install Sign Assembly with R7-8T and R7-8P Signs, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|------------|-------------------------------|
| A-29 | 4 | EA | Furnish and Install Sign Assembly with R7-8T Sign, Complete in Place For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-30 | 7 | EA | For Furnishing & Installing Pedestrian Lights and All Necessary Electrical Items, Including All Items & Appertenances, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-31 | 100% | LS | For Furnishing & Installing All Electrical Items Per the Plans And Specifications, Including All Items & Appertenances Necessary For a Complete & Operational Lighting System, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Each. | | |
| A-32 | 100% | LS | For Furnishing & Installing Revegetation of All Disturbed Areas to Include Watering For Establishment, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|-----------------|--------------------|---------------|--|---------------------|-------------------------------|
| A-33 | 100% | LS | For Furnishing & Installing Thin-set Concrete for Restroom Entrances to ensure TDLR / Texas ADA Compliance, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-34 | 0 | EA | For Removing Existing and Installing New ADA Accessible Restroom Thresholds, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-35 | 80 | SY | Furnish and Install Class "A" Miscellaneous Concrete, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |
| A-36 | 100% | LS | For a Registered Surveyor to locate all Site Improvements per the Plans, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars and _____ Cents per Lump Sum. | | |

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|--|------------|-------------------------------|
| A-37 | 4 | EA | Furnish & Install 4' x 8' Project Sign as specified by the Owner, Complete For | \$ _____ | \$ _____ |
| | | | _____ Dollars | | |
| | | | and _____ Cents | | |
| | | | per Lump Sum. | | |

TOTAL BID AMOUNT PART A (ITEMS A-1 - A-37)

BID AMOUNT \$: _____
(numerals)

(words)

**BID SCHEDULE
FOR
BRAME PARK IMPROVEMENTS**

| Item No. | Estimated Quantity | Unit | Description | Unit Price | Total Amount (in numerals) |
|----------|--------------------|------|---|-----------------|-------------------------------|
| B-1 | 8 | EA | For Furnishing & Installing Pedestrian Lights and All Necessary Electrical Items, Including All Items & Appertenances, Complete For | \$ _____ | \$ _____ |
| | | | | _____ Dollars | |
| | | | | and _____ Cents | |
| | | | | per Each. | |

TOTAL BID AMOUNT PART B (ITEMS B-1)

BID AMOUNT \$: _____
(numerals)

(words)

The above prices shall include all labor, materials, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

The work proposed to be done shall be accepted when fully completed and finished in accordance with the plans, specifications and Project Schedule shown herein to the satisfaction of the Engineer.

The undersigned bidder hereby declares that he has visited the site of the work and has carefully examined the Contract Documents pertaining to the work covered in the above bid, and that the bid prices contained in the proposal have been carefully checked and are submitted as correct and final.

Respectfully submitted:

Name:

By:

Address

Printed Name: _____

City, State & Zip

Seal & Authorization (if a Corporation)

Attest:

Phone

Fax

Email Address

Secretary