CITY OF WACO

Purchasing Services
Post Office Box 2570
Waco, Texas 76702-2570
254-750-8062
Fax: 254-750-8063
www.waco-texas.com

Date: **10/28/2022**
RFQ No: **2022-080**
Commodity: **18th Street Utility Improvements**
Purchasing Agent: **Daryle Bullard**

Closing Time: 2:00 P.M. CST, Thursday, November 10, 2022
Opening Time: 2:01 P.M. CST, Thursday, November 10, 2022

RFQ Opening Location: Operations Center, Purchasing Services Office, 1415 N. 4th St., Waco, TX 76707

Addendum No: 1

The above-mentioned RFQ invitation has been changed in the following manner. **Sign and return addendum to the Purchasing Office by the closing time and date with your RFQ response**. Returning this page signed by your authorized agent will serve to acknowledge this change. All other requirements of the invitation remain unchanged. If you have any questions, please call or stop by the Purchasing Office at the above address.

1. **Answers to questions raised.**
2. **Updated Wage Rates**
3. **Replace Project Revisions. Section 1.8 Materials on Hand, Section 1.17 Testing, Section 1.19 Contractor Self-Performance, and Section 6.4.3 Traffic Control Plans have been revised.**

Firm:_____

Address_____

Signature of Person
Authorized to Sign Bid:_____

Signor's Name and Title
(print or type):_____

E-mail Address:_____

Date:_____Telephone:_____Fax:_____

ADDENDUM 1

Addendum Issue Date:	October 28, 2022
Project Name:	18th Street Utility Improvements
Project No.:	RFB 2022-080
Owner:	City of Waco
Engineer:	CP&Y, Inc. / KPA Engineers

This addendum forms a part of the Contract Documents and modifies the original Project Manual dated October 2022. Bidder shall acknowledge receipt of this addendum in the space provided below and in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

CONTRACTOR QUESTIONS:

No.	Question	Answer
1	Abandonment items (60-65) --> can surface replacement items be separated out?	Any surface replacement will be considered incidental to the appropriate bid item.
2	Item 58 for 1800 Sanger --> can the exploration/site investigation be a separate bid item from installation of the service? Can surface replacement items be separated out?	Any necessary site exploration/investigation will be considered incidental to the appropriate bid item. For 1800 Sangar, Bid Item 58 will detail the utility improvements for this property. New Bid Item 58A will detail the surface replacement items necessary for the scope of work.
3	Item 97 for 1800 Sanger, can the quantity be provided or listed as SF or SY sidewalk and LF of curb and gutter? Also, can you break out reinforced concrete retaining, pavement and solid block at this location into a logical quantity.	The contractor will be required to bid on this item on a lump sum basis.
4	Can we propose a Daily Fee vs Lump Sum for site investigation/potholing?	No. All potholing activities and/or site investigation are incidental to the project.
5	How many lanes of traffic can be blocked at a time for construction of water/sewer lines?	Traffic Control Narrative in the Special Project Provisions, Item 6.4 provides direction on the number of lane closures allowed by the City. Two lanes of travel in 17th Street and 18th Street must be open during the hours of 7 AM to 7 PM. One Lane of travel may be allowed during the hours of 7 PM to 7 AM.

BID DOCUMENTS:

REPLACE: Existing TX20210033 Wage Rates with attached TX20220007 Wage Rates.

REPLACE: Special Project Provisions. Section 1.8 Materials on Hand, Section 1.17 Testing, Section 1.19 Contractor Self-Performance, and Section 6.4.3 Traffic Control Plans have been revised.

REPLACE: Bid Proposal Form.

Replace: Bid Item 58 shall read as follows: 1800 Sanger Ave (Greater Love IME Church) Service Reconnection Including necessary investigation to determine existing services location, excavation, embedment, 2" service tap, 150 LF of 2" service line, 1 1/2" meter, meter box, 1 1/2" backflow, necessary material to perform required transitions, gravel trench backfill, embedment, backfill, all required fittings to provide connection to existing services at buildings & all material, labor, equipment, and Incidentals complete and in place.

Add: Bid Item 58A: 1800 Sanger Ave (Greater Love IME Church) Surface Repairs including Class "B" surface replacement, curb and gutter replacement, sidewalk replacement, solid block sod, & all material, labor, equipment, and Incidentals complete and in place.

Replace: Bid Item 97 shall read as follows: Site Restoration of 1801 Sanger Ave (Calvary Chapel Waco) Including Replacement of Curb & Gutter, Reinforced Concrete Sidewalk, Reinforced Concrete Retaining Wall, Pavement & Installation of Solid Block and all material, labor, equipment, and incidentals complete and in place

DRAWINGS:

REPLACE: Sheets C102, C104-C108 with the attached revised sheets.

REPLACE: Sheets C109-C115 with the attached revised sheets. Shading in legend has been updated to reflect the correct color.

DETAIL REVISIONS:

REPLACE: Detail W-19 with the attached detail.

REPLACE: Detail S-5 with the attached detail.

REPLACE: Detail ST-23 with ST-23A & ST-23B

REPLACE: Detail ST-25 with ST-25A & ST-25B

ADD: Detail ST-30

ADD: Detail T-1

REPLACE: T-9 with T-6

DELETE: T-10 (no longer utilized)

Please acknowledge receipt of this Addendum No. 1 by signing below and submitting with the Bid.

Acknowledged: _____

By: _____

Title: _____

David L. Marek, PE
CP&Y, Inc.

Alvin R. "Trae" Sutton, III, PE, CFM
KPA Engineers

"General Decision Number: TX20220007 02/25/2022

Superseded General Decision Number: TX20210007

State: Texas

Construction Types: Heavy and Highway

Counties: Atascosa, Bandera, Bastrop, Bell, Bexar, Brazos, Burleson, Caldwell, Comal, Coryell, Guadalupe, Hays, Kendall, Lampasas, McLennan, Medina, Robertson, Travis, Williamson and Wilson Counties in Texas.

HEAVY (excluding tunnels and dams, not to be used for work on Sewage or Water Treatment Plants or Lift / Pump Stations in Bell, Coryell, McClennon and Williamson Counties) and HIGHWAY Construction Projects

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)(2)-(60).

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 $15.00 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 2022.
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 $11.25 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 2022.

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

https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

* SUTX2011-006 08/03/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving and Structures)	$ 12.56 **	
ELECTRICIAN	$ 26.35	
FORM BUILDER/FORM SETTER		
Paving & Curb	$ 12.94 **	
Structures	$ 12.87 **	
LABORER		
Asphalt Raker	$ 12.12 **	
Flagger	$ 9.45 **	
Laborer, Common	$ 10.50 **	
Laborer, Utility	$ 12.27 **	
Pipelayer	$ 12.79 **	
Work Zone Barricade Servicer	$ 11.85 **	
PAINTER (Structures)	$ 18.34	
POWER EQUIPMENT OPERATOR:		
Agricultural Tractor	$ 12.69 **	
Asphalt Distributor	$ 15.55	
Asphalt Paving Machine	$ 14.36 **	
Boom Truck	$ 18.36	
Broom or Sweeper	$ 11.04 **	
Concrete Pavement Finishing Machine	$ 15.48	
Crane, Hydraulic 80 tons or less	$ 18.36	
Crane, Lattice Boom 80 tons or less	$ 15.87	
Crane, Lattice Boom over 80 tons	$ 19.38	
Crawler Tractor	$ 15.67	
Directional Drilling Locator	$ 11.67 **	
Directional Drilling Operator	$ 17.24	
Excavator 50,000 lbs or Less	$ 12.88 **	
Excavator over 50,000 lbs	$ 17.71	
Foundation Drill, Truck Mounted	$ 16.93	
Front End Loader, 3 CY or Less	$ 13.04 **	
Front End Loader, Over 3 CY	$ 13.21 **	
Loader/Backhoe	$ 14.12 **	
Mechanic	$ 17.10	
Milling Machine	$ 14.18 **	
Motor Grader, Fine Grade	$ 18.51	
Motor Grader, Rough	$ 14.63 **	
Pavement Marking Machine	$ 19.17	

Reclaimer/Pulverizer.....$ 12.88 **
Roller, Asphalt.....$ 12.78 **
Roller, Other.....$ 10.50 **
Scraper.....$ 12.27 **
Spreader Box.....$ 14.04 **
Trenching Machine, Heavy....$ 18.48

Servicer.....$ 14.51 **

Steel Worker
Reinforcing.....$ 14.00 **
Structural.....$ 19.29

TRAFFIC SIGNALIZATION:
Traffic Signal Installation
Traffic Signal/Light Pole
Worker.....$ 16.00

TRUCK DRIVER
Lowboy-Float.....$ 15.66
Off Road Hauler.....$ 11.88 **
Single Axle.....$ 11.79 **
Single or Tandem Axle Dump
Truck.....$ 11.68 **
Tandem Axle Tractor w/Semi
Trailer.....$ 12.81 **

WELDER.....$ 15.97

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 ($15.00) or 13658 ($11.25). Please see the Note at the top of the wage determination for more information.

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) (ii)).

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

Union Average Rate Identifiers

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

A UAVG rate will be updated once a year, usually in January of

each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour 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 DECISIO"

Special Project Provisions

1. GENERAL

1.1. **Liquidated Damages** – Contractor shall pay Owner $1,000.00 for each day that expires after the time specified in the Contract for Substantial Completion and Final Completion (reference General Conditions, Supplementary Conditions, and the Agreement).

1.2. **Standards –** Construction shall be in accordance with the City of Waco Standard Specifications for Construction (current version) and applicable City of Waco Manual of Standard Details (WMSD), with the following exceptions and as noted in these Special Project Provisions:

1.2.1. **Traffic Control Plans:** The Contractor shall use the Texas Department of Transportation (TxDOT) traffic control measures provided in the plans to the extent possible.

1.2.2. **Hot-Mix Asphalt Concrete:** The Contractor shall use TxDOT Special Specification 3076 Dense-Graded Hot-Mix Asphalt Type D for overlay, Type D for level up and installation of curb and gutter, and CLSM for base failure repair.

1.3. **Construction Surveying** - All construction staking shall be provided by the Contractor. This work is subsidiary to the various bid items. This provision supersedes the most current Standard Specifications for Construction and all other city contract documents.

1.4. **Benchmarks** – This project includes benchmarks as shown on the plans. Additional benchmarks or those requiring replacement shall be paid for by the Contractor at no additional cost to Owner.

1.5. **Site Restoration** – All areas (vegetated, gravel, paved, etc.) disturbed by the work of this contract must be restored to pre-project or better condition. Payment for this work will be considered to be subsidiary to completion of the associated work item unless otherwise provided. All existing vegetated areas must be restored to existing condition or better with topsoil and either seed or sod as appropriate. Contractor is responsible for watering and all required care until project acceptance. This work will be considered subsidiary to the project, unless otherwise specified.

1.6. **Mobilization** – If total contract is:

1.6.1. $500,000 or greater, the lump sum for mobilization shall not exceed 10%,

1.6.2. Between $100,000 and $500,000, the lump sum for mobilization shall not exceed 15%,

1.6.3. Less than $100,000, the lump sum for mobilization shall not exceed 20%

1.6.4. Payment of mobilization shall be included in the progress payments upon written application subject to the following provisions:

a. 50% of the mobilization will be paid when 1% of the contract amount (less mobilization, bonds & insurance, and materials on hand) have been earned
b. 75% of the mobilization will be paid when 5% of the contract amount(less mobilization, bonds & insurance, and materials on hand) have been earned
c. 90% of the mobilization will be paid when 10% of the contract amount(less mobilization, bonds & insurance, and materials on hand) have been earned
d. The remainder of the mobilization will be paid when 100% of the contract amount(less mobilization, bonds & insurance, and materials on hand) have been earned

1.6.5. This specification supersedes Section 6.4, Part 4(A)5, of the Standard Specifications for Construction, specifically regarding the percentage (%) of mobilization to be paid.

1.6.6. This contract document has an order of governance that is to be followed. However, should a conflict arise between this section other sections of this contract document the stricter specification will rule.

1.6.7. Mobilization payments will be subject to retainage amounts stipulated in this agreement.

1.7. **Bonds and Insurance**

1.7.1. Bonds and insurance is not considered a mobilization expense. However, it will be addressed in the following manner.

1.7.2. Bonds and insurance will not exceed 2.5 % of the total construction costs of the project, less mobilization costs.

1.7.3. Bonds and insurance expenses over 2.5% of the total construction costs of the project, less mobilization costs, may be considered acceptable and payable (at the owner's discretion) if (a) detailed documentation of the actual expense is provided and (b) proof that the actual expense for the bonds and insurance has been paid.

1.7.4. Bonds and insurance may be 100% payable in the first invoice provided all pre-construction items have been submitted and approved including:

a. Schedule of Values
b. Trench Safety Plan
c. SWPPP
d. Construction schedule
e. Preconstruction photos (if required)

1.8. **Materials on Hand** – Materials on Hand will be allowed for the following material items only:

1.8.1. 12" C-900 PVC Water Line

1.8.2. 8" C-900 PVC Water Line

1.8.3. 12" Resilient Seat Gate Valve

1.8.4. 8” Resilient Seat Gate Valve

1.8.5. Water Fittings 8” and larger (Fittings Only, no incidentals)

1.8.6. Fire Hydrants

1.8.7. Wastewater Manholes (Base, Riser, Cone and Ring & Cover only)

1.8.8. 10” SDR-26 PVC Wastewater Pipe

1.8.9. 8” SDR-26 PVC Wastewater Pipe

Invoices for all materials shall be provided and material must be delivered prior to recommendation for payment. The Project CI will verify delivered quantities prior to recommendation for payment.

1.9. **Protection of Facilities in Right-of Way** – The Contractor shall be responsible for adequately protecting all facilities (mailboxes, trees, bushes, sidewalks, handicapped ramps, etc.) not designated for removal. Any facilities that accidentally sustain damage shall be restored to existing or better condition, and the cost of the restoration shall be subsidiary to the work.

1.10. **Underground Utilities** – The attention of the Bidder is drawn to requirements in State law regarding location of underground utilities prior to excavation and the reporting of damage to any underground utility.

1.11. **Aboveground Utilities** – The Contractor is responsible to coordinate with the appropriate utilities owning any poles or signs that may be impacted during the work of this contract. Bracing, shielding, and protective measures per the requirements of the utility owners shall be provided by the Contractor and shall be considered subsidiary to the work. Contractor to coordinate with Oncor on the potential requirement to shield overhead lines using an Oncor approved contractor.

1.12. **Privately Owned Lots** – If the Contractor chooses to utilize a private lot(s) as a staging area, the Contractor shall provide to the City written permission from the property owner(s). The project shall not be finalized until the Contractor provides a written letter from the property owner(s) saying that the property owner is satisfied with the said lot(s). If the Contractor chooses to utilize any City-owned lots, the Contractor shall obtain written permission from the City’s Property Manager. Additional insurance may be required.

1.13. **Private Property Access** – Contractors shall endeavor to minimize disruptions to private properties and vehicular access to private driveways must be maintained. At the end of each working day, all private vehicular drives shall have access. Cost to provide this work shall be incidental to the installation of the utility.

1.14. **Earthwork** – All earthwork (cut and fill) required for the work of this contract, unless otherwise specified, is subsidiary to payment for the various bid items.

1.15. **Bus Routes** – The Contractor shall coordinate all work with public and private schools affected by the construction at the beginning of construction and maintain communication until final acceptance of the roadway. Coordination will be required if any bus routes (Waco ISD, Waco Transit, or other) are affected or there is a school within one block of construction.

1.16. **Trash Pickup** – The Contractor shall coordinate all work with the City's Waste Management Division to avoid interruption of service on trash pickup days. Contact information is provided in the plans.

1.17. **Testing** – The Contractor must request material testing and inspections forty-eight (48) hours in advance through the Project CI. Availability of the testing company may dictate final testing date. The Owner will be financially responsible for testing that:

a. Confirms installed material or work was done in accordance with the technical specifications and/or construction documents.
b. During testing of water lines, filling of lines will occur from a fire hydrant. The lines to be tested must maintain a physical separation from the existing lines until all test results are passing.
c. Duplicate testing as directed by the Owner
d. Any special testing as directed by the Owner

The Contractor will be financially responsible for testing costs for the following conditions:

a. Testing that finds installed material or work was **NOT** done in accordance with the technical specifications and/or construction documents.
b. Early or non-standard testing as requested by the Contractor.
c. Any charges incurred due to the project or item of work not being ready for testing when the laboratory arrives onsite.
d. Any charges incurred due to cancellation of the testing as requested by the Contractor.

For any costs that the Contractor will be financially responsible, the Contractor will be required to set up an account with the material testing company and will pay said company directly. The Project CI will direct the material testing company on which entity is responsible for material testing costs.

1.18. **Projectmates**

1.18.1. The City has setup an Internet-based project management system called Projectmates for managing design and construction projects. The Contractor will be required to utilize Projectmates as follows:

1.18.2. Contract management related processes including RFIs, submittals, field reports, meeting minutes, change orders, pay application, punch lists, and close-out documents shall be submitted, tracked, and responded to, by the Contractor, City, and Engineer through Projectmates over the Internet. Paper copies shall not be accepted unless specifically requested.

1.18.3. The City of Waco Projectmates software portal is:

https://city ofwaco.projectmates.com

One (1) Projectmates user license will be provided to the Contractor by the City without charge. The City will recover the license upon project

completion. The Contractor may purchase additional Projectmates user licenses through the City for a cost of $1,000.00 each.

1.18.4. The Contractor shall be familiar with Projectmates prior to the pre-construction meeting. Training can be arranged by contacting software vendor Systemates Inc. Training expenses shall be borne by the Contractor. Contact Systemates, Inc., Richardson, Texas 214-217-4100 or email info@systemates.com

1.19. **Contractor Self-Performance –** The General Contractor must "self-perform" a minimum of 51% of the work in the awarded contract. The term "self-perform" shall refer to workers employed by the General Contractor, and equipment owned or rented by the General Contractor. Such term does not include employees or equipment of a subcontractor, agents of the General Contractor, or any other assignees.

1.20. **Right of Way Clearing and Cleanup**

1.20.1. **Right of Way Clearing:** The Contractor shall be responsible for clearing the right of way of trees, shrubs, and other vegetative growth as needed for equipment clearance, construction of street components, and any other work required for this Project, prior to beginning construction, and in areas specifically identified on the drawings. Any trees that are removed to facilitate the work must be replaced with the same species, unless otherwise specified by the Owner or as indicated on the plans. Any cut limbs shall be sealed with Spectracide Pruning Seal or approved equal. See Tree Pruning and Removal detail in the plans for additional requirements. This work shall be subsidiary to all pay items unless otherwise noted on the drawings.

1.20.2. **Right of Way Cleanup:** At the end of the project and prior to requesting the punch list, the Contractor shall cleanup the right of way from the edge of pavement to the approximate right of way on each side of the street (including portions of intersecting streets on which work was performed). The approximate right of way is shown on the plans (via parcel boundaries); however, the Contractor and Construction Inspector (CI) shall coordinate the extents of the work during construction. The purpose of the right of way cleanup is to leave the entire right of way clear of trash, debris, overgrown vegetation, and vegetative growth in the curb and gutter. The Contractor will not be required to go beyond any fence lines for this work. Cleanup activities shall include, but not limited to the following:

a. Remove all trash and debris
b. Remove all downed trees, tree limbs, and brush piles
c. Mow grass/vegetation to 3-inch height
d. Edge Grass at back of curb, pavement, sidewalk, and curb ramps
e. Remove vegetation from curb and gutter, sidewalk, and curb ramps by mechanical means or other methods approved by the Project Engineer

This work shall be subsidiary to all pay items unless otherwise noted on the drawings.

1.21. **Notice to Proceed**

1.21.1. To allow for procurement of materials in advance of construction activities, the City of Waco will delay the issuance of a Notice to Proceed to no later than May 1, 2023. Upon execution of the Contract by all parties, The City of Waco will issue a Notice to Procure for the Project which will contain the following language:

The contract for the referenced project has been fully executed, please consider this letter as your Notice to Procure on the above referenced project, effective MON DATE YEAR. This Notice to Procure allows for the procurement process to begin for the 18th Street Utility Improvements project, including processing of material submittals, obtaining essential materials requiring lead-time, and temporary storage of approved materials on City of Waco property prior to construction. The City anticipates issuing a Notice to Proceed for construction no later than May 1, 2023, which will start the construction time indicated in the contract documents.

Under the terms of this notice, no project site storage or staging shall occur until a separate Notice to Proceed is issued. The City of Waco has facilities where the material shall be temporarily delivered and stored. The Contractor will be responsible for coordinating delivery of materials and access to the City property. The Contractor will be responsible for adequate coverage and protection of any stored and delivered material so that it is in acceptable condition at the time of installation. Should any of the product be damaged after receipt and reimbursement by the City, the Contractor will be responsible for replacement of the material at no cost to the City. The Contractor will also be responsible for material relocation from the temporary place of storage to the jobsite at no additional cost to the City.

The Contractor may conduct all necessary submittals and procurement of items after the Notice to Procure has been issued. After the Notice to Procure and before the Notice to Proceed, the Contractor may request payment only for materials on hand, bonding and insurance, SWPPP plans, trench safety plans, traffic control plans, confined space plans and bypass pumping plans. The Contractor may only be paid for these items once they have been approved by the City, properly stored and all documentation has been submitted. No other bids items such as Mobilization will be paid during this period.

2. COMMUNICATION

2.1. Construction Inspector Notification – Contractor shall contact the Construction Inspector (CI) a minimum of seventy-two (72) and a maximum of ninety-six (96) hours prior to beginning (or recommencing after a hiatus) work; and notify the CI immediately upon any change in schedule.

2.2. Public Notification prior to beginning Construction – The contractor will be required to notify residences and businesses that will be impacted seven (7) days prior to beginning construction. The contractor shall submit a schedule of start and finish times on each section to the inspector. The contractor will deliver a copy of the notification flyer for review to the City before distribution to the residences and businesses. The notification flyer shall be delivered to a contact person at each business that will be impacted by construction. Construction will not be allowed to start until the flyer is delivered. A sample notification has been included showing the required information to distribute. The notification flyer will be on the Contractor's letterhead. All work involved with the Public Notification of Construction flyer shall be considered subsidiary to the contract price and no additional compensation shall be made. Flyer shall be submitted for approval.

3. SITE CLEAN-UP

3.1. During the progress of the Work and on a daily basis, CONTRACTOR shall keep all the premises (including any staging areas) free from accumulations of all waste materials, rubbish and other debris resulting from the Work.

3.2. The Contractor shall remove all material stockpiles, equipment left overnight or any obstructions within thirty (30) feet of a travel way or clearly marked by warning lights and barricades.

3.3. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. CONTRACTOR shall leave the site clean and ready for the OWNER prior to initiating project completion process (requesting punch list, etc.).

3.4. It shall be the responsibility of the Contractor to keep the roadway, drive approaches, and sidewalk clean of mud, sand, rock, and other debris.

3.5. If the CONTRACTOR fails to comply with these requirements, the OWNER may do so and pass along all related costs to the CONTRACTOR.

4. PERMITS

4.1. No TxDOT permits are required for this project.

4.2. Plumbing Permits – If plumbing services or water services on private property are included in the scope of work, the City of Waco Utility Department will cover the cost of the plumbing permit that must be obtained for each address at which the plumber on this project will be working. All work on private property must be conducted by a licensed plumber.

5. SUBMITTALS

5.1. All submittals shall be complete shop drawings and design data, providing the information necessary to document compliance with all specifications. See section 2.6 C in the General Provisions of the City of Waco Standard Specifications for Construction.

5.2. The Owner will utilize Projectmates during the submittal process. Each submittal is limited to one (1) line item and shall be submitted using the appropriate naming conventions. Resubmittal numbers are auto-generated in Projectmates.

5.3. If "mass submittals" are received, Engineer's review time stated above will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner and Contractor. "Mass submittals" are defined as six or more submittals in one day or 15 or more submittals or items in one week.

5.4. Contractor is responsible for keeping a current set of record drawings available for review, documenting any and all changes to the contract documents made in the field during construction. Contractor shall review these record drawings with the Construction Inspector on a weekly basis.

5.5. **Review Time** – All submittals, Request for Information (RFI) and Potential Change Orders (PCO) shall be allowed a maximum of fifteen (15) calendar days for review.

5.6. **Erosion Control and SW3P** – Submittal is required in accordance with City of Waco Standard Specifications for Construction, Section 1.10 Storm Water Pollution Prevention.

6. SAFETY

6.1. **Confined Space** – If the completion of this contract requires working within a confined space, access to such a work area will only be allowed through compliance with a project specific program meeting applicable OSHA standards. The contractor shall review any hazards confronted during the confined space entry with the City's designated representative.

6.2. **Fire Watch** – Some of the buildings within the limits of the water lines that will be isolated for tie-ins, have a dedicated fire sprinkler service. During times where the public service to these lines is interrupted, the Contractor shall provide sufficient "Fire Watch" of these structures. Contractor is responsible for determining all buildings that will require a "Fire Watch" and payment to provide such services are incidental to the Project. No additionally payment will be made if the "Fire Watch" is required to be extended outside of the initial timeline for said service.

6.3. **Trench Safety** – If the completion of this contract requires working in excavations deep enough to dictate the use of trench safety protective measures. Access to any such excavations will only be allowed through compliance with a project specific program meeting applicable OSHA standards. The contractor shall submit the name and cell phone number of the Qualified Person.

6.4. **Traffic Control Plans (TCP)** – TCP's must be compiled by licensed or certified personnel (Texas Licensed Professional Engineer; IMSA Certified Work Zone - Work Zone Traffic Control Technician; or TEEX, Texas A&M Engineering Extension Services, Work Zone Traffic Control Certification, HWS002). Documentation of current certification shall be submitted with all TCP's.

6.4.1. Each TCP must be developed to address the specific conditions of the planned construction work zone location. Multiple phases of construction will require a separate TCP for each phase. All may be submitted at one time for acceptance. The Contractor shall incorporate the various Barricade Standards, Traffic Control Plan Standards, and Work Zone Standards into the TCPs as appropriate.

6.4.2. Temporary traffic control plans shall be completed by a Texas professional engineer prior to submittal. Plans for construction projects occurring on state roads will require TXDOT approval prior to submittal.

6.4.3. TCP's shall be designed such that only one direction of traffic (2-way streets) or half of the available lanes (one-way street) are closed during any portion of the Project.

a. North 18th Street from Bosque Boulevard to West Waco Drive is a One-Way thoroughfare that is a three lane heavily traveled roadway. The TCP will need to address lower traffic speeds and proper warning signs for traffic channelization. Pedestrian traffic will need to be addressed by the TCP as well. The majority of 18th Street has commercial and residential uses along the route.

b. Two lanes of travel in 17th Street and 18th Street must be open during the hours of 7 AM to 7 PM. One late of travel may be allowed during the hours of 7 PM to 7 AM.

7. EROSION CONTROL

7.1. The Contractor shall use Best Management Practices (BMPs) to provide erosion control measures for this project. This is subsidiary to the "Stormwater Pollution Prevention Plan" and "Stormwater Pollution Prevention Plan Implementation" line items. Erosion control measures to be used must be submitted in writing to the Engineer and approved by the Engineer before work begins. Suggested erosion control measures have been indicated on plan sheets for select work areas (e.g. sidewalks), but the Contractor shall provide a plan and implementation for the entire project site.

8. SCHEDULE

8.1. This contract is a calendar day contract.

8.2. The construction of the project (Base Bid) shall be completed to Substantial Completion within 345 calendar days from the date of the Notice to Proceed and to Final Completion within 375 calendar days from the date of the Notice to Proceed. In the event that the Base Bid + Additive Alternate #1 is awarded, the construction of the project shall be completed to Substantial Completion within 415 calendar days from the date of the Notice to Proceed and to Final Completion within 455 calendar days from the date of the Notice to Proceed.

8.3. The Contractor is required to provide an approved construction schedule within two weeks of the effective date of the notice to proceed.

8.4. The Contractor shall also provide updated schedules as warranted by the progress of the work at all regularly scheduled monthly meetings.

8.5. It is anticipated that the pre-construction meeting will be held the week following the receipt of the signed contracts from Legal. Unless other arrangements have been approved, the effective date of the Notice to Proceed will be the Monday following the pre-construction meeting.

8.6. The project schedule includes time to:

8.6.1. Develop, submit, review, approve and implement the SWP3/erosion control plan;

8.6.2. Develop, submit, review, and approve safety and material submittals;

8.6.3. Complete and commission the Work;

8.6.4. Attend Monthly Progress Meetings;

8.6.5. Conduct Punch List Walk Through; and

8.6.6. Complete the project closure activities and paperwork.

8.7. The contractor shall maintain a work force adequate to accomplish the work within the contract time. The Contractor agrees to employ only orderly, competent, and knowledgeable workers, skillful in performance of the type of work required under this contract.

8.8. Contractor's representative (City of Waco Standard Specifications for Construction, General Provisions, Section 8.7, page 58) – "Before starting work, the Contractor shall designate in writing a representative who shall have complete authority to act for it. The representative or alternate shall be present at the Work site whenever work is in progress…"

8.9. The Contractor is required to provide an approved construction schedule within four weeks of the effective date of the Notice To Proceed. The schedule shall be in a Gantt, CPM, or PERT format suitable to depict the project work plan.

8.10. The Contractor shall also provide updated schedules as warranted by the progress of the work.

8.11. If the Contractor works a minimum of three (3) hours during a day, said day shall not be allowed to be claimed as a Weather Day.

8.12. **Working Hours** – All work shall be done between 7:00 a.m. and 6:00 p.m. unless authorized by Owner's Representative in accordance with Section 7.2 of the City of Waco Standard Specifications for Construction. If a contractor wants to perform work on Saturdays, Sundays, and/or legal holidays, the Contractor shall seek approval by making a written request to the City/Engineer 72-hours in advance. Dark or night-time work will require a minimum request of 5 days in advance of said work. If the Contractor is required to work outside of the normal working hours, the Contractor may not request additional compensation.

8.13. **Overtime Costs** – Contractor shall be responsible for all City staff and third-party time, costs, expenses and overtime for work performed after standard working hours, Saturdays, Sundays, or City holidays, unless excused in writing by the City prior to the work. City/Engineer will bill key personnel at the following rates. All

other City/Engineer personnel will be billed at their current billing rates.

There will be an 8 hour minimum charge for Saturday, Sunday, or Holiday work. Cancellation is required by Friday 12:00 PM Noon in advance of Saturday, Sunday, or Holiday work or the 8 hour minimum charge will apply.

8.13.1.	Field Representative/Observer	$165.00/hr
8.13.2.	Project Manager	$215.00/hr
8.13.3.	Project Engineer	$165.00/hr
8.13.4.	Project Administrator	$90.00/hr

8.13.5. Payment shall be obtained from the retainage withheld by the City of Waco.

9. PROJECT COMPLETION

9.1. It is expected that the contractor shall complete the "final" phase of the project in no more than 30 calendar days of completion of pay items, within the constraints of Section 7, Prosecution, Progress, and Acceptance of Work, City of Waco Standard Specifications for Construction.

9.2. The Substantial Completion for the Project will occur upon completion and acceptance of all components of the awarded contract.

9.3. When contractor completes all work or pay items, they shall submit a written request for a punch list.

9.4. The Construction Inspector along with a representative for the various City of Waco Departments will coordinate a "walk of the project" and issue the punch list.

9.5. When contractor deems all punch list items are complete, they shall submit a written request for a final inspection.

9.6. When the Construction Inspector finds all items complete to their satisfaction, they shall submit a letter of final acceptance which will request the contractor submit a one year guarantee and an all bills paid affidavit, both notarized.

9.7. The final acceptance letter shall include an accurate description of the Work being accepted.

9.8. If private property is used, the Inspector shall receive a written release from property owner accepting the condition of their property.

9.9. Once the guarantee and affidavit are received, the project will be deemed final.

9.10. Warranty –The Warranty for the entire project will begin on the date of Substantial Completion. The inspector will schedule a warranty walk approximately 11 months after project completion. If any issues arise during the warranty period, the Construction Inspector will send written request to the contractor.

10. CONSTRUCTION SEQUENCE/CONSTRAINTS

10.1. SW3P and Traffic Control – SW3P and traffic control shall be approved and implemented prior to commencement of construction.

10.2. Water Line Tie-Ins And Temporary Service Disruptions

10.2.1. All efforts shall be made by the Contractor to minimize disruption of service to area customers that may be affected by construction work.

10.2.2. Where existing water mains must be shut off longer than 30 minutes, customers shall be given advanced notification.

10.2.3. The City shall approve all interruptions of water service on a case by case basis with intent to provide all customers a minimum advanced notice of 72 hours.

10.2.4. A construction schedule to coincide outside of business hours or non-operating hours will be required where non-residential customers are affected.

10.2.5. Water service shall not be interrupted to any customer or any fire hydrant for a period exceeding 4 hours under any circumstances.

10.2.6. Temporary potable water service (utilizing NSF-61 piping and fittings) shall be provided to all commercial customers.

10.2.7. Customers and businesses that require potable water for medical reasons shall not have their service interrupted without prior approval and scheduling.

10.2.8. Water tie-ins will be scheduled Tuesdays and Thursdays only, unless given approval by the Owner. The CI shall coordinate with the RMG Group for valve closures with a minimum advanced notice of 72 hours.

10.3. Wastewater Line Tie-Ins And Temporary Service Disruptions –

10.3.1. All efforts shall be made by the Contractor to minimize disruption of service to area customers that may be affected by construction work.

10.3.2. Where existing wastewater services must be shut off longer than 30 minutes, customers shall be given advanced notification.

10.3.3. The City shall approve all interruptions of wastewater service on a case by case basis with intent to provide all customers a minimum advanced notice of 72 hours.

10.3.4. A construction schedule to coincide outside of business hours or non-operating hours will be required where non-residential customers are affected.

10.3.5. Wastewater service shall not be interrupted to any customer for a period exceeding 4 hours under any circumstances.

10.4. **Street Work (Concrete and Mill/Overlay Operations)**

10.4.1. At the acceptance of the utility improvements, the Contractor can begin demolition and haul off of the existing curb and gutter and sidewalk to be replaced.

10.5. **Hauling Materials** – Contractor shall arrange construction operations to prevent the hauling of materials through completed pavement sections unless otherwise approved by the CI or City Engineer.

10.6. **Order of Work** – The Contractor must complete all necessary work within Phase 1, including but not limited to acceptance of the waste water and water improvements, connection to existing public mains, transfer of services to the new utility and all final surface replacement and/or milling and overlay improvements prior to initiating Phase 2 Improvements.

11. POTHOLE REQUIREMENTS

11.1. The Contractor is directed to conduct the necessary potholes of existing utilities, both public and private, as identified in the construction drawings.

11.2. The cost of all potholes is subsidiary to the cost of installation of the appropriate utility.

11.3. The pothole shall include the preparation and submittal of any required Traffic Control Plans, Traffic Control Device implementation and removal, cost of obtaining a water meter and payment of any water charges, and backfill and repair of the pavement surface as required.

11.4. The Contractor shall provide the following information to the Design Engineer:

11.4.1. Utility Name

11.4.2. Horizontal location based on the coordinate system for the Project

11.4.3. Vertical elevation of the top of the utility

11.4.4. Material of the utility

11.4.5. For water, sewer and storm drainage utilities, the OD of the utility shall be measured.

11.5. At locations where the proposed utility will connect to the existing utility, including installation of valves for isolation during construction, the Contractor shall pothole these locations prior to the ordering of the material necessary for said connection. Failure to do so will not be considered a justification for an extension of the construction time.

12. UTILITY WORK

12.1. **Utility Identification** – The contractor shall place the appropriate utility identification tape on top of the embedment. Water pipe and its corresponding marking tape shall be the color “blue” and Wastewater pipe and its corresponding marking tape shall be the color “green” or, if necessary, the color that meets AWWA requirements. These costs shall be subsidiary to linear foot of pipeline being installed.

12.2. **Embedment** – If the bedding under existing storm drain, water, or sanitary sewer pipes is impacted during this construction, the Contractor shall restore such bedding in accordance with current City of Waco standard details. Restoration of such bedding, and any necessary additional embedment and backfill, shall be subsidiary to the work and per the City of Waco Standard Details.

12.3. **Tracer Wire** – Tracer Wire is required on all non-metallic utility lines. Tracer Wire shall be installed in the bottom of the trench below the bedding material. The contractor shall use blue colored #12 AWG Solid (0.0808" diameter) steel core soft drawn tracer wire, 250# average tensile break load, 30 mil high molecular-high density polyethylene jacket complying with ASTM-D-1248, 30 volt rating. Manufactured by Copperhead Industries part number 1230-SF or approved equal. No breaks or cuts in the tracer wire of wire insulation shall be permitted. The tracer wire shall be securely bonded together at all wire joints with an approved watertight connector to provide electrical continuity, and shall be accessible at all new water valve boxes and water meter boxes. The end of the tracer wire shall be spliced to the wire of a six pound zinc anode and buried at the same elevations as the water main. Contractor shall perform a continuity test on all trace wire in the presence of the Owner's Representative. If the trace wire is found to be not continuous after testing, Contractor shall repair or replace the failed segment of wire. These costs shall be subsidiary to linear foot of pipeline being installed.

12.4. **Polyethylene Wrap** – Polyethylene Wrap is required on all ductile iron pipe. This shall be paid for subsidiary to the piping and trenching bid item(s) in the project.

12.5. **Compaction** – All trenching and excavation required for construction shall meet the following requirements. Excavation and backfill in traffic areas shall be backfilled to pavement profile with gravel (pit run) and compacted to 95% standard proctor density per City of Waco Standard Specifications for Construction. Excavation and backfill in non-traffic areas shall be backfilled with the excavated reuse material, where suitable. Reuse material shall meet all specifications and shall be accepted by the City's construction representative. Where reuse material does not meet all specifications, imported borrow shall be used that meets all specifications. All backfill shall be place per all specifications and shall be compacted to 95% standard proctor. Contractor shall include in their original bid price all costs associated with meeting all backfill requirements. No additional compensation shall be made to Contractor for imported and/or select fill.

12.6. **Utility Services Sewer Piping** – Where sanitary sewer service connections must be re-tapped into the new sanitary main while the main is still under construction, Contractor shall pressure test both the new main and new service line by temporary plugging the new service line at the upper most new cleanout that connects to the existing sanitary sewer service line at the residence. New service lines to be re-tapped into existing sanitary sewer mains shall be tested from the upper most new cleanout that connects to the existing sanitary sewer service line at the residence to the existing sanitary sewer main. Contractor shall test prior to connecting the new service line to the existing main. All new or retrofitted manholes shall be pressure tested as specified in the applicable specification section.

12.7. **Vertical Bend Fittings** – Vertical bend fittings may not all be shown or called out on the drawings. Vertical bend fittings not specifically called out on the plans but are required to properly achieve pipe alignments and/or connections shall be

subsidiary to the water main construction and no additional payment will be made to the contractor for such fittings.

12.8. **Additional Fittings (as needed)** – More bends may have been included in the bid proposal than are shown on the plans. It is possible that the Engineering Inspector will direct the Contractor to use some of these supplemental bends if unexpected conflicts are discovered during construction. Bends in addition to those shown on the plans may only be used with specific permission from the Engineering Inspector. No adjustment to the unit prices in the contract will be made as a result of reduced quantities if these supplemental bends are not used.

12.9. **Disposal of Excavated Materials** – Any excess excavated material, not utilized after all backfill requirements have been met, shall become the responsibility of the Contractor. The Contractor shall haul and dispose of excess excavated material outside the limits of this project and of public thoroughfares and water courses, in conformity with pertinent City, County, State and Federal regulations.

12.10. **Disturbed Areas** – All disturbed off-street areas shall be re-seeded or re-sodded and the cost shall be considered subsidiary to the item whose work caused the disturbed areas. Fences requiring removal for construction purposes shall be replaced with a fence of similar type and material as existing and all work, equipment, material, and associated appurtenances shall be subsidiary to the Bid Item that required the fence removal.

12.11. **Surface Replacement** – Surface replacement is paid by the linear foot and no additional payment will be made if additional surface replacement is required due to the possibility of unstable soil.

12.12. **Gravel Trench Backfill** – Gravel trench backfill is paid for as part of the street trench bid items and no additional payment will be made if additional gravel trench backfill is required due to the possibility of unstable soil.

12.13. **Water Services** – For installation of new water services (if required), the Contractor shall:

12.13.1. Remove existing service to meter.

12.13.2. Install new service in accordance with City of Waco Standard Specifications for Construction and Details.

12.13.3. Connect new service to existing meter.

12.13.4. Provide necessary surface replacement and curb and gutter removal and replacement. Surface Replacement shall be incidental to the cost of the water service.

12.14. **Notice of Water and Sanitary Sewer Service Interruption** – All homeowners and businesses potentially affected by the interruption of water or sewer services shall be notified by the Contractor 48 hours in advance of the planned service interruption on a city provided template. Should the work not occur on the specified day, new notification will be distributed as directed by the City's project representative.

12.15. **Sewer Service Lines** – The unit price bid for sewer service lines shall include connection to main, taps, and any additional cleanouts needed to install the lines

in accordance with the City of Waco Standard Specifications for Construction and Details. Price per each new sewer service line shall also include restoration of all concrete, curb & gutter, sidewalk, steps, handicap ramps, asphalt, driveways, landscaping, vegetation, irrigation systems, grass, and anything else above ground to pre-project conditions.

12.15.1. Where sewer service lines cross sidewalks the Contractor shall remove and replace sidewalk section between joints adjacent to both sides of the service location. This shall be paid for subsidiary to service line bid items.

12.15.2. Where sewer service lines are in existing driveways the Contractor shall remove and replace full width of driveway from the street to the property line, and in accordance with the applicable details. This shall be paid for subsidiary to service line bid items.

12.15.3. Surface Replacement shall be incidental to the cost of the sewer service.

12.16. **Manhole Protection** – The City of Waco Standard Specifications for Construction requires the coating of the inside and outside surfaces of all sanitary sewer manholes. In lieu of coating the new manholes for this project (48" diameter manholes only), the manholes (48" diameter only) may be cast with concrete containing ConShield (or a pre-approved equal) added at a rate of 1 gallon per cubic yard of concrete replacing 1 gallon of water. If ConShield is chosen to be utilized, then Con Tint concrete colorant, or an approved equal, shall be added at the manufacturer's recommended dosage. Additionally, ConmicShield Joint Set, or an approved equal, shall be used. A letter from ConShield must be submitted confirming compliance with manufacturer's recommendations. In the event the contractor elects to utilize the Conshield design for manholes, the Conshield additive and tint must be used for the concrete "donuts."

12.17. **Sanitary Sewer Flow Control** – If building a new sewer in the same location as existing active sewer the following shall be followed:

12.17.1. During construction hours, the contractor shall plug the upstream manhole, use it as temporary storage for the upstream wastewater and haul off the wastewater when the manhole has become full or provide temporary 8" service around manhole. When wastewater flow is plugged, or blocked, sufficient precautions shall be taken to protect the public health and protect wastewater lines from damage. No wastewater shall be allowed to backup into any homes or building. No wastewater shall overflow any manhole, cleanout, or any other sewer access. During any time when an active wastewater line is plugged or blocked, the contractor shall continually observe the conditions upstream of the plug.

12.17.2. Outside of construction hours, the contractor shall provide a temporary connection, if necessary, between the old and the new pipe. For all work which will require a temporary interruption of utility service via

temporary pump around by-pass system, the Contractor shall submit a proposed pump around work plan which indicates the manpower, tools, fuel, materials, equipment, and procedure to be used to complete the installation, at least 14 calendar days prior to the activity. Pumping plan shall include sufficient pumps and pumping capacity to adequately handle estimated peak wastewater flows. Contractor shall take all necessary precautions at all times to prevent wastewater overflows.

12.18. **Abandonment** – It is the Contractor's responsibility to verify that all flow from existing services, main lines and manholes has been rerouted prior to abandonment.

12.19. **Surface Replacement Thickness** – The thickness of the HMAC within the project limits varies as indicated on the geotechnical borings. For the final surface replacement, the thickness of the HMAC shall match that of the existing pavement. Variation in pavement thickness is not grounds for a change order and the appropriate pay item shall be used for all thicknesses.

12.20. **Utility Measurement** – All utilities shall be measured and paid for based on the Plan Linear Footage of the Utility. Contractor shall be responsible for incorporating any additional costs due to the true length of pipe based on vertical elevations or wastage of partial pipe. Any change orders that require adjustment to the utilities shall also be measured and paid for by the plan length.

13. CONNECTION TO EXISTING UTILITY MAINS

13.1. This project requires that the water utility be built as a whole, tested in accordance with the City of Waco requirements, and then connected to the existing main or valves installed for isolation purposes.

13.2. Due to interruptions of commercial and/or residential property owners, connections will be required to be conducted outside the normal working hours. Notification of the affected users in advance of the work is required as outlined in Section 2 of the Special Project Notes.

13.3. Contractor may be required to complete some or all tie-ins during low demand/low flow periods, which may require completing such tie-ins during night-time hours. No additional payment shall be made to Contractor for night-time work and shall be included as part of their original project bid price.

14. STEEL PLATES

14.1. The Contractor will be allowed to use steel plates and pins, secured to the street, if work is to resume within 24 hours. In the event work will not be resumed within 24 hours, the Contractor shall backfill the trench.

14.2. Contractor shall comply with Section 23-31 of the City of Waco Code of Ordinances.

14.3. When the Contractor elects to use a steel plate a cold asphalt mix ramp will be provided to feather around the plate.

14.4. The thickness of plates for trench widths exceeding 72 inches shall be established in an analysis completed by a Licensed Professional Engineer Registered in the State of Texas.

14.5. Steel plates must extend a minimum of 24 inches beyond the edges of excavation.

14.6. In the event of improper installation of the steel plates that presents a nuisance or a public safety problem, the Contractor shall respond to all excavation restoration requests by the City immediately upon notification. Non-responses will result in the required restoration work being done by the City, with all expenses to be paid by the Contractor.

14.7. It is the responsibility of the Contractor to perform and document daily inspections of all active plate(s) or unattended plate(s) location(s), and where necessary take appropriate measures to protect the public safety until work is completed. This documentation shall be available to the inspector upon request. No un-plated excavation shall be left unattended overnight.

14.8. All steel plates shall be properly marked with the Contractor's name and Contractor's after- hours contact phone number in the event the plates need to be secured.

15. TEMPORARY STREET REPAIR

15.1. For the construction of the new utility lines in 18th Street, the work is broken into two phases. Within each phase, multiple blocks of 18th Street are affected. The Contractor may only work within a block at a time to minimize the disruption to the traffic on 18th Street.

15.2. To allow for the Contractor to minimize the disruption to the traffic, the Bid Item: Temporary Street Repair is included in the Bid Proposal. This Bid Item shall consist of the Contractor installing a prime coat on the gravel trench backfill, installation of 2" HMAC Type C , and installation of temporary striping as needed. Although the utility line has not been tested, approved and connected to the existing main, use of this Bid Item will allow for traffic disruption to be minimized.

15.3. Cost to remove and dispose of the Temporary Street Repair in advance of final permanent street repair will be considered subsidiary to the Temporary Street Repair Bid Item.

15.4. Cost of Traffic Control Mobilization and Demobilization due to this requirement will be included in the Traffic Control Implementation Bid Item.

15.5. If the utility line fails during testing, the Contractor is required to excavate to make necessary repairs to meet the testing requirements. If the utility line repair is not completed and approved within seven (7) days, the Contractor shall at no additional cost, install Temporary Street Repair at no additional cost so as to allow traffic to resume.

16. STREET WORK

16.1. The Contractor may pave any time (during working hours) the roadway has no standing water on the roadway surface, the roadway surface temperature is at least 60°F and the ambient temperature is at least 50°F and rising. Place mixtures only when the Engineer determines the roadway surface weather and moisture conditions are suitable. The Engineer may restrict the Contractor from paving if the ambient temperature is below 50°F and falling. Cease placement twenty-four

(24) hours before the National Weather Service forecast predicts temperatures below 32°F unless otherwise approved.

16.2. No asphalt treatments will be applied just prior to a rain event that could result in chemical asphalt or any asphalt by-product pollutant being washed into a stream or stormwater collection system.

16.3. No AC or Emulsion for surface treatment items will be placed between October 1 and April 1 unless approved in writing by the Engineer.

16.4. Installation of new curb and gutter, concrete fillets and valley gutters; completion of base failure repair; and HMAC grinding and level up work shall be completed prior to the overlay work.

16.5. All aggregate for each project will come from the same source or blended sources approved by the Engineer.

16.6. Remove all dirt and debris accumulated in the curb and gutter sections prior to beginning paving. Likewise, remove all vegetation from pavement edges prior to operations. This work will be subsidiary to bid items.

16.7. When paving more than one section of continuous street, the Engineer or designated representative will have the final decision whether to pave cross streets.

16.8. Random cores will be performed by the City for the purpose of payment calculations. Payment calculations will follow TxDOT Special Specification 3076 Dense-Graded Hot-Mix Asphalt.

16.9. Surfacing required as repair due to unsatisfactory workmanship by the Contractor will not be paid for directly but shall be deemed the cost responsibility of the Contractor.

16.10. Any tracking of asphalt material will be the responsibility of the Contractor to mitigate at no additional expense to the City.

16.11. For adjustment of manholes, valves, and vaults the finish elevation of the structure shall be constructed within ¼" inch of adjacent proposed grade.

16.12. Manhole and water valve lids shall be adjusted in accordance with COW Standard Details ST-11 and ST-13 respectively.

16.13. Any conflicts between City of Waco specification s and Texas Department of Transportation specifications will be directed to the Engineer to provide clarification.

16.14. The elevation adjustment of any "SWB or AT&T Manholes" shall be coordinated through Calvin Pewitt of AT&T who can be contacted at (254)757-7810 (office), (254)715-7869 (mobile) or at cp8237@att.com.

16.15. Any signs removed shall be replaced the same day.

17. MILLING, BASE REPAIR, AND OVERLAY

17.1. General Process

17.1.1. The mill and overlay process consists of milling usually to a depth of 2" where HMAC is to be placed (unless otherwise specified), base failure

repair if needed, cleaning, and applying a bonding course (either Tracking-Resistant Asphalt Interlayer of product type Hot Asphalt) and placement of 2" of HMAC, Type D.

17.1.2. Adjustments to mill depth shall be made based on the geotechnical boring information provided in the contract book, plans, and/or varying site conditions. The following table shall be used to determine mill and overlay depth based on existing pavement thickness:

EXISTING PAVEMENT THICKNESS	MILL DEPTH	HMAC OVERLAY DEPTH
< 1.5"	0"	2"
1.5" to 2.5"	0.5"	2"
2.5" to 3"	1"	2"
>3"	2"	2"

In areas where existing pavement is less than 2.5", mill to CTB. Mill depth transitions shall occur over a distance of 100 ft (minimum).

17.1.3. HMAC overlay shall be tapered over a 4-foot width (min) at edges of pavement to match the elevation of the gutter lip. The minimum thickness of the tapered HMAC overlay shall be 1 inch in the street and 2 inches at the edge of pavement, or to depth of base, whichever is less. Edge milling to depths exceeding those in the table above will be allowed to match the new pavement surface with the existing gutter lip. Exposed base shall receive a prime coat if not overlaid the same day as exposure.

17.1.4. Do not mill or overlay concrete pavement.

17.1.5. Milling shall be done to match the grade of new and existing surfaces at concrete aprons and valleys, utility vaults (transition so that utility vaults do not need adjustment and a smooth ride is achieved), concrete street intersections, and along intersecting streets identified in the plans.

17.1.6. Where due to milling there is a transverse joint greater than ½" in depth in a travel way a temporary ramp acceptable to the Engineer shall be placed prior to opening to traffic.

17.1.7. Millings shall become the property of the Contractor and removed from site. This removal is subsidiary to the unit price for milling and overlay.

17.1.8. Milled pavement must be overlaid within 72 hours unless otherwise approved by the City of Waco Project Manager.

17.1.9. Adjustment of manholes and valves shall be made to within ¼" of adjacent proposed grade. Note that abandoned valves may exist and will be addressed by the Engineering Inspector during construction. If old style valve boxes are encountered during the raising process, the Contractor shall replace them with boxes meeting the new details. The boxes will be either raised or replaced and paid for by the appropriate

bid item. Contractor will not be paid for both. Salvage all water valve covers and deliver to the City's Utility Department at 200 Colcord Avenue.

17.2. **Base Failure Repair**

17.2.1. Base Failure Repair shall utilize Controlled Low Strength Materials (CLSM). The average depth of base failure repair is 8 inches from the bottom of the 4-inch deep saw cut section.

17.2.2. At least 14 calendar days prior to the Contractor beginning work on a street, the contractor shall notify the Engineering Inspector and the Contractor will walk the milled lanes with the Engineering Inspector and decide where Base Failure Repair is needed. The City reserves the right to add or subtract locations to receive base failure repair and the final decision will be the City's. The unit price as bid will be used regardless of the quantity.

17.2.3. Base failure repair work shall be done after milling of corresponding lane(s) of roadway and prior to placement of HMAC. The City's intent of the spot base repairs is to keep the work parallel to the curb and gutter and not to extend across the entire width of the road being repaired. Minimum base repair dimensions shall be 7 feet by 10 feet, with the 10 foot dimension in the direction of travel. The width of the base repair shall be increased as needed to prevent the edge of the repair being located in the wheel path.

17.2.4. Upon completion of each 4-inch base repair lift, Contractor shall complete a density test and submit results to the Engineering Inspector for review and approval. Density test and report costs shall be subsidiary to the Base Failure Repair cost.

17.2.5. Though the City's Public Works Department has no minimum curing time requirement for the CLSM for base repairs, the Contractor shall work diligently to minimize the impact on the public. Base repair work shall be sequenced such that a lane of traffic may remain open at all times. Removal of material below the milled surface will be subsidiary to Base Failure Repair. All lanes shall be open to traffic by the close of the working day.

17.2.6. The Base Failure Repair quantities provided in the drawings and bid items are estimates only. Engineering Inspector and the Contractor will walk the milled lanes and decide where Base Failure Repair is needed. The final decision will be the City's. The unit price as bid will be used regardless of the quantity.

17.3. **Prime Coat for Base Failure Repair and Exposed Base Material**

17.3.1. The Contractor shall utilize a prime coat asphalt applied as a solid and uniform coat over the entire area of the base failure repair to receive new HMAC. Prime coat material shall be AE-P, MC-30, or approved equal. Before the prime coat is applied, the surface shall be cleaned thoroughly to the satisfaction of the EI. The rate of application shall be

0.15 gal/SY of residual asphalt and shall provide complete and uniform coverage of the repair surface. The EI must approve proper coverage and may suspend paving operations until satisfactory prime coat has been applied. This item shall be subsidiary to the unit price for base failure repair.

17.3.2. If base material is exposed, the Contractor shall apply a prime coat of the same material and application rate above within the same day of exposure. Base material shall not be left without a prime coat overnight or if rain is forecasted within 8 hours. This item shall be subsidiary to the mill and overlay work.

17.4. **Bonding Course**

17.4.1. **General** – **General -** For the bonding course, the Contractor shall use Tracking-Resistant Asphalt Interlayer (TRAIL), product type Hot Asphalt) per TxDOT Special Specification 3084).

17.4.2. **TRAIL, product type Hot Asphalt** – Tracking-Resistant Asphalt Interlayer (TRAIL) of the product type Hot Asphalt shall be used per TxDOT Special Specification 3084. The following TRAIL product manufactures are acceptable for use, without exception:

a. UltraFuse – Trackless Hot Applied by Blacklidge
b. Underseal by Jebro
c. eTac-HB by Ergon Asphalt and Emulsions

Before the bonding course is applied the surface shall be cleaned thoroughly to the satisfaction of the Engineering Inspector or designated representative. This product shall be applied at the rate of 0.19 GAL/SY (residual asphalt) to provide complete and uniform coverage of the underlying milled material. The Contractor shall also apply a uniform coat to all contact surfaces including curbs, castings, structures and joints to provide a closely bonded, watertight joint. The Engineering Inspector or designated representative must approve proper coverage and may suspend paving operations until satisfactory underseal membrane has been applied. This material will be measured and paid for in accordance with Special Specification 3084.

17.4.3. **TRAIL, product type Emulsified Asphalt** – *Tracking-Resistant Asphalt Interlayer (TRAIL) of the product type Emulsified Asphalt per TxDOT Special Specification 3084* TRAIL, may be used in place of TRAIL, product type Hot Asphalt for handwork only in narrow, irregular-shaped areas that are inaccessible to the spray bar and small areas with less than 20 feet longitudinal run. The following TRAIL product manufacturers and products are acceptable for use, without exception:

- UltraTack – Trackless Tack (NTSS-1HM) - by Blacklidge
- NTQS-1HH – by Asphalt Products Unlimited
- CBC-1H by Ergon Asphalt and Emulsions
- CATT-TR Emulsified Asphalt by Wright Asphalt Products Co

- BC-1HT by Ergon Asphalt and Emulsions

Before the Emulsified Asphalt bonding course is applied to narrow, irregular-shaped areas that are inaccessible to the spray bar and small areas with less than 20 feet longitudinal run, the surface shall be cleaned thoroughly to satisfaction of the EI or designated representee. This product shall be applied at the rate of 0.10 GAL/SY residual asphalt rate to provide complete and uniform coverage of the underlying milled material. The contractor shall also apply a uniform coat to all vertical and horizontal contact surfaces including curb, castings, structures and joints to provide a closely bonded, watertight joint. The EI or designated representative must approve proper coverage and may suspend paving operations until satisfactory underseal membrane has been applied. This item shall be paid for by the gallon of residual asphalt placed properly.

17.5. **Hot-mix Asphalt Concrete (HMAC)**

17.5.1. The Contractor may not place the overlay course until approval is requested and written approval is received by the Contractor from the Engineer.

17.5.2. HMAC shall be TxDOT Special Specification 3076 Dense-Graded Hot-Mix Asphalt Type D performance graded asphalt 64-22 and shall be applied at a rate of 110 lbs/SY/inch of compacted pavement.

17.5.3. HMAC for level up and installation of curb and gutter shall be TxDOT Special Specification 3076 Dense-Graded Hot-Mix Asphalt Type B performance graded asphalt 64-22.

17.5.4. The Contractor shall provide results from the mix prior to construction.

17.5.5. A City of Waco representative shall inspect the stockpile prior to construction.

18. QUANTITY BASIS

ASPHALT SURFACE AREAS - SY

Item	Description	Roadway & Intersection
310	Prime Coat (AE-P or RC-250)	364
3084	(TRAIL HOT APPLIED)	10,882
3084	(TRAIL EMULSIFIED ASPHALT) (WAND APPLIED)	84
3076	2” Hot-Mix Overlay (D-GR HMA TY-D PG 64-22)	10,882

Basis of Estimate

Item	Description	Rate	SY	Quantity

310	Prime Coat (AE-P or RC-250)	0.15* GAL/SY	364	55 GAL
3084	(TRAIL HOT APPLIED)	0.19 GAL/SY	10,882	2,068 GAL
3084	(TRAIL EMULSIFIED ASPHALT) (WAND APPLIED)	0.10 GAL/SY	84	9 GAL
3076	2" Hot-Mix Overlay (D-GR HMA TY-D PG 64-22)	N/A	10,882	10,882 SY

***** Denotes Residual Asphalt

NOTE: The information above is intended to provide general guidance and as a basis of estimate. Based on weather and surface conditions at the time of application, the engineer may make adjustments to the rates.

19. CURB, GUTTER AND PEDESTRIAN IMPROVEMENTS

19.1. Where asphaltic material is present in gutter pan, Contractor shall mill to gutter pan or to a depth of 1 ½", whichever comes first.

19.2. The Contractor will be responsible for construction of all curb and gutter, and other tie-ins to meet existing grades as shown in the plans and described in all details and notes.

19.3. The Contractor shall work with property owners when working on or near driveways in order to ensure that access is maintained at all times.

19.4. All subgrade, fill, and HMAC work required in the curb and gutter details in the plans shall be subsidiary to the Curb and Gutter bid item.

19.5. The CI and Contractor will walk lanes to receive surface treatment and determine where curb and gutter replacement is required. The final decision will be the City's. The unit price as bid will be used regardless of the quantity.

19.6. Where vegetation is to be established in an area where concrete or asphalt is being removed, Contractor will be paid per square foot for the work. This pay item includes watering and all required care until project acceptance.

19.7. All earthwork (cut and fill) required for the work of this contract, unless otherwise specified, is subsidiary to payment for the sidewalk, retaining wall, etc.

19.8. At all pedestrian ramp locations, the change in elevation between the curb and gutter and beginning of the ramp rise shall not exceed 1/4-inch.

19.9. The maximum cross slope in any direction on the new sidewalk shall be 2% and graded to drain with a minimum slope of 0.5%, unless otherwise noted on plans.

19.10. The maximum slope in any direction across a landing shall be 2%. Landings shall be graded to drain with a minimum slope of 0.5%, unless otherwise noted on plans.

19.11. The Contractor may scale the length of ramps, dimensions of landings, etc. from the plans for estimating purposes, but these lengths and dimensions are approximate. The Contractor will be responsible for construction of all ramps and landings, sidewalk, vegetated areas, driveways, and other tie-ins to comply with maximum and minimum slopes and widths and to meet existing grades as shown in the plans and described in all details and notes.

20. PEDESTRIAN RAMPS

20.1. Each ramp will be bid as a unit price item. The unit price bid will be full compensation for materials, tools, labor and incidentals to construct the ramp, upper and lower landings, detectable warning surface, ramp and landing, curbs, and flares as shown on the plans.

21. PAVEMENT MARKINGS

21.1. Place temporary traffic markings that meet the Texas Manual on Uniform Traffic Control Devices on all streets currently marked.

21.2. Placement of permanent markings on all streets shall be done as existing, unless indicated in plans. Markings shall meet the requirements of TxDOT Item 666, "Retroreflectorized Pavement Markings." This shall include any non-overlaid concrete sections within the street limits.

21.3. Type 1 markings must meet the following minimum retro-reflectivity values for edge line markings, centerline or no passing barrier-line, and lane lines when measured any time after 3 days, but not later than 10 days after application:

21.3.1. White markings: 250 millicandelas per square meter per lux (mcd/m2/lx)

21.3.2. Yellow markings: 175 mcd/m2/lx

21.4. Contractor shall complete the retroreflectivity testing in accordance with TxDOT Item 666 and shall provide written report with test results confirming conformance the required retroreflectivity values.

21.5. Placement of Raised Pavement Markers shall be done in accordance with TxDOT Item 672, "Raised Pavement Markers."

21.6. The Contactor will supply and install the blue raised reflective markers utilized for all fire hydrants within the work limits. This is included as a line item in the Bid Proposal.

21.7. Removal of raised pavement markers as work progresses shall be subsidiary to the various bid items.

21.8. Two-way left-turn use arrow pavement markings are to be placed, with 16 feet typical spacing, at or just downstream from the beginning of the two-way left-turn lane, as indicated in plans, per the Texas Manual on Uniform Traffic Control Devices, Section 3B.20.

21.9. Pedestrian Crossings are to have 10 feet long by 2 feet wide white bars with 2 feet spacing.

21.10. The Contractor shall open the pavement to traffic each night.

21.11. Reflective pavement markings of the break type shall be measured and paid for by the linear feet of pavement marking applied. Contractor shall note that the length and spacing of the yellow and white break lines shown on the plans may not be to scale. The length of the lines shall be 10' and the length of the spacing shall be 30'.

21.12. Contractor shall arrange construction operations to prevent the hauling of materials through the completed pavement sections unless otherwise approved by the EI or Director of Public Works or her or his designee.

ATTACHMENT "A"
(EXAMPLE)

ABC PAVING COMPANY LOGO

Starting

ABC PAVING COMPANY is working for the City of Waco on a street resurfacing project. Your street will be resurfaced in order to improve its appearance and to lengthen its life. With your cooperation it will be possible to get this work completed quickly with a minimum of inconvenience to all concerned.

It will be necessary to close all or part of your street beginning at 7:00 AM. Other streets in your neighborhood will be resurfaced the same day. Please do not have any parked cars on the street after 7:00 AM. We ask that you do not drive on the new surfacing until the crew has opened the street. Fresh surfacing can stick to your car's tires and paint. The "CURED" surface will not stick to your car. The surface is "CURED" when the crew removes the barricades or cones.

Under normal conditions, your street will be open to traffic in 4 to 6 hours. However, the new surface may be "TENDER" for a few days, so "TAKE IT EASY."

In the event of rain or equipment problems, the work will be rescheduled for the next business day.

Thank you for your cooperation in helping the City provide you with a better street surface for your daily use.

PLEASE NOTE:
Emergency Response Vehicles will always have the right of way. If you have a specific medical access need or require contractor access, please contact Albert Snerdly at 413.912.7437 who can directly assist you in coordinating access. He will be on site for ABC PAVING COMPANY while work is occurring.

PRICING INFORMATION

NOTE: Depending on unit prices, requirements and approved budgeted funds, quantities may be reduced or increased during the contract period.

THE CONTRACTOR IS RESPONSIBLE FOR ALL MATH, CALCULATIONS, AND FORMULAS

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
BASE BID					
GENERAL CONDITIONS - BASE BID					
1	Mobilization, Permits and Project Incidentals (10% Maximum of Total Bid)	1	LS		$ -
2	Bonding and Insurance (2.5% Maximum of Total Bid)	1	LS		$ -
3	Stormwater Pollution & Prevention Plan	1	LS		$ -
4	Stormwater Pollution & Prevention Plan Implementation	1	LS		$ -
5	Testing & TV Inspection of Improvements	1	LS		$ -
6	Coordination of Utility Installation with Private Utility Companies	1	LS		$ -
7	Trench Safety Plan	1	LS		$ -
8	Confined Space Plan & Implementation	1	LS		$ -
9	Traffic Control Plan	1	LS		$ -
10	Traffic Control Plan Implementation	1	LS		$ -
11	Bypass Pumping Plan and Implementation, including all necessary pumps, plugs, electrical, controls, generators, piping, installation & removal of appurtenances and all material, labor, equipment, and incidentals complete and in place.	1	LS		$ -
	SUBTOTAL - GENERAL CONDITIONS				**$ -**
WATER IMPROVEMENTS - BASE BID					
12	Grout Fill & Cap Existing 15" Water Line to be Abandoned, including all necessary installation of caps on existing water line, trust blocking, dewatering of existing line, excavation, gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	1444	LF		$ -
13	Grout Fill & Cap Existing 8" Water Line to be Abandoned, including all necessary installation of caps on existing water line, trust blocking, dewatering of existing line, excavation, gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	86	EA		$ -
14	Grout Fill & Cap Existing 6" Water Line to be Abandoned, including all necessary installation of caps on existing water line, trust blocking, dewatering of existing line, excavation, gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	405	LF		$ -
15	Removal of Existing Water Line (All Sizes ≤12")(All Depths) and Disposal Offsite, including any necessary traffic control implementation, excavation, dewatering, removal, installation of gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	245	LF		$ -
16	Removal of Existing Water Line (All Sizes >12")(All Depths) and Disposal Offsite, including any necessary traffic control implementation, excavation, dewatering, removal, installation of gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	590	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
17	Existing Fire Hydrant to be Removed and Delivered to the City of Waco, including necessary excavation, dewatering, transportation and delivery to City Facilities, installation of backfill, installation of solid block sod, and all material, labor, equipment, and incidentals complete and in place	5	EA		$ -
18	Existing Gate Valve (All Sizes) to be Removed and Delivered to the City of Waco, including necessary excavation, dewatering, plugging of existing water lines, disposal of valve box, placement of low strength concrete in excavation, transportation and delivery to City Facilities, and all material, labor, equipment, and incidentals complete and in place	17	EA		$ -
19	Connection to existing 15" water line, including necessary pothole investigation, special fittings, reducers, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	4	EA		$ -
20	Connection to existing 12" water line, including necessary pothole investigation, special fittings, reducers, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
21	Connection to existing 8" water line, including necessary pothole investigation, special fittings, reducers, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	3	EA		$ -
22	Connection to existing 6" water line, including necessary pothole investigation, special fittings, reducers, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	8	EA		$ -
23	12" C-900 PVC Water Line (All Depths) (Street Trench) including necessary excavation, embedment, tracer wire, marking tape, installation of utility, and gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	2274	LF		$ -
24	8" C-900 PVC Water Line (All Depths) (Street Trench) including necessary excavation, embedment, tracer wire, marking tape, installation of utility, and gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1655	LF		$ -
25	6" C-900 PVC Water Line (All Depths) (Street Trench) including necessary excavation, embedment, tracer wire, marking tape, installation of utility, and gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	29	LF		$ -
26	3" Polyethylene Temporary Water Line, Including service tap to existing water lines, necessary fittings, installation of 3" water line, connection to existing services, HMAC installation in gutter, and removal of temporary water line upon completion and all material, labor, equipment, and incidentals complete and in place	740	LF		$ -
27	2" Polyethylene Temporary Water Line, Including service tap to existing water lines, necessary fittings, installation of 3" water line, connection to existing services, HMAC installation in gutter, and removal of temporary water line upon completion and all material, labor, equipment, and incidentals complete and in place	519	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
28	1" Polyethylene Temporary Water Line, Including service tap to existing water lines, necessary fittings, installation of 3" water line, connection to existing services, HMAC installation in gutter, and removal of temporary water line upon completion and all material, labor, equipment, and incidentals complete and in place	238	LF		$ -
29	12" X 8" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	8	EA		$ -
30	12" X 6" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
31	8" X 8" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	5	EA		$ -
32	8" X 6" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	5	EA		$ -
33	6" X 6" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
34	12" - 45° DIP Bend, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	30	EA		$ -
35	12" - 11/4° DIP Bend, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	6	EA		$ -
36	8" - 45° DIP Bend, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	42	EA		$ -
37	6" - 45° DIP Bend, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	9	EA		$ -
38	8" X 6" DIP Reducer, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	5	EA		$ -
39	15" DIP Cap, including necessary excavation, connection to water line, thrust blocking, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
40	12" DIP Cap, including necessary excavation, connection to water line, thrust blocking, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
41	8" DIP Cap, including necessary excavation, connection to water line, thrust blocking, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	3	EA		$ -
42	6" DIP Cap, including necessary excavation, connection to water line, thrust blocking, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
43	Unreinforced Concrete Cap, including necessary excavation, placement of material, and all material, labor, equipment, and incidentals complete and in place	120	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
44	12" Resilient Seat Gate Valve, including necessary excavation, connection to water line, thrust blocking, tracer wire, thrust blocking, valve box and lid, and all material, labor, equipment, and incidentals complete and in place	14	EA		$ -
45	8" Resilient Seat Gate Valve, including necessary excavation, connection to water line, thrust blocking, tracer wire, thrust blocking, valve box and lid, and all material, labor, equipment, and incidentals complete and in place	16	EA		$ -
46	Fire Hydrant Assembly, including necessary excavation, embedment, 6" DIP Fire Line, 6" Resilient Seat Gate Valve, valve box and lid, Gradlock, gravel trench backfill, and all material labor, equipment and incidentals complete and in place	6	EA		$ -
47	1" Irrigation Water Service (Short) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	1	EA		$ -
48	1" Irrigation Water Service (Long) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	1	EA		$ -
49	1" Residential Water Service (Short) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	7	EA		$ -
50	1" Residential Water Service (Long) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	4	EA		$ -
51	1" Residential Water Service (Short) (No Meter), including necessary excavation, embedment, gravel trench backfill, surface replacement, installation of meter box, and all material, labor, equipment and incidentals complete and in place	12	EA		$ -
52	1" Residential Water Service (Long) (No Meter), including necessary excavation, embedment, gravel trench backfill, surface replacement, installation of meter box, and all material, labor, equipment and incidentals complete and in place	6	EA		$ -
53	2" Commercial Water Service (Short) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	8	EA		$ -
54	2" Commercial Water Service (Long) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	5	EA		$ -
55	2" Commercial Water Service (Long) (No Meter), including necessary excavation, embedment, gravel trench backfill, surface replacement, installation of meter box, and all material, labor, equipment and incidentals complete and in place	1	EA		$ -
56	Reconnection of Existing 2" Water Services, including necessary excavation, embedment, service tap, connection to existing service and all material, labor, equipment and incidentals complete and in place	1	EA		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
57	Removal and Replacement of existing water meter box, including providing water meter box, removal and disposal of existing water mater box, installation, installation of solid block sod in all disturbed areas, watering, and all material, labor, equipment and incidentals complete and in place	30	EA		$ -
58	1800 Sanger Ave (Greater Love IME Church) Service Reconnection Including necessary investigation to determine existing services location, excavation, embedment, 2" service tap, 150 LF of 2" service line, 1 1/2" meter, meter box, 1 1/2" backflow, necessary material to perform required transitions, gravel trench backfill, embedment, backfill, all required fittings to provide connection to existing services at buildings & all material, labor, equipment, and Incidentals complete and in place.	1	LS		$ -
58A	1800 Sanger Ave (Greater Love IME Church) Surface Repairs including Class "B" surface replacement, curb and gutter replacement, sidewalk replacement, solid block sod, & all material, labor, equipment, and Incidentals complete and in place.	1	LS		$ -
59	Trench Safety Implementation, including all necessary material, labor, equipment, training and incidentals complete and in place	4011	LF		$ -
	SUBTOTAL - WATER IMPROVEMENTS				**$ -**
WASTEWATER IMPROVEMENTS - BASE BID					
60	Grout Fill & Cap Existing 10" Wastewater Line to be Abandoned, including all necessary installation of caps on existing wastewater line, trust blocking, excavation, gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	424	LF		$ -
61	Grout Fill & Cap Existing 8" Wastewater Line to be Abandoned, including all necessary installation of caps on existing wastewater line, trust blocking, excavation, gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	296	LF		$ -
62	Grout Fill & Cap Existing 6" Wastewater Line to be Abandoned, including all necessary installation of caps on existing wastewater line, trust blocking, excavation, gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	38	LF		$ -
63	Removal of Existing 10" Wastewater Line (All Depths) and Disposal Offsite, including any necessary traffic control implementation, excavation, removal, installation of gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	160	LF		$ -
64	Removal of Existing 8" Wastewater Line (All Depths) and Disposal Offsite, including any necessary traffic control implementation, excavation, removal, installation of gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	80	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
65	Existing Wastewater Manhole (All Sizes) (All Depths) to be Removed and Disposed Offsite, including necessary excavation, plugging of existing wastewater lines, removal, transportation and disposal, placement of select fill in excavated areas, necessary traffic control implementation, surface replacement and all material, labor, equipment and incidentals, complete and in place	7	EA		$ -
66	Connection to existing 10" wastewater line, including necessary pothole investigation, embedment, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
67	Connection to existing 8" wastewater line, including necessary pothole investigation, embedment, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	7	EA		$ -
68	Connection to existing 6" wastewater line, including necessary pothole investigation, embedment, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	2	LF		$ -
69	10" SDR-26 PVC ASTM-3034 Wastewater Line (5'-10' Depth) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	125	LF		$ -
70	10" SDR-26 PVC ASTM-3034 Wastewater Line (10'-15' Depth) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	462	LF		$ -
71	8" SDR-26 PVC ASTM-3034 Wastewater Line (5' - 10' Depth) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	98	LF		$ -
72	8" SDR-26 PVC ASTM-2241 Pressure Rated Wastewater Line (5' - 10' Depths) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	739	LF		$ -
73	8" SDR-26 PVC ASTM-2241 Pressure Rated Wastewater Line (10' - 15' Depths) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	248	LF		$ -
74	6" SDR-26 PVC ASTM-3034 Wastewater Line (5'-10' Depth) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	10	LF		$ -
75	8" PVC Plug, including necessary excavation, connection to wastewater line, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
76	6" PVC Plug, including necessary excavation, connection to wastewater line, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
77	5' Diameter Manhole (10' - 15' Depth) (Street Trench) with standard ring and cover including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	4	EA		$ -
78	5' Diameter Manhole (10' - 15' Depths) (Street Trench) with standard ring and cover and 8" PVC external drop fixture, including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	2	EA		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
79	5' Diameter Manhole (10'-15' Depth) (Street Trench) with standard ring and cover and 6" PVC external drop fixture, including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	1	EA		$ -
80	4' Diameter Manhole (5'-10' Depth) (Street Trench) with standard ring and cover including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	3	EA		$ -
81	4' Diameter Manhole (10' - 15' Depths) (Street Trench) with standard ring and cover and 8" PVC external drop fixture, including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	1	EA		$ -
82	5' Diameter Manhole (10' - 15' Depths) (Street Trench) with standard ring and cover and 2 - 6" PVC external drop fixture, including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	1	EA		$ -
83	6" SCH-40 PVC Commercial Wastewater Service with 2-Way Cleanout and connected to private service, including all necessary excavation, embedment, gravel trench backfill, connection to existing wastewater service, surface replacement, solid block sod and all material, labor, equipment and incidentals complete and in place	3	EA		$ -
84	4" SCH-40 PVC Residential Wastewater Service with 2-Way Cleanout and not connected to private service, including all necessary excavation, embedment, gravel trench backfill, surface replacement, solid block sod and all material, labor, equipment and incidentals complete and in place	13	EA		$ -
85	Unreinforced Concrete Cap, including necessary excavation, placement of material, and all material, labor, equipment, and incidentals complete and in place	91	LF		$ -
86	Trench Safety Implementation, including all necessary material, labor, equipment, training and incidentals complete and in place	1679	EA		$ -
87	Bypass Pumping, As Required, Including All Necessary Electrical, Pumping, Controls, and material, labor, equipment, and incidentals complete and in place	1	LS		$ -
	SUBTOTAL - WASTEWATER IMPROVEMENTS				**$ -**
STREET IMPROVEMENTS - BASE BID					
88	Class 'B' Surface Replacement, including all necessary preparation, installation of concrete base, bonding course, placement of HMAC (Match existing HMAC thickness), cleanup and all material, labor, equipment and incidentals complete and in place	4703	LF		$ -
89	Provide 2" depth HMAC Milling and disposal offsite, including all HAMC sawcut, sweeping, dust control, installation of temporary traffic striping, hauling and disposal of millings, and all material, labor, equipment and incidentals complete and in place	890	SY		$ -
90	2" HMAC Type "D" including application of spray applied underseal or TRAIL, including all surface preparation, installation, necessary temporary traffic striping, and all material, labor, equipment and incidentals complete and in place	890	SY		$ -
91	Temporary Street Replacement, including installation of prime coat on gravel trench backfill, installation of 2" HMAC Type"C", installation of temporary striping as required, saw cutting and removal of material upon acceptance of utility, disposal of removed material, and all material, labor, equipment and incidentals complete and in place	5617	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
92	Adjustment of Existing Valve Box and Lid to final grade and installation of reinforced concrete diamond, including all necessary saw cutting, adjustment and all material, labor, equipment and incidentals complete and in place	20	EA		$ -
93	Adjustment of Wastewater Manhole Ring and Cover to final grade and installation of reinforce concrete diamond, including all necessary saw cutting, adjustment and all material, labor, equipment and incidentals complete and in place	7	EA		$ -
94	Existing Concrete Curb and Gutter to Be Removed and Replaced, including necessary saw cutting, removal transportation and disposal, forming, reinforcement, dowels, placement of concrete, curing, and all material, labor, equipment and incidentals complete and in place	271	LF		$ -
95	Solid Block Sod, including preparation of subgrade, installation of topsoil and fertilizer, installation of sod, rolling, watering and all material, labor, equipment and incidentals complete and in place	50	SF		$ -
96	Reflective Pavement Marking Type 1, Color: White, Width: 4", broken, 100 mil., including all necessary surface preparation, removal of temporary striping, and all material, labor, equipment and incidentals complete and in place	100	LF		$ -
97	Site Restoration of 1801 Sanger Ave (Calvary Chapel Waco) Including Replacement of Curb & Gutter, Reinforced Concrete Sidewalk, Reinforced Concrete Retaining Wall, Pavement & Installation of Solid Block and all material, labor, equipment, and incidentals complete and in place	1	LS		$ -
	SUBTOTAL - STREET IMPROVEMENTS				**$ -**
	TOTAL BASE BID AMOUNT				**$ -**

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
DEDUCT ALTERNATE 1					
GENERAL CONDITIONS - DEDUCT ALTERNATE 1					
DA1	Reduction in Mobilization, Permits & Project Incidentals	(1)	LS		$ -
DA2	Reduction in Bonding & Insurance	(1)	LS		$ -
DA3	Reduction in Stormwater Pollution & Prevention Plan Implementation	(1)	LS		$ -
DA4	Reduction in Testing & TV Inspection of Improvements	(1)	LS		$ -
DA5	Reduction in Confined Space Plan & Implementation	(1)	LS		$ -
DA6	Reduction in traffic control plan implementation	(1)	LS		$ -
DA7	Reduction in bypass pumping plan & implementation	(1)	LS		$ -
	SUBTOTAL - WATER IMPROVEMENTS				$ -
WATER IMPROVEMENTS - DEDUCT ALTERNATE 1					
DA8	Removal of Existing Water Line (All Sizes ≤12")(All Depths) and Disposal Offsite, including any necessary traffic control implementation, excavation, dewatering, removal, installation of gravel trench backfill, surface replacement, and all material, labor, equipment, and incidentals complete and in place	(245)	LF		$ -
DA9	Existing Fire Hydrant to be Removed and Delivered to the City of Waco, including necessary excavation, dewatering, transportation and delivery to City Facilities, installation of backfill, installation of solid block sod, and all material, labor, equipment, and incidentals complete and in place	(1)	EA		$ -
DA10	Existing Gate Valve (All Sizes) to be Removed and Delivered to the City of Waco, including necessary excavation, dewatering, plugging of existing water lines, disposal of valve box, placement of low strength concrete in excavation, transportation and delivery to City Facilities, and all material, labor, equipment, and incidentals complete and in place	(2)	EA		$ -
DA11	Connection to existing 8" water line, including necessary pothole investigation, special fittings, reducers, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(3)	EA		$ -
DA12	Connection to existing 6" water line, including necessary pothole investigation, special fittings, reducers, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
DA13	8" C-900 PVC Water Line (All Depths) (Street Trench) including necessary excavation, embedment, tracer wire, marking tape, installation of utility, and gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(425)	LF		$ -
DA14	6" C-900 PVC Water Line (All Depths) (Street Trench) including necessary excavation, embedment, tracer wire, marking tape, installation of utility, and gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(411)	LF		$ -
DA15	3" Polyethylene Temporary Water Line, Including service tap to existing water lines, necessary fittings, installation of 3" water line, connection to existing services, HMAC installation in gutter, and removal of temporary water line upon completion and all material, labor, equipment, and incidentals complete and in place	(347)	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
DA16	2" Polyethylene Temporary Water Line, Including service tap to existing water lines, necessary fittings, installation of 3" water line, connection to existing services, HMAC installation in gutter, and removal of temporary water line upon completion and all material, labor, equipment, and incidentals complete and in place	(80)	LF		$ -
DA17	8" X 8" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(3)	EA		$ -
DA18	8" X 6" DIP Tee, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(1)	EA		$ -
DA19	8" - 45° DIP Bend, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(8)	EA		$ -
DA20	6" - 45° DIP Bend, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(4)	EA		$ -
DA21	8" X 6" DIP Reducer, including necessary excavation, connection to water line, spool pieces, thrust blocking, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	1	EA		$ -
DA22	8" DIP Cap, including necessary excavation, connection to water line, thrust blocking, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	(3)	EA		$ -
DA23	Unreinforced Concrete Cap, including necessary excavation, placement of material, and all material, labor, equipment, and incidentals complete and in place	(35)	LF		$ -
DA24	8" Resilient Seat Gate Valve, including necessary excavation, connection to water line, thrust blocking, tracer wire, thrust blocking, valve box and lid, and all material, labor, equipment, and incidentals complete and in place	(5)	EA		$ -
DA25	Fire Hydrant Assembly, including necessary excavation, embedment, 6" DIP Fire Line, 6" Resilient Seat Gate Valve, valve box and lid, Gradlock, gravel trench backfill, and all material labor, equipment and incidentals complete and in place	(1)	EA		$ -
DA26	1" Residential Water Service (Short) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	(3)	EA		$ -
DA27	1" Residential Water Service (Short) (No Meter), including necessary excavation, embedment, gravel trench backfill, surface replacement, installation of meter box, and all material, labor, equipment and incidentals complete and in place	(7)	EA		$ -
DA28	1" Residential Water Service (Long) (No Meter), including necessary excavation, embedment, gravel trench backfill, surface replacement, installation of meter box, and all material, labor, equipment and incidentals complete and in place	(6)	EA		$ -
DA29	2" Commercial Water Service (Short) and Connection to Existing Meter, including necessary excavation, embedment, gravel trench backfill, surface replacement, connection to existing meter and all material, labor, equipment and incidentals complete and in place	(1)	EA		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
DA30	Reconnection of Existing 2" Water Services, including necessary excavation, embedment, service tap, connection to existing service and all material, labor, equipment and incidentals complete and in place	(1)	EA		$ -
DA31	Removal and Replacement of existing water meter box, including providing water meter box, removal and disposal of existing water mater box, installation, installation of solid block sod in all disturbed areas, watering, and all material, labor, equipment and incidentals complete and in place	(4)	EA		$ -
DA32	Trench Safety Implementation, including all necessary material, labor, equipment, training and incidentals complete and in place	(816)	LF		$ -
DA33	8" Blind Flange, including necessary excavation, connection to water line, thrust blocking, gravel trench backfill, and all material, labor, equipment, and incidentals complete and in place	2	EA		$ -
	SUBTOTAL - WATER IMPROVEMENTS				$ -
WASTEWATER IMPROVEMENTS - DEDUCT ALTERNATE 1					
DA34	Existing Wastewater Manhole (All Sizes) (All Depths) to be Removed and Disposed Offsite, including necessary excavation, plugging of existing wastewater lines, removal, transportation and disposal, placement of select fill in excavated areas, necessary traffic control implementation, surface replacement and all material, labor, equipment and incidentals, complete and in place	(3)	EA		$ -
DA35	Connection to existing 8" wastewater line, including necessary pothole investigation, embedment, gravel trench backfill and all material, labor, equipment, and incidentals complete and in place	(3)	EA		$ -
DA36	8" SDR-26 PVC ASTM-2241 Pressure Rated Wastewater Line (5' - 10' Depths) (Street Trench) including excavation, surveying, embedment, placement, tracer wire, gravel trench backfill and all material, labor, equipment and incidentals complete and in place	(433)	LF		$ -
DA37	5' Diameter Manhole (10' - 15' Depths) (Street Trench) with standard ring and cover and 8" PVC external drop fixture, including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	(1)	EA		$ -
DA38	4' Diameter Manhole (5'-10' Depth) (Street Trench) with standard ring and cover including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	(2)	EA		$ -
DA39	5' Diameter Manhole (10' - 15' Depths) (Street Trench) with standard ring and cover and 2 - 6" PVC external drop fixture, including all excavation, bedding, manhole coatings, installation, backfill, and all material, labor, equipment and incidentals, complete and in place	(1)	EA		$ -
DA40	6" SCH-40 PVC Commercial Wastewater Service with 2-Way Cleanout and connected to private service, including all necessary excavation, embedment, gravel trench backfill, connection to existing wastewater service, surface replacement, solid block sod and all material, labor, equipment and incidentals complete and in place	(3)	EA		$ -
DA41	4" SCH-40 PVC Residential Wastewater Service with 2-Way Cleanout and not connected to private service, including all necessary excavation, embedment, gravel trench backfill, surface replacement, solid block sod and all material, labor, equipment and incidentals complete and in place	(13)	EA		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
DA42	Unreinforced Concrete Cap, including necessary excavation, placement of material, and all material, labor, equipment, and incidentals complete and in place	(12)	LF		$ -
DA43	Trench Safety Implementation, including all necessary material, labor, equipment, training and incidentals complete and in place	(433)	EA		$ -
	SUBTOTAL - WASTEWATER IMPROVEMENTS				$ -
STREET IMPROVEMENTS - DEDUCT ALTERNATE 1					
DA44	Class 'B' Surface Replacement, including all necessary preparation, installation of concrete base, bonding course, placement of HMAC (Match existing HMAC thickness), cleanup and all material, labor, equipment and incidentals complete and in place	(405)	LF		$ -
DA45	Provide 2" depth HMAC Milling and disposal offsite, including all HAMC sawcut, sweeping, dust control, installation of temporary traffic striping, hauling and disposal of millings, and all material, labor, equipment and incidentals complete and in place	(890)	SY		$ -
DA46	2" HMAC Type "D" including application of spray applied underseal or TRAIL, including all surface preparation, installation, necessary temporary traffic striping, and all material, labor, equipment and incidentals complete and in place	(890)	SY		$ -
DA47	Temporary Street Replacement, including installation of prime coat on gravel trench backfill, installation of 2" HMAC Type"C", installation of temporary striping as required, saw cutting and removal of material upon acceptance of utility, disposal of removed material, and all material, labor, equipment and incidentals complete and in place	(1297)	LF		$ -
DA48	Adjustment of Wastewater Manhole Ring and Cover to final grade and installation of reinforce concrete diamond, including all necessary saw cutting, adjustment and all material, labor, equipment and incidentals complete and in place	(5)	EA		$ -
DA49	Existing Concrete Curb and Gutter to Be Removed and Replaced, including necessary saw cutting, removal transportation and disposal, forming, reinforcement, dowels, placement of concrete, curing, and all material, labor, equipment and incidentals complete and in place	(136)	LF		$ -
DA50	Solid Block Sod, including preparation of subgrade, installation of topsoil and fertilizer, installation of sod, rolling, watering and all material, labor, equipment and incidentals complete and in place	(50)	SF		$ -
DA51	REFL PAV MRK TY 1(W) 4" (BRK) (100MIL), including all necessary surface preparation, removal of temporary striping, and all material, labor, equipment and incidentals complete and in place	(100)	LF		$ -
	SUBTOTAL - STREET IMPROVEMENTS				**$ -**
	TOTAL DEDUCT ALTERNATE 1 AMOUNT				**$ -**

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
ADDITIVE ALTERNATE 1 - 2021 MILL AND OVERLAY PH 4: 18th STREET: BOSQUE TO WACO DRIVE (ADDENDUM 1)					
GENERAL - ADDITIVE ALTERNATE 1					
AA1	Mobilization, Bonding, and Insurance	100%	LS		$ -
AA2	Stormwater Pollution Prevention Plan	100%	LS		$ -
AA3	Stormwater Pollution Prevention Plan Implementation	100%	LS		$ -
AA4	Traffic Control Plan	100%	LS		$ -
AA5	Traffic Control Plan Implementation	100%	LS		$ -
AA6	Coordination of Utility installations with Private Utility Companies	100%	LS		$ -
AA7	Provide Red-Line As-Builts of the Project	100%	LS		$ -
AA8	Provide Video of 18th Street, Pre-Project & Post-Project	100%	LS		$ -
	SUBTOTAL - GENERAL				$ -
DEMOLITION - ADDITIVE ALTERNATE 1					
AA9	Preparation of the Right-of-Way including any Necessary Tree Removal, Tree Trimming or any other Material necessary for Clearing, Removal and Disposal, Complete for	23.50	STA		$ -
AA10	Remove & Dispose of Reinforced Concrete Curb & Gutter or Reinforced Concrete Curb or Gutter including saw cut, Complete for	145.00	LF		$ -
AA11	Remove & Dispose of Reinforced Concrete Sidewalk and/or Concrete Flat Work and/or Curbs at Street Radii where Pedestrian Ramps are to be installed including saw cut, Complete for	567.00	SY		$ -
AA12	Remove & Dispose of Reinforced Concrete Driveways/Approaches including saw cut, Complete for	160.00	SY		$ -
AA13	Remove and Retain Directional, Informational or Street Signs with poles for reinstallation, including all materials, labor, equipment & incidentals, Complete for	30.00	EA		$ -
AA14	Provide 2-inch Depth HMAC/Base Milling and Disposal, including all HMAC saw cut, labor, equipment and incidentals, Complete for	10,882.00	SY		$ -
AA15	Provide 1-inch Extra Depth HMAC/Base Milling and Disposal, including all HMAC saw cut labor, equipment and incidentals, Complete for	4,000.00	SY		$ -
	SUBTOTAL - DEMOLITION				$ -
ROADWAY IMPROVEMENTS - ADDITIVE ALTERNATE 1					
AA16	2-inch Hot Mix Asphaltic Pavement Course Type “D” including application of spray applied underseal or TRAIL including all material, labor, saw cut, equipment and incidentals, Complete and in Place for	10,882.0	SY		$ -
AA17	Base Failure Repair, including excavation of unsuitable base, subgrade preparation, placement of 10” 2000 PSI Concrete and all materials, labor, saw cut, equipment and incidentals, Complete and in Place for	364.0	SY		$ -
AA18	Provide and Install Extra Depth 2000 PSI Concrete and all materials, labor, equipment and incidentals, Complete and in Place for	200.0	CY		$ -
AA19	Provide and Install HMAC "Type D", Level up course of varying depths for subgrade before placing HMAC overlays as specified including all material, labor, equipment, rolling and incidentals Complete and in Place for	250.0	TN		$ -
AA20	Provide and Install HMAC "Type D" patch for Tie-ins to various types of pavement structures and for connections of new curb & gutter to existing longitudinal pavement structure including all material, labor, equipment, rolling and incidental, Complete and in Place for	200.0	TN		$ -
AA21	Standard Curb & Gutter, including reinforcement, connections to existing curb & gutter and all materials, labor saw cut, equipment and incidentals, Complete and in Place for	145.0	LF		$ -

Item No.	Description	Unit	Estimate Qty	Bid Unit Price	Bid Price
AA22	6-inch Concrete Flatwork, including reinforcement, any necessary excavation & subgrade preparation, connection to existing sidewalk, other pavement and all material, labor, saw cut, equipment and incidentals. This item includes 6-inch concrete fillets to be constructed, Complete and in Place for	264.0	SY		$ -
AA23	Install 5-inch Depth Concrete Sidewalks with Construction Joints, Tooled Joints, Connections to Curb & Gutter and all materials, labor, equipment and incidentals, Complete and in Place for	584.0	SY		$ -
AA24	Reinstallation of Existing Directional, Informational and Street Signs, Complete and in Place for	30.0	EA		$ -
AA25	Adjust Wastewater and Stormwater Manhole Covers to Finished Grade including all materials, labor, concrete collar and all equipment, Complete and in Place for	15.0	EA		$ -
AA26	Adjust Water Valve Boxes to Finished Grade including all materials, labor, concrete collar and all equipment, Complete and in Place for	12.0	EA		$ -
AA27	Provide and Install St. Augustine (Raleigh) Grass Sod including all material, labor, equipment, watering and incidental items, Complete and In Place for	145.0	SY		$ -
	SUBTOTAL - ROADWAY IMPROVEMENTS				$ -
DRIVEWAY REPLACEMENTS - ADDITIVE ALTERNATE 1					
AA28	Install 6-inch Concrete Drive Approach , including reinforcement, any necessary excavation & subgrade preparation, connection to existing concrete paving or other pavement, labor, saw cut, equipment and incidentals, Complete and in Place for	160.0	SY		$ -
	SUBTOTAL - DRIVEWAY REPLACEMENTS				$ -
PEDESTRIAN RAMPS - ADDITIVE ALTERNATE 1					
AA29	Provide & install Pedestrian Ramp Type 1 with detectable surface & base, 5-inch depth concrete, concrete curbs, reinforcement including necessary excavation & subgrade preparation and all materials, labor, saw cut, equipment and incidentals, Complete and in Place for	2.0	EA		$ -
AA30	Provide & install Pedestrian Ramp Type 7 with detectable surface & base, 5-inch depth concrete, concrete curbs, reinforcement including necessary excavation & subgrade preparation and all materials, labor, saw cut, equipment and incidentals, Complete and in Place for	26.0	EA		$ -
	SUBTOTAL - PEDESTRIAN RAMPS				$ -
STRIPING / PAVEMENT MARKINGS - ADDITIVE ALTERNATE 1					
AA31	Reflective Pavement Marking Type 1, Color: White, Width: 4", Solid, 100 Mil including all pavement preparation and all material, labor, equipment and incidentals, Complete and in Place for	430.0	LF		$ -
AA32	Reflective Pavement Marking Type 1, Color: White, Width: 4", Broken, 100 Mil including all pavement preparation and all material, labor, equipment and incidentals, Complete and in Place for	1,600.0	LF		$ -
AA33	Reflective Pavement Marking Type 1, Color: White, Width 24", Solid, 100 Mil (Stop Bar) including all pavement preparation and all material, labor, equipment and incidentals, Complete and in Place for	65.0	LF		$ -
AA34	Reflective Pavement Marking Type 1, Color: White, Width 24", Solid, 100 Mil (Crosswalk) including all pavement preparation and all material, labor, equipment and incidentals, Complete and in Place for	120.0	LF		$ -
AA35	Raised White Reflective Pavement Marker, Type I-C, Complete and in Place for	71.0	EA		$ -
	SUBTOTAL - STRIPING / PAVEMENT MARKINGS				**$ -**
	TOTAL ADDITIVE ALTERNATE 1 AMOUNT				**$ -**

BID PACKAGE SUMMARY

Bid Package 1: Base Bid = _____

Bid Package 2: Base Bid + Deduct Alternate #1 = _____

Bid Package 3: Base Bid + Additive Alternate #1 = _____

Bid Package 4: Base Bid + Deduct Alternate #1 + Additive Alternate #1 = _____

The General Contractor must self perform a minimum of 51% of the work in the awarded contract.

I WILL USE THE FOLLOWING SUBCONTRACTORS FOR THIS WORK:

SUBCONTRACTOR	TYPE OF WORK

FIRM NAME: _____

BY: _____

TITLE: _____

ADDRESS: _____

Contractor acknowledges and agrees that the official TOTAL AMOUNT OF BID is determined by multiplying the unit bid prices by the respective estimated quantities shown in this bid proposal and then totaling all of the extended amounts. Extended amounts<u>SHOULD NOT</u> be rounded up or down. All dollar amounts should be either written legibly or typed. Any mistakes should be rewritten and initialed by the Contractor.

1.8. **Above Ground Utilities** - The Contractor is responsible for coordinating with the appropriate utilities owning any poles or signs that may be impacted during the work of this contract. Bracing and protective measures per the requirements of the signs' owners shall be provided by the Contractor and shall be considered subsidiary to the work.

1.9. If the Contractor chooses to utilize a private lot(s) as a staging area, the Contractor shall provide the City written permission from the property owner(s). The project shall not be finalized until the Contractor provides a written letter from the property owner(s) saying that the property owner is satisfied with the said lot(s) once the Contractor demobilizes.

1.10. Material on hand shall not be considered for payment.

1.11. All earthwork (cut and fill) required for the work of this contract, unless otherwise specified, is subsidiary to payment for the various bid items.

1.12. **Projectmates**

1.12.1. The City has set up an Internet-based project management system called Projectmates for managing design and construction projects. The Contractor will be required to utilize Projectmates as follows:

1.12.2. Contract management related processes including RFIs, submittals, field reports, meeting minutes, change orders, pay application, punch lists, and close-out documents shall be submitted, tracked, and responded to, by the Contractor, City, and Project Engineer through Projectmates over the Internet. Paper copies shall not be accepted unless specifically requested.

1.12.3. The City of Waco Projectmates software portal is:

https://cityofwaco.projectmates.com

1.12.4. One (1) Projectmates user license will be provided to the Contractor by the City without charge. The City will recover the license upon project completion.

1.12.5. The Contractor shall be familiar with Projectmates prior to the pre-construction meeting. Training can be arranged by contacting software vendor Systemates Inc. Training expenses shall be borne by the Contractor. Contact Systemates, Inc., Richardson, Texas 214-217-4100 or email info@systemates.com.

1.12.6. See "Submittals" section for detailed instructions regarding submittals.

1.13. **Right of Way Clearing and Cleanup**

1.13.1. **Right of Way Clearing:** The Contractor shall be responsible for clearing the right of way of trees, shrubs, and other vegetative growth as needed for equipment clearance, construction of street components, and any other work required for this Project, prior to beginning construction, and in areas specifically identified on the drawings. Any cut limbs shall be sealed with Spectracide Pruning Seal, or approved equal. See Tree Pruning and Removal detail in the plans for additional requirements. This work shall be subsidiary to all pay items unless otherwise noted on the drawings.

1.13.2. **Right of Way Cleanup:** At the end of the project and prior to requesting the punch list, the Contractor shall cleanup the right of way from the edge of pavement to the approximate right-of-way on each side of the street (including portions of intersecting streets on which work was performed). The approximate right of way is shown on the plans (via parcel boundaries); however, the Contractor and Engineering Inspector (EI)

shall coordinate the extents of the work during construction. The purpose of the right of way cleanup is to leave the entire right of way clear of trash, debris, overgrown vegetation, and vegetative growth in the curb and gutter. The Contractor will not be required to go beyond any fence lines for this work. Cleanup activities shall include, but not be limited to the following:

- Remove all trash and debris
- Remove all downed trees, tree limbs, and brush piles
- Mow grass/vegetation to 3-inch height
- Edge grass at back of curb, pavement, sidewalk, and curb ramps
- Remove vegetation from curb and gutter, sidewalk, and curb ramps by mechanical means or other methods approved by the Project Engineer

This work shall be subsidiary to all pay items unless otherwise noted on the drawings.

2. CHANGE MANAGEMENT

2.1. See Section 4 in the General Provisions of the City of Waco Standard Specifications for Construction.

3. COMMUNICATION

3.1. Contractor shall contact the Engineering Inspector (EI) a minimum of seventy-two (72) hours and a maximum of ninety-six (96) hours prior to beginning (or recommencing after a hiatus) work; and notify the EI immediately upon any change in schedule.

3.2. All homeowners and businesses affected by the construction shall be notified by the Contractor a minimum of seventy-two (72) hours and a maximum of ninety-six (96) hours in advance of any street/construction work. See **Attachment "A"** in the plans for a flier example. Should the work not occur on the specified day, new notification will be distributed when required. The notification shall be in a form of a written posting, with the contractor's representative's local cellular telephone number and stating the time and date the work will take place. Flier shall be submitted for approval prior to distribution.

3.3. **Portable Changeable Message Signs** – The Contractor shall provide two portable changeable message signs at each work location in accordance with TxDOT Item 6001, which shall be used for the duration of the Project. A work location is generally defined as a neighborhood, section of neighborhood, or individual street (collectors and arterials). The signs shall be placed at the beginning and end of the neighborhood or street seven (7) days before construction or any major traffic pattern changes/shifts.

3.4. **The Contractor shall coordinate all work with the following**:

3.4.1. **Schools** affected by the construction at the beginning of construction and maintain communication until final acceptance of the roadway. Coordination will be required if any bus routes (Waco ISD, Midway ISD, China Spring ISD, Waco Transit, or other) are affected or there is a school within one block of construction.

3.4.2. **City of Waco's Waste Management Division** to avoid interruption of service on trash pickup days. Contact information is provided on the General Notes sheet.

CITY OF WACO

PUBLIC WORKS ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE

SPECIAL PROVISIONS

NO.	REVISION	DATE

STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED PROFESSIONAL ENGINEER

Name: 7-29-22 Date

Design: WMP/BVB Approved: ARS
Checked: ARS Project Mgr.: WMP

Project No: 2020-157
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9.2. When Contractor completes all work or pay items, the Contractor shall submit a written request for a punch list. At the time this is submitted, contract days will temporarily cease accruing.

9.3. The EI will coordinate a "walk of the project" with the Contractor and other City representatives and soon after will issue the punch list. At the time of issuance, the contract days will resume accruing.

9.4. When Contractor deems all punch list items are complete, the Contractor shall submit a written request for a final inspection.

9.5. When the EI finds all items complete to their satisfaction the EI shall submit a letter of final acceptance. At this time, contract time will stop. The letter will request the Contractor submit a one-year guarantee and an all bills paid affidavit, both notarized.

9.5.1. The final acceptance letter will include an accurate description of the Work being accepted.

9.5.2. If private property is used the EI shall receive from the Contractor a written release from the property owner accepting the condition of their property.

9.5.3. Once the guarantee and affidavit are received the project will be deemed final.

9.6. **Warranty** – (City of Waco Standard Specifications for Construction, General Provisions, Section 7.7, page 51). The EI will schedule a warranty walk approximately eleven (11) months after project completion. If any issues arise during the warranty period, the Engineering Inspector will send written request to the Contractor to remedy the issue(s).

10. SUBMITTALS

10.1. All submittals shall be complete shop drawings and design data, providing the information necessary to document compliance with all specifications. See section 2.6 C in the General Provisions of the City of Waco Standard Specifications for Construction. Contractor shall submit all submittals through Projectmates.

10.2. Within 10 working days of the Notice to Proceed, the Contractor shall provide a complete list of submittals for the project. The list shall include all materials and products required on the project (i.e., Item 340 HMAC Type D).

10.3. **Projectmates Instructions**: When uploading submittals to Projectmates, the Contractor shall do so using the following format:

- **Each item shall be submitted separately** (i.e., do not submit concrete mix and HMAC mix together in one submittal).
- **Description**: Include a brief description of the submittal contents (i.e., Submittal includes mix design and test reports for Item 340 HMAC Type D.)
- Upon clicking ***Add Submittal Items***:
  - Under Category:
    - Do not select anything for Division or Section
    - For *Description Below*, include the title of the submittal provided in the approved list of submittals (i.e., Item 340 HMAC Type D).
  - Under Submittal Type, select the option that best matches the submittal.
  - Save and close the Add Submittal Items window.
- Leave **Reference #** blank, fill in remaining sections as needed, and click ***Save & Finalize***.

- **Resubmittals**: If review of the initial submittal requires a resubmittal, Contractor shall click on the original submittal in Projectmates, click on ***Resubmit*** at the bottom, and follow the same steps as above.
- Contractor shall note that failure to follow the instructions above may result in rejection of the submittal.

11. STREET WORK

11.1. The Contractor may pave any time (during working hours established in Section 8) the has no standing water on the roadway surface and the temperature conditions meet the requirements set forth in TxDOT Specification Item SS 3076. Place mixtures only when the EI determines the roadway surface, weather, and moisture conditions are suitable.

11.2. No asphalt treatments will be applied just prior to a rain event that could result in chemical asphalt or any asphalt by-product pollutant being washed into a stream or stormwater collection system.

11.3. No AC or Emulsion for surface treatment items will be placed between October 1 and April 1 unless approved in writing by the Project Engineer.

11.4. Installation of new curb and gutter, completion of base failure repair, and HMAC grinding and level up work shall all be completed prior to street work.

11.5. All aggregate for each project will come from the same source or blended sources approved by the Project Engineer.

11.6. Remove all dirt and debris accumulated in the curb and gutter sections prior to beginning paving. Likewise, remove all vegetation from pavement edges and concrete edges and curb and gutter prior to operations. This work will be subsidiary to bid items.

11.7. When paving more than one section of continuous street, the Engineer or designated representative will have the final decision whether to pave cross streets.

11.8. Surfacing required as repair due to unsatisfactory material or workmanship by the Contractor or Subcontractors shall be deemed the cost responsibility of the Contractor.

11.9. Any tracking of asphalt material will be the responsibility of the Contractor to mitigate at no additional expense to the City.

11.10. Any conflicts between City of Waco specifications and Texas Department of Transportation specifications will be directed to the Project Engineer to provide clarification.

11.11. Any signs removed shall be replaced the same day.

12. MILL AND OVERLAY

12.1. **General Process** - The mill and overlay process generally consists of milling to a depth of 2" where HMAC is to be placed (unless otherwise specified), base failure repair if needed, cleaning, and applying bonding course of either Tracking-Resistant Asphalt Interlayer of product type Hot Asphalt or placing Spray-Applied Underseal Membrane, and placement of 2" of HMAC, Type D.

CITY OF WACO

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2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE

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ALVIN R. SUTTON, III
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12.2. **Milling**

12.2.1. Mill depth transitions perpendicular to direction of travel shall occur over a distance of 100 ft (minimum).

12.2.2. No peeling, flaking or scabbing HMAC may remain after milling (i.e. if the existing HMAC layer is just over 2" thick); Contractor shall mill or otherwise remove the peeling layer to the base, and this is subsidiary to the milling bid item.

12.2.3. The minimum thickness of the HMAC overlay in all locations shall be 2 inches. HMAC overlay shall be tapered over a 4-foot width (min) at edges of pavement to ensure final surface course matches the elevation of the gutter lip. Edge milling into the base (if the existing asphalt is less than 2" thick) will be allowed to ensure the new 2" pavement surface matches the existing or proposed gutter lip.

12.2.4. Overlay after milling shall occur within 72 hrs on arterial and collector streets, and 5 working days on all other streets unless otherwise indicated in plans. Once the surface is milled, the Contractor shall be responsible for protecting the milled surface and any exposed base from damage due to weather and vehicle traffic. Any damage that occurs before the street receives an overlay shall be repaired by the Contractor and all repair costs shall be considered subsidiary to the milling and overlay bid items.

12.2.5. Do not mill or overlay concrete pavement.

12.2.6. Milling shall be done to match the grade of new and existing surfaces at concrete aprons and valleys, utility vaults (transition so that utility vaults do not need adjustment and a smooth ride is achieved), concrete street intersections, valleys, and along intersecting streets identified in the plans.

12.2.7. Where, due to milling, there is a transverse joint greater than ½" in depth in a travel way a temporary ramp acceptable to the EI shall be placed prior to opening to traffic.

12.2.8. Millings shall become the property of the Contractor and removed from site. This removal is subsidiary to the unit price for milling.

12.3. **Prime Coat for Exposed Base**

12.3.1. The Contractor shall utilize a prime coat asphalt applied as a solid and uniform coat over any base material that will receive new HMAC according to TxDOT Item 310 "Prime Coat".

12.3.2. Immediately prior to application of the prime coat, the new road or driveway base shall be wetted so that voids in the surface are filled with water, but no free water remains standing on the surface.

12.3.3. Before the prime coat is applied, the surface shall be cleaned thoroughly to the satisfaction of the EI.

12.3.4. Prime coat material shall be AE-P, MC-30 or approved equal applied at a rate of 0.15 gal/SY of residual asphalt and shall provide complete and uniform coverage of the repair surface. The EI must approve proper coverage and may suspend paving operations until satisfactory prime coat has been applied.

12.3.5. Base material shall not be left without a prime coat overnight or if rain is forecasted within 8 hours.

12.4. **Bonding Coarse**

12.4.1. **General** – For the mill and overlay bonding course, the Contractor has the option of using either Spray Applied Underseal Membrane (per TxDOT Special Specifications 3002 and 3084) or Tracking-Resistant Asphalt Interlayer (TRAIL), product type Hot Asphalt (per TxDOT Special Specification 3084).

12.4.2. **Spray Applied Underseal Membrane** - City specifications call for RC-2, but for this project, spray applied underseal membrane shall be used (see TxDOT Special Specification 3002, "Spray Applied Underseal Membrane"), with a solid and uniform coat of oil which shall be a consistently dark color over the entire area. Before the bonding course is applied the surface shall be cleaned thoroughly to the satisfaction of the EI or designated representative. This membrane shall be applied at the rate of 0.19 GAL/SY (minimum) to provide complete and uniform coverage of the underlying milled material. The Contractor shall also apply a uniform coat to all contact surfaces including curbs, castings, structures and joints to provide a closely bonded, watertight joint. The EI or designated representative must approve proper coverage and may suspend paving operations until satisfactory underseal membrane has been applied.

12.4.3. **TRAIL, product type Hot Asphalt** - Tracking-Resistant Asphalt Interlayer (TRAIL) of the product type Hot Asphalt shall be used per TxDOT Special Specification 3084. The following TRAIL product manufactures are acceptable for use, without exception:

- *UltraFuse – Trackless Hot Applied* by Blacklidge
- *Underseal* by Jebro
- *eTac-HB* by Ergon Asphalt and Emulsions

Before the bonding course is applied the surface shall be cleaned thoroughly to the satisfaction of the EI or designated representative. This product shall be applied at the rate of 0.19 GAL/SY (minimum) to provide complete and uniform coverage of the underlying milled material. The Contractor shall also apply a uniform coat to all contact surfaces including curbs, castings, structures and joints to provide a closely bonded, watertight joint. The EI or designated representative must approve proper coverage and may suspend paving operations until satisfactory underseal membrane has been applied. This item shall be subsidiary to the unit price for milling.

12.4.4. Before the bonding coarse is applied the surface shall be cleaned thoroughly to the satisfaction of the EI or designated representative.

12.4.5. The Contractor shall also apply a uniform coat to all horizontal and vertical contact surfaces including curbs and gutters, castings, structures, and joints to provide a closely bonded, watertight joint.

12.4.6. The Project Engineer or designated representative must approve proper coverage and may suspend paving operations until satisfactory bonding coarse has been applied.

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N. 18TH STREET - BOSQUE TO WACO DRIVE

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PROFESSIONAL ENGINEER

Name: 7-29-22 Date

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12.5. **Hot-Mix Asphalt Concrete (HMAC)**

12.5.1. The Contractor may not place the overlay course until approval is requested and written approval is received by the Contractor from the Project Engineer.

12.5.2. Contractor to provide a joint layout prior to the pre-paving meeting.

12.5.3. HMAC for overlay, level-up, concrete structure tie-ins, and a portion of the base failure repair shall be TxDOT SS 3076 Dense-Graded Hot-Mix Asphalt Type D performance graded asphalt 64-22. **No QC/QA bonus shall be given. The Contractor shall include the Engineer and EI on end-of-day reports each day of production and placement.**

12.5.4. Contractor shall use a laydown machine and a material transfer device for all HMAC placement.

12.5.5. Before the first HMAC course can be installed on the underseal, the road or driveway must be swept clean to the satisfaction of the Engineer or EI.

12.5.6. The Contractor shall provide results from the mix prior to construction.

12.5.7. Pavement edge blading shall be subsidiary to the various pay items.

13. BASE FAILURE REPAIR

13.1. Base Failure Repair shall utilize 2,000 psi concrete. See *Base Failure Repair with Concrete* detail in plans for additional requirements.

13.2. The Base Failure Repair quantities provided in the plans are estimates only. After milling a street, the Contractor shall notify the EI who will walk the street with the Contractor to confirm the base failure repair locations. The City reserves the right to add locations not identified by the Contractor. The unit price as bid for Base Failure Repair shall be used regardless of the final quantity.

13.3. The concrete for base failure repairs shall be cured for a minimum of 4 calendar days before exposed to traffic. The Contractor shall utilize traffic control devices to prevent traffic contact with the concrete during the curing period. Base repair work shall be sequenced such that a lane of traffic will remain open at all times, which may require the work to be done in multiple sections.

13.4. Removal of all material shall be subsidiary to the Base Failure Repair bid item.

13.5. Minimum base repair dimensions shall be per the *Base Failure Repair with Concrete* detail. The width of the base repair shall be increased as needed to prevent the edge of the repair being located in the wheel path. Contractor will be paid for dimensions of actual base repair.

14. PAVEMENT THICKNESS TESTING

14.1. In addition to TXDOT SS 3076 requirements, any pavement placed on this project shall be subject to the following testing and deficiency requirements, which supersede those provided in the City of Waco Standard Specifications for Construction.

14.2. During and upon completion of the work and before final acceptance and final payment shall be made, pavement thickness tests shall be made by the City or its authorized representative unless otherwise specified in these special project provisions or in the plans.

The number and location of tests shall be at the discretion of the City, but will typically be not more than every 1,000 LF and in each lane. For this project, full thickness of HMAC will be tested to observe deficiencies.

14.3. Within 7 calendar days of pavement placement and as a condition for payment, the Contractor shall submit their QA/QC results for: pavement cores, lab-molded densities, and field densities.

14.4. **Pavement Thickness, Deficiencies, and Payment**

14.4.1. For this project, the following table shall be used to determine payment for deficiency in thickness for the Type D HMAC:

Deficiency in Thickness Determined by Cores (inches)	Proportional Part of Contract Price Allowed
0.0-0.20	80 percent
0.20-0.30	70 percent
0.30-0.50	60 percent

If the pavement thickness deficiency is greater than 0.5 inches, the Contractor will be required to remove and replace the entire HMAC pavement thickness the full width of the street and 100 feet longitudinally in each direction of the deficient sample at their own expense. With the City's approval, the Contractor may conduct, at their expense, subsequent tests to isolate the deficiency to less than 100 feet longitudinally. These additional tests shall be scheduled with the EI and completed by a City-approved laboratory.

14.4.2. If pavement removal and replacement is required, any areas cored by either the City or the Contractor shall be included in the pavement to be removed and replaced.

14.4.3. No additional payment over the contract unit price shall be made for any pavement thickness exceeding that required by the plans.

15. CONCRETE CURB AND GUTTER, SIDEWALKS, ADA RAMPS, FILLETS, VALLEY GUTTERS, DRIVEWAYS, AND OTHER CONCRETE FACILITIES

15.1. The Contractor shall be responsible for construction of all concrete curb and gutter, sidewalks, ADA ramps, fillets, valley gutters, driveways, and other concrete facilities to meet existing grades as shown in the plans and described in all details and notes.

15.2. All work shown in the aforementioned concrete facility standard details shall be subsidiary to their respective bid items. **This work includes the Type D HMAC asphalt surface and concrete base tie-in (typically 2') between the concrete facility and any adjacent pavement** required to provide a smooth transition between the existing pavement and the new concrete edge.

15.3. The Contractor shall work with property owners when working on or near driveways in order to ensure that access is maintained at all times.

15.4. The EI and Contractor will walk lanes to receive surface treatment and determine where curb and gutter replacement is required. The final decision will be the City's. The unit price as bid will be used regardless of the quantity.

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15.5. All curb & gutter shall be straight-graded between existing tie-in points unless otherwise noted on plans.

16. WATER VALVE BOXES, MANHOLE LIDS

16.1. Manhole and water valve lids shall be adjusted and fitted with concrete diamonds in accordance with the details provided in the plans.

16.2. Adjustment of manholes and valves shall be made to within 1/8" of adjacent proposed grade. Manhole and water valve lids shall be adjusted in accordance with COW Standard Details, as well as the "Manhole Lid Height Adjustment" detail and "Valve Box Height Adjustment" detail in the plans. Note that abandoned valves may exist and will be addressed by the EI during construction. If old style valve boxes are encountered during the raising process, the Contractor shall replace them with boxes meeting the new details. All old style valve boxes shall be replaced to the full depth of the valve. The boxes will be either raised or replaced and paid for by the appropriate bid item. **Contractor will not be paid for both**. Salvage all water valve covers and deliver to the City's Utilities Department at 200 Colcord Avenue.

16.3. The Contractor shall coordinate elevation adjustments of any "SWB Manholes" or AT&T manholes with Calvin Pewitt of AT&T who can be contacted at (254)757-7810 (office), (254)715-7869 (mobile) or at cp8237@att.com. Elevation adjustments to any other utility manholes encountered shall be coordinated by the Contractor.

17. PAVEMENT MARKINGS

17.1. Temporary Markings shall be placed before lanes are open to traffic.

17.2. Place temporary traffic markings that meet the Texas Manual on Uniform Traffic Control Devices on all streets currently marked.

17.3. Placement of permanent markings on all streets shall be done as existing, unless indicated in plans. Markings shall meet the requirements of TxDOT Item 666, "Retroreflectorized Pavement Markings." This shall include any non-overlaid concrete sections within the street limits.

- Type 1 markings must meet the following minimum retroreflectivity values for edgeline markings, centerline or no passing barrier-line, and lane lines when measured any time after 3 days, but not later than 10 days after application:
  - White markings: 250 millicandelas per square meter per lux (mcd/m2/lx)
  - Yellow markings: 175 mcd/m2/lx
- Contractor shall complete the retroreflectivity testing in accordance with TxDOT Item 666 and shall provide written report with test results confirming conformance the required retroreflectivity values.
- Surface preparation of concrete to receive pavement marking is required and shall be subsidiary to the various pavement marking bid items.

17.4. Placement of Raised Pavement Markers shall be done in accordance with TxDOT Item 672, "Raised Pavement Markers."

17.5. Two-way left-turn use arrow pavement markings are to be placed, with 16 feet typical spacing, at or just downstream from the beginning of the two-way left-turn lane, as

indicated in plans, per the Texas Manual on Uniform Traffic Control Devices, Section 3B.20.

17.6. Pedestrian Crossings are to have 10 feet long by 2 feet wide white bars with 2 feet spacing between the bars (4' from center to center).

17.7. Reflective pavement markings of the break type shall be measured and paid for by the linear feet of pavement marking applied. Contractor shall note that the length and spacing of the yellow and white break lines shown on the plans may not be to scale. The length of the lines shall be 10' and the length of the spacing shall be 30'.

17.8. Contractor shall arrange construction operations to prevent the hauling of materials through the completed pavement sections unless otherwise approved by the EI or City Engineer.

17.9. The Contractor shall open the pavement to traffic each night.

17.10. The Contractor shall supply and install the blue raised reflective markers utilized for all fire hydrants within the work limits.

17.11. Removal of raised pavement markers as work progresses shall be subsidiary to the various bid items.

18. QUANTITY BASIS

Asphalt Surface Areas – SY

Item	Description	Roadway & Intersections
310	Prime Coat (AE-P or MC-30)	364
3002 or 3084	Spray Applied Underseal Membrane or TRAIL (Hot-Applied)	10,882
3076	2" Hot-Mix Overlay (D-GR HMA TY-D PG 64-22)	10,882

Basis of Estimate

Item	Description	Rate	SY	Quantity
310	Prime Coat (AE-P or MC-30)	0.15 GAL/SY*	364	55 GAL
3002 or 3084	Spray Applied Underseal Membrane or TRAIL (Hot-Applied)	0.19 GAL/SY	10,882	2,068 GAL
3076	2" Hot-Mix Overlay (D-GR HMA TY-D PG 64-22)	N/A	10,882	10,882 SY

* Denotes Residual Asphalt

NOTE: The information above is intended to provide general guidance and as a basis of estimate. Based on weather and surface conditions at the time of application, the engineer may make adjustments to the rates.

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19. TXDOT WACO DISTRICT, GENERAL NOTES

19.1. The following TxDOT Waco District General Notes shall be included as part of the contract documents:

ITEM	GENERAL NOTES
104	**REMOVING CONCRETE** a) Properly dispose of unsalvageable material at the Contractor's expense. b) Remove loose material from the roadway before opening to traffic.
160	**TOPSOIL** Salvage the existing topsoil from the cut/fill areas. Topsoil not stored in small windrows will be stockpiled in locations with heights no greater than four (4) feet and dumped loose from Contractor equipment. The Contractor will minimize topsoil compaction and limit equipment being driven over stockpiled topsoil. Additional Topsoil will come from approved sources outside of the ROW. Topsoil must come from a location within six (6) inches of the natural ground surface to ensure it contains nutrients and is not sterile soil. Off ROW top soil will contain a minimum organic content of three & one-half (3.5%) percent, based on soil test results.
302	**AGGREGATES FOR SURFACE TREATMENTS (APPLIES TO ITEM 3076)** The pre-coated aggregate target value of residual bitumen will be in the range of 0.5 % to 1.5 % by weight from a pre-coating material.
752	**TREE AND BRUSH REMOVAL** The Contractor will take precautions to avoid harm to any wildlife encountered during the project; this includes active nests or burrows. All Oak Tree Species: **1.** To avoid the spread of Oak Wilt or other disease, all species of oak trees that are damaged or cut (branches, roots and/or stumps) for any reason during this contract, must be treated with a commercial wound dressing within 20 minutes of causing the damage or cut. **2.** To prevent the spread of infection from tree to tree when pruning oak trees (all species), the Contractor must disinfect all pruning tools with a solution of 70% isopropyl alcohol after all cutting is complete on each oak tree. **3.** Potentially dangerous trees or limbs will be removed as soon as possible. **4.** The Engineer can stop all Work operations if the dressing, cut and removal requirements are not followed. **5.** Pruning shall be in accordance with ANSI A300 pruning standard. The Contractor will be responsible for leaving the project site clean and neat in appearance upon completion and before final acceptance by the Engineer. Limits as shown in the plans are approximate. Actual limits may vary. Remove and dispose of cuttings within five (5) calendar days after cutting. Material will be disposed of in accordance with federal, state, and local regulations. No material will be placed on private property unless otherwise approved in writing by the Engineer. The Contractor will provide sufficient documentation to verify proper disposal. Wood chips may be left on the right of way no deeper than two (2) inches. Do not trespass on private property while perform work on this contract. Do not cut or damage timber outside the right-of-way lines.

ITEM	GENERAL NOTES
	Remove all fallen parts of trees, damaged limbs, and dead limbs. This work will not be paid for directly, but will be considered subsidiary to this item. Tree Trimming: Contractor may use a buzzbar type saw for trimming trees. If using a buzzbar type saw, branches may protrude from the truck. The use of a brushax will not be allowed. Trees will be trimmed to a clearance height as follows: 1. 10 feet above natural ground within the ROW (except above pavement) 2. 18 feet above pavement (includes shoulders and travel lanes) Tree Trimming and Brush Removal for Channels: This item will be used to pay for work in channels, slopes, wide right of way, and areas of dense trees areas as shown on the plans. Stump removal is subsidiary to this bid item for trees removed by Contractor

CITY OF WACO

PUBLIC WORKS ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE

SPECIAL PROVISIONS

NO.	REVISION	DATE

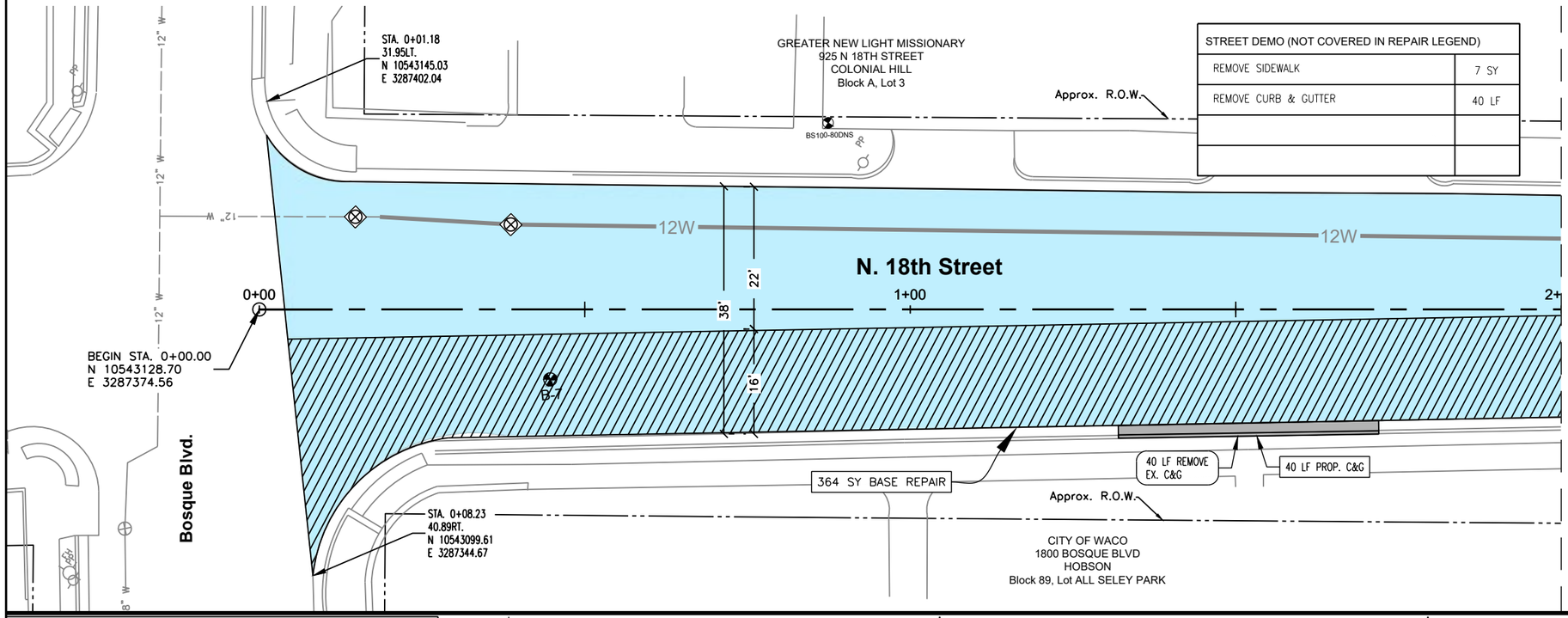
STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

Name: 7-29-22 Date

Design: WMP/BVB Approved: ARS
Checked: ARS Project Mgr.: WMP

Project No: 2020-157
Sheet Size: 11x17
Issue Date: Jul-22
Sheet No. C108

P:\Waco\2020\2020-157 WACO MILL AND OVERLAY\CAD\BASE\18TH STREET MO SPECIAL PROVISION.dwg



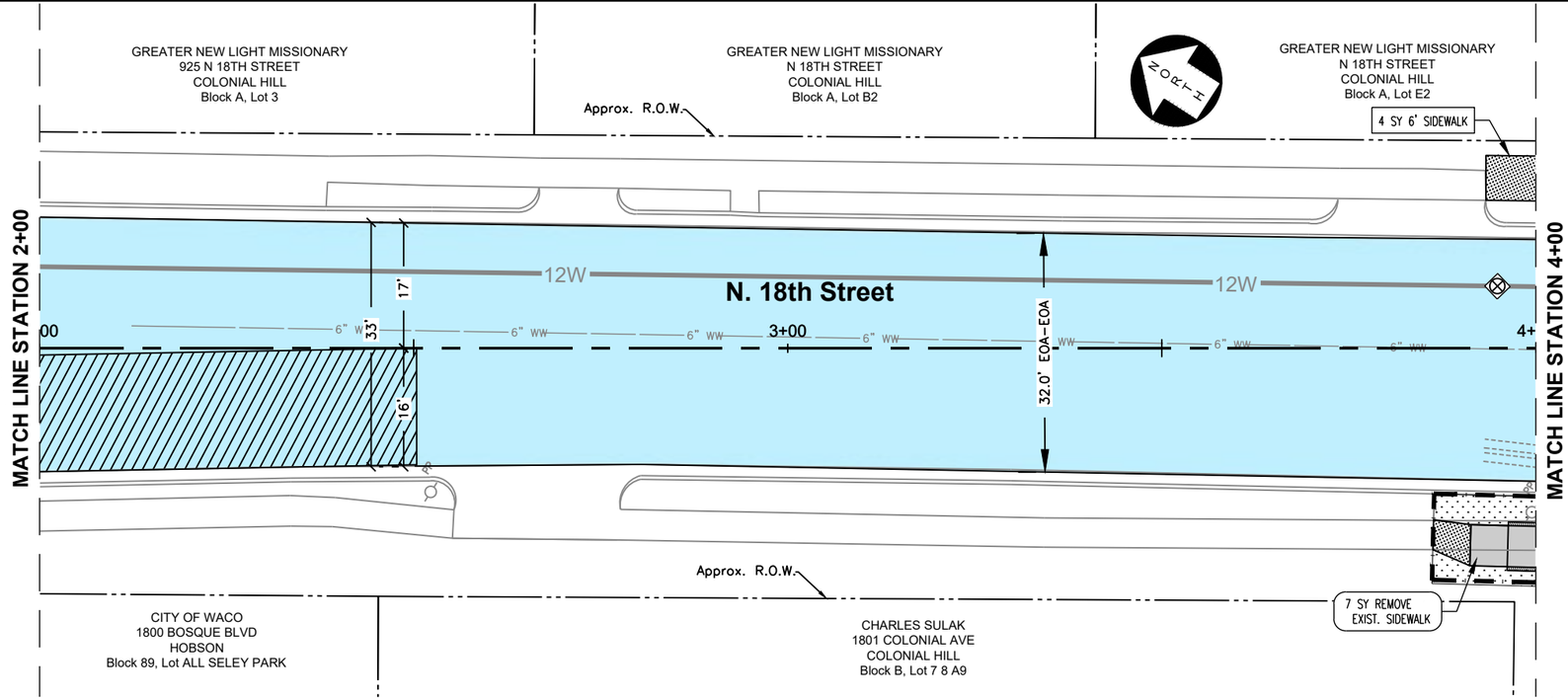
STREET DEMO (NOT COVERED IN REPAIR LEGEND)	
REMOVE SIDEWALK	7 SY
REMOVE CURB & GUTTER	40 LF

NORTH

0 10 20

HORIZONTAL SCALE IN FEET

ROAD BORING/CORING INFORMATION		
BORING/ CORING ID	ASPHALT THICKNESS (INCHES)	BASE THICKNESS (INCHES)
B-7	4.5	13



NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
3. CONTRACTOR MAY COMBINE CONCRETE DIAMONDS WITH ENGINEERS APPROVAL.
4. CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES.
5. 2' WIDE 6" TOPSOIL AND SOD REQUIRED BEHIND ALL SIDEWALK, RAMP, CURB & GUTTER WORK ADJACENT TO NATURAL GROUND. REFER TO SPECIAL PROJECT PROVISIONS FOR DETAILS, AND SCHEDULE OF QUANTITIES FOR ESTIMATED AREA.

STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	1546 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	3 EA
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	40 L.F.
	PROPOSED SIDEWALK	4 SY
	PROPOSED RAMP	0
	BASE REPAIR	364 SY
	PROPOSED DRIVE APPROACH	0

STREET REFRENCE LEGEND	
	THIS AREA QUANTIFIED ON PEDESTRIAN RAMP OR DRIVEWAY DETAIL SHEETS

BENCHMARKS

PT.	NORTH	EAST	ELEV.	DESC.
100	10543070.79700	3287446.01100	541.54600	BS100-80DNS
101	10542575.40700	3287718.49000	530.86200	TS101-80DNS
102	10542260.83800	3288134.33100	512.26400	TS102-80DNS
103	10542034.89400	3288404.85000	498.20400	TS103-80DNS
104	10541601.44400	3288653.26200	482.79000	TS104-MAGNS
105	10541639.20700	3288687.88100	478.63400	TS104A-MAGNS

!!!WARNING!!!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE 'ONE CALL' LOCATOR SERVICE AT (800)344-8377 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

P:\Waco\2020\2020-157 WACO MILL AND OVERLAY\CAD\BASE\VFG - 18th bos to waco - (4) - (4).dwg

CITY OF WACO
PUBLIC WORKS
ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 0+00 TO STATION 4+00

NO.	REVISION	DATE

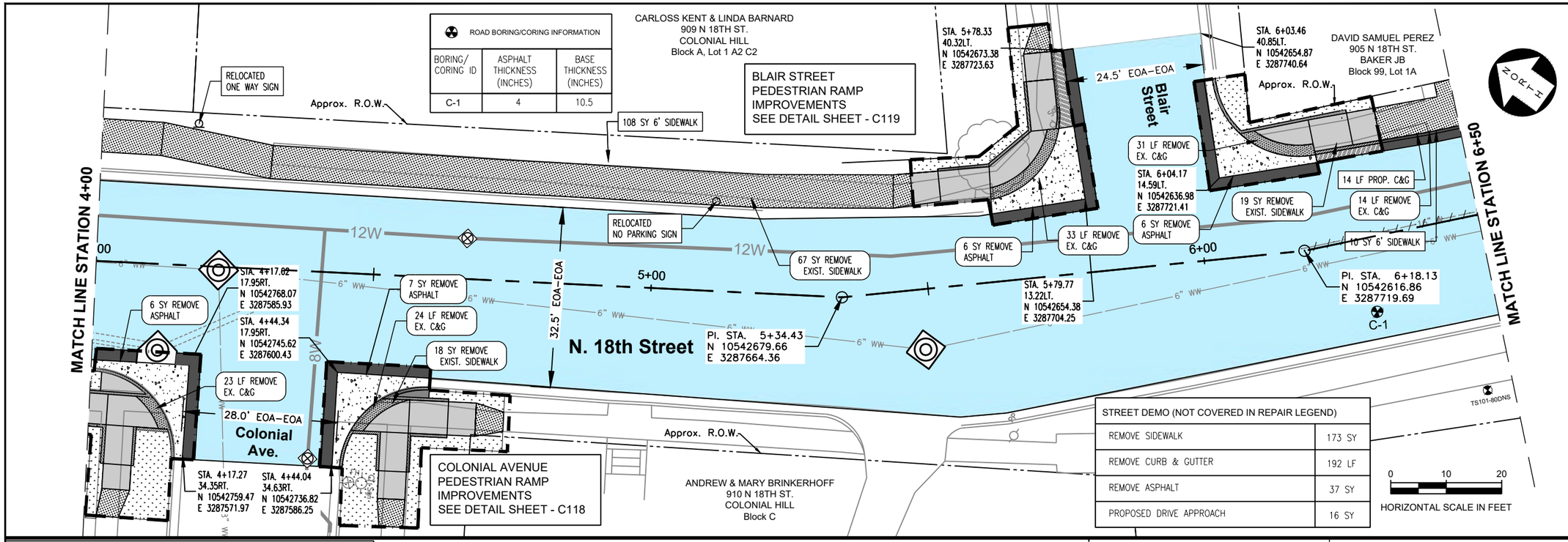
STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

Name: Date: 10-21-22

Design: DJP Approved: ARS
Checked: ARS Project Mgr.: ARS

Project No: 18ST2101B
Sheet Size: 11x17
Issue Date: Oct-22

Sheet No. C109

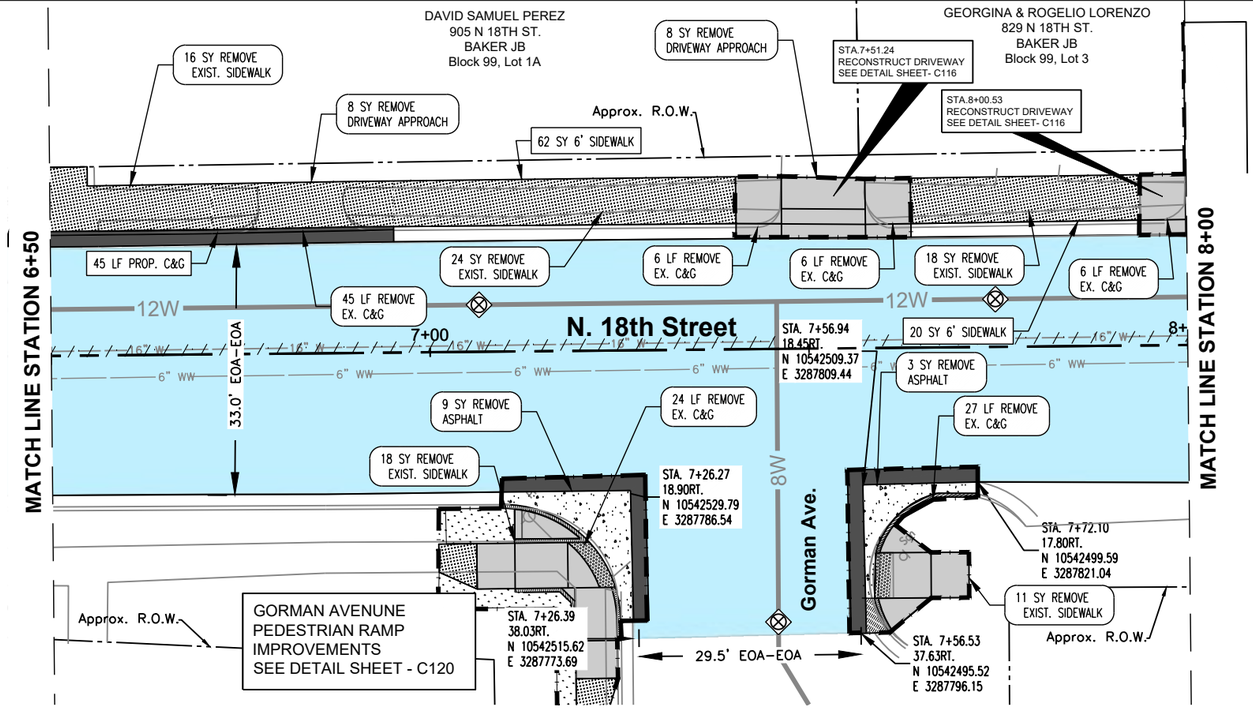


NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
3. CONTRACTOR MAY COMBINE CONCRETE DIAMONDS WITH ENGINEERS APPROVAL.
4. CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES.
5. 2' WIDE 6" TOPSOIL AND SOD REQUIRED BEHIND ALL SIDEWALK, RAMP, CURB & GUTTER WORK ADJACENT TO NATURAL GROUND. REFER TO SPECIAL PROJECT PROVISIONS FOR DETAILS, AND SCHEDULE OF QUANTITIES FOR ESTIMATED AREA.

STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	1676 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	3 EA
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	5 EA
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	85 LF
	PROPOSED SIDEWALK	200 SY
	PROPOSED RAMP	6 EA
	BASE REPAIR	0
	PROPOSED DRIVE APPROACH	1 EA

STREET REFRENCE LEGEND	
	THIS AREA QUANTIFIED ON PEDESTRIAN RAMP OR DRIVEWAY DETAIL SHEETS



BENCHMARKS				
PT.	NORTH	EAST	ELEV.	DESC.
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101,10542575.40700,3287718.49000,530.86200,TS101–80DNS				
102,10542260.83800,3288134.33100,512.26400,TS102–80DNS				
103,10542034.89400,3288404.85000,498.20400,TS103–80DNS				
104,10541601.44400,3288653.26200,482.79000,TS104–MAGNS				
105,10541639.20700,3288687.88100,478.63400,TS104A–MAGNS				

!!!WARNING!!!
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P:\Waco\2020\2020-157 WACO MILL AND OVERLAY\CAD\BASE\VFG - 18th bos to waco - (4) - (4).dwg

CITY OF WACO
PUBLIC WORKS ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 4+00 TO STATION 8+00

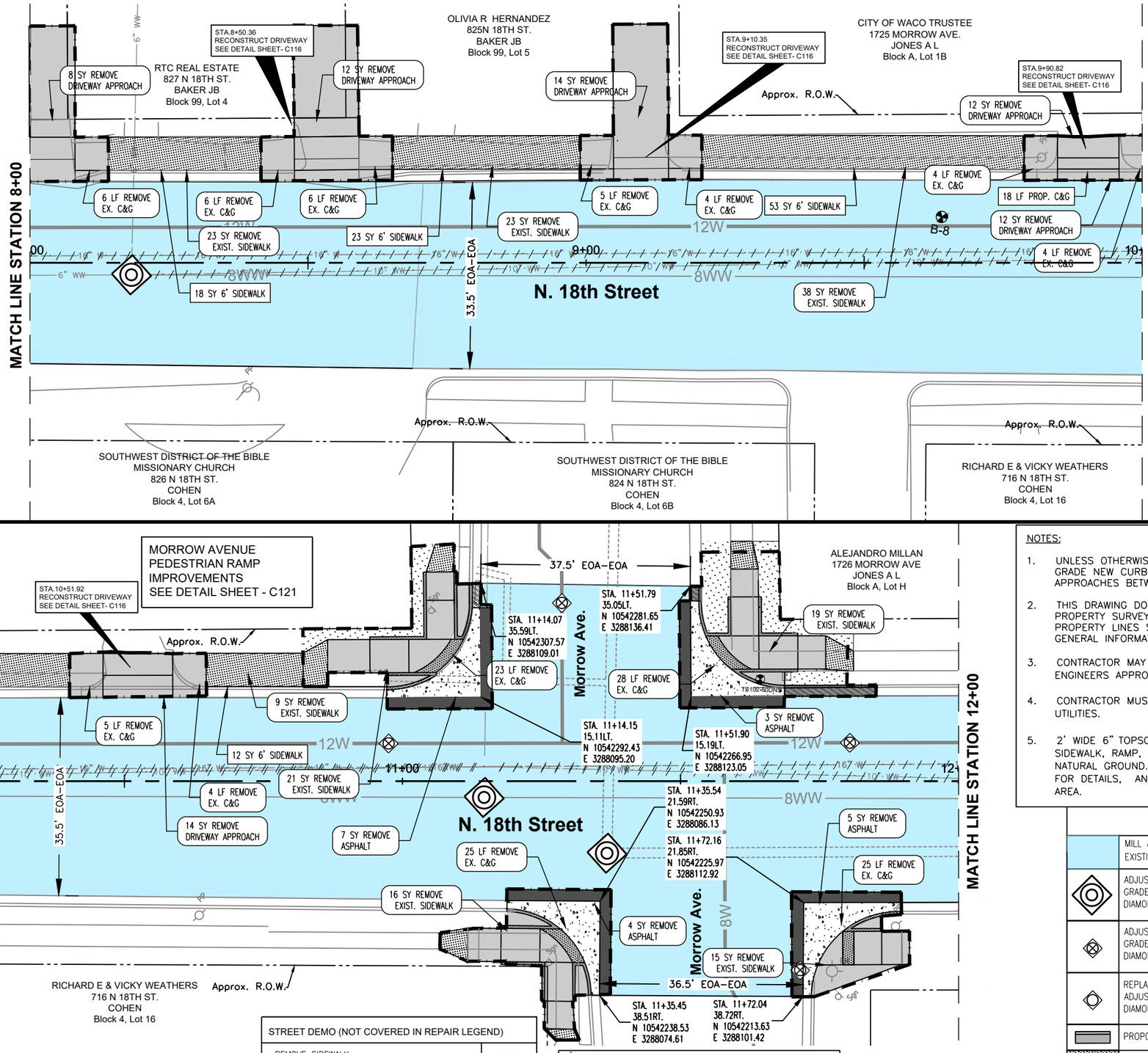
NO.	REVISION	DATE

STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED PROFESSIONAL ENGINEER

Name: 10-21-22 Date

Design: DJP Approved: ARS
Checked: ARS Project Mgr.: ARS

Project No: 18ST2101B
Sheet Size: 11x17
Issue Date: Oct-22
Sheet No. C110



ROAD BORING/CORING INFORMATION		
BORING/ CORING ID	ASPHALT THICKNESS (INCHES)	BASE THICKNESS (INCHES)
B-8	4.5	9.5

NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
3. CONTRACTOR MAY COMBINE CONCRETE DIAMONDS WITH ENGINEERS APPROVAL.
4. CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES.
5. 2' WIDE 6" TOPSOIL AND SOD REQUIRED BEHIND ALL SIDEWALK, RAMP, CURB & GUTTER WORK ADJACENT TO NATURAL GROUND. REFER TO SPECIAL PROJECT PROVISIONS FOR DETAILS, AND SCHEDULE OF QUANTITIES FOR ESTIMATED AREA.

STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	1721 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	3 EA
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	3 EA
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	0
	PROPOSED SIDEWALK	149 SY
	PROPOSED RAMP	4 EA
	BASE REPAIR	0
	PROPOSED DRIVE APPROACH	2 EA

STREET DEMO (NOT COVERED IN REPAIR LEGEND)	
REMOVE SIDEWALK	177 SY
REMOVE CURB & GUTTER	145 LF
REMOVE ASPHALT	19 SY
REMOVE DRIVE APPROACH	60 SY

BENCHMARKS

PT.	NORTH	EAST	ELEV.	DESC.
100	10543070.79700	3287446.01100	541.54600	BS100–80DNS
101	10542575.40700	3287718.49000	530.86200	TS101–80DNS
102	10542260.83800	3288134.33100	512.26400	TS102–80DNS
103	10542034.89400	3288404.85000	498.20400	TS103–80DNS
104	10541601.44400	3288653.26200	482.79000	TS104–MAGNS
105	10541639.20700	3288687.88100	478.63400	TS104A–MAGNS

STREET REFRENCE LEGEND	
	THIS AREA QUANTIFIED ON PEDESTRIAN RAMP OR DRIVEWAY DETAIL SHEETS

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P:\Waco\2020\2020-157 WACO MILL AND OVERLAY\CAD\BASE\VFG - 18th bos to waco - (4) - (4).dwg

CITY OF WACO
PUBLIC WORKS ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 8+00 TO STATION 12+00

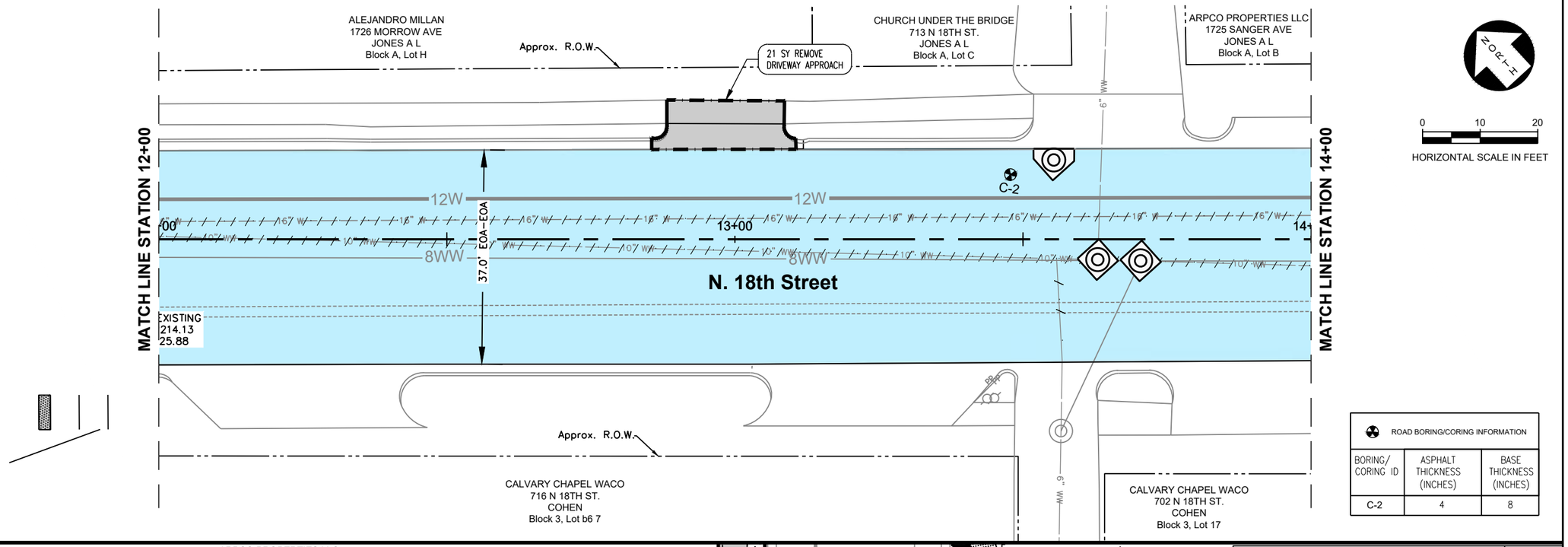
NO.	REVISION	DATE

STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

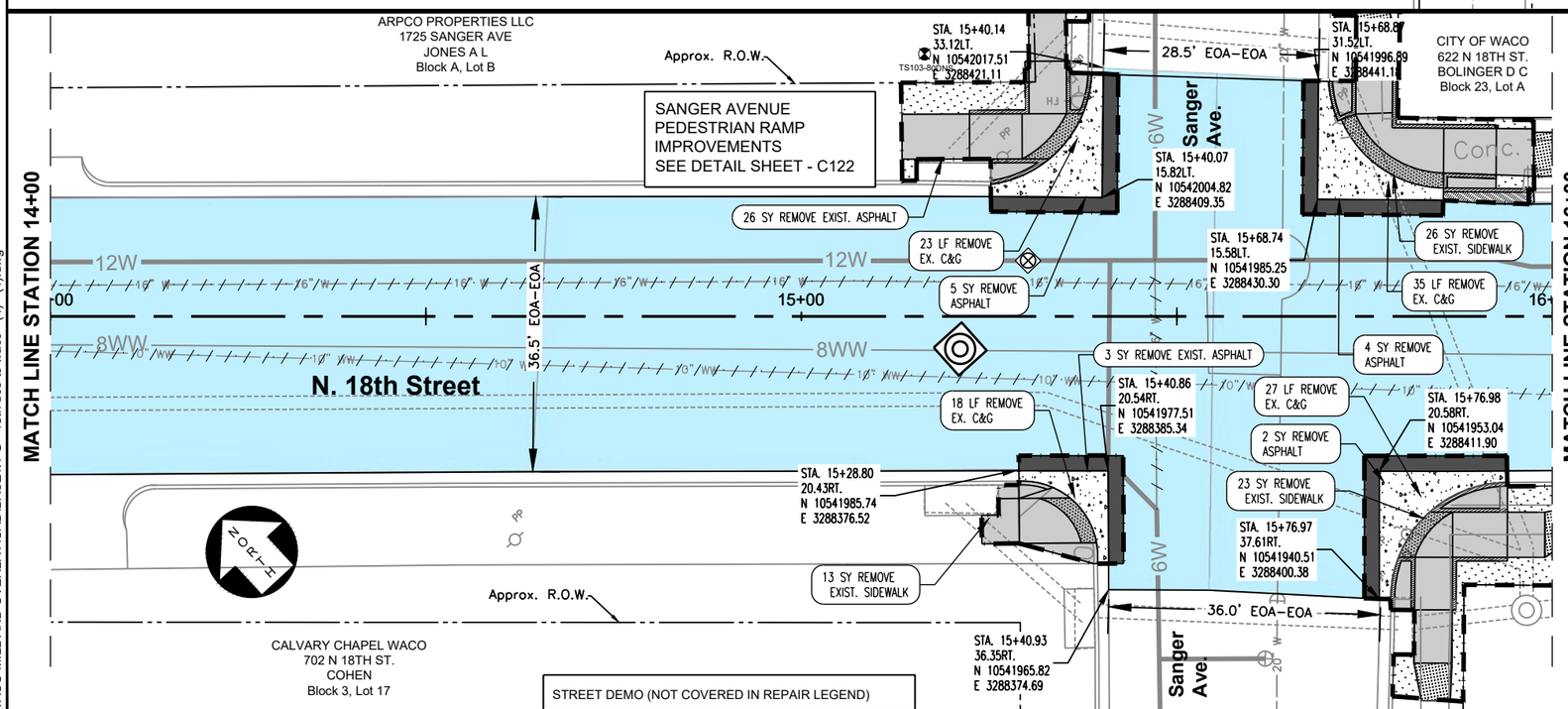
Name: 10-21-22 Date

Design: DJP Approved: ARS
Checked: ARS Project Mgr.: ARS

Project No: 18ST2101B
Sheet Size: 11x17
Issue Date: Oct-22
Sheet No. C111



ROAD BORING/CORING INFORMATION		
BORING/ CORING ID	ASPHALT THICKNESS (INCHES)	BASE THICKNESS (INCHES)
C-2	4	8



STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	1747 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	4 EA
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	1 EA
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	27 SY
	PROPOSED SIDEWALK	0
	PROPOSED RAMP	4 EA
	BASE REPAIR	0
	PROPOSED DRIVE APPROACH	0

STREET DEMO (NOT COVERED IN REPAIR LEGEND)	
REMOVE SIDEWALK	62 SY
REMOVE CURB & GUTTER	103 LF
REMOVE ASPHALT	40 SY
PROPOSED DRIVE APPROACH	21 SY

BENCHMARKS

PT.	NORTH	EAST	ELEV.	DESC.
100	10543070.79700	3287446.01100	541.54600	BS100-80DNS
101	10542575.40700	3287718.49000	530.86200	TS101-80DNS
102	10542260.83800	3288134.33100	512.26400	TS102-80DNS
103	10542034.89400	3288404.85000	498.20400	TS103-80DNS
104	10541601.44400	3288653.26200	482.79000	TS104-MAGNS
105	10541639.20700	3288687.88100	478.63400	TS104A-MAGNS

STREET REFRENCE LEGEND	
	THIS AREA QUANTIFIED ON PEDESTRIAN RAMP OR DRIVEWAY DETAIL SHEETS

NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
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4. CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES.
5. 2' WIDE 6" TOPSOIL AND SOD REQUIRED BEHIND ALL SIDEWALK, RAMP, CURB & GUTTER WORK ADJACENT TO NATURAL GROUND. REFER TO SPECIAL PROJECT PROVISIONS FOR DETAILS, AND SCHEDULE OF QUANTITIES FOR ESTIMATED AREA.

!!!WARNING!!!
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CITY OF WACO
PUBLIC WORKS
ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 12+00 TO STATION 16+00

NO.	REVISION	DATE

STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

Name: 10-21-22 Date

Design:	DJP	Approved:	ARS
Checked:	ARS	Project Mgr.:	ARS

Project No:	18ST2101B
Sheet Size:	11x17
Issue Date:	Oct-22
Sheet No.	C112

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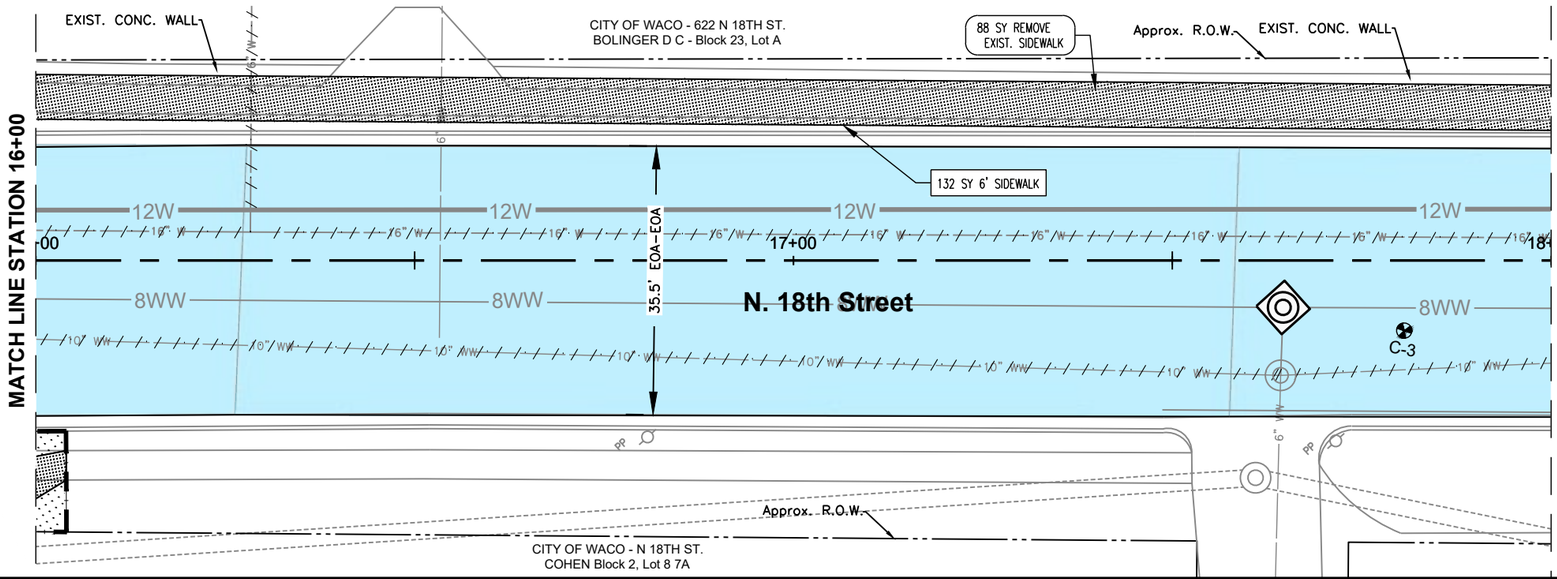

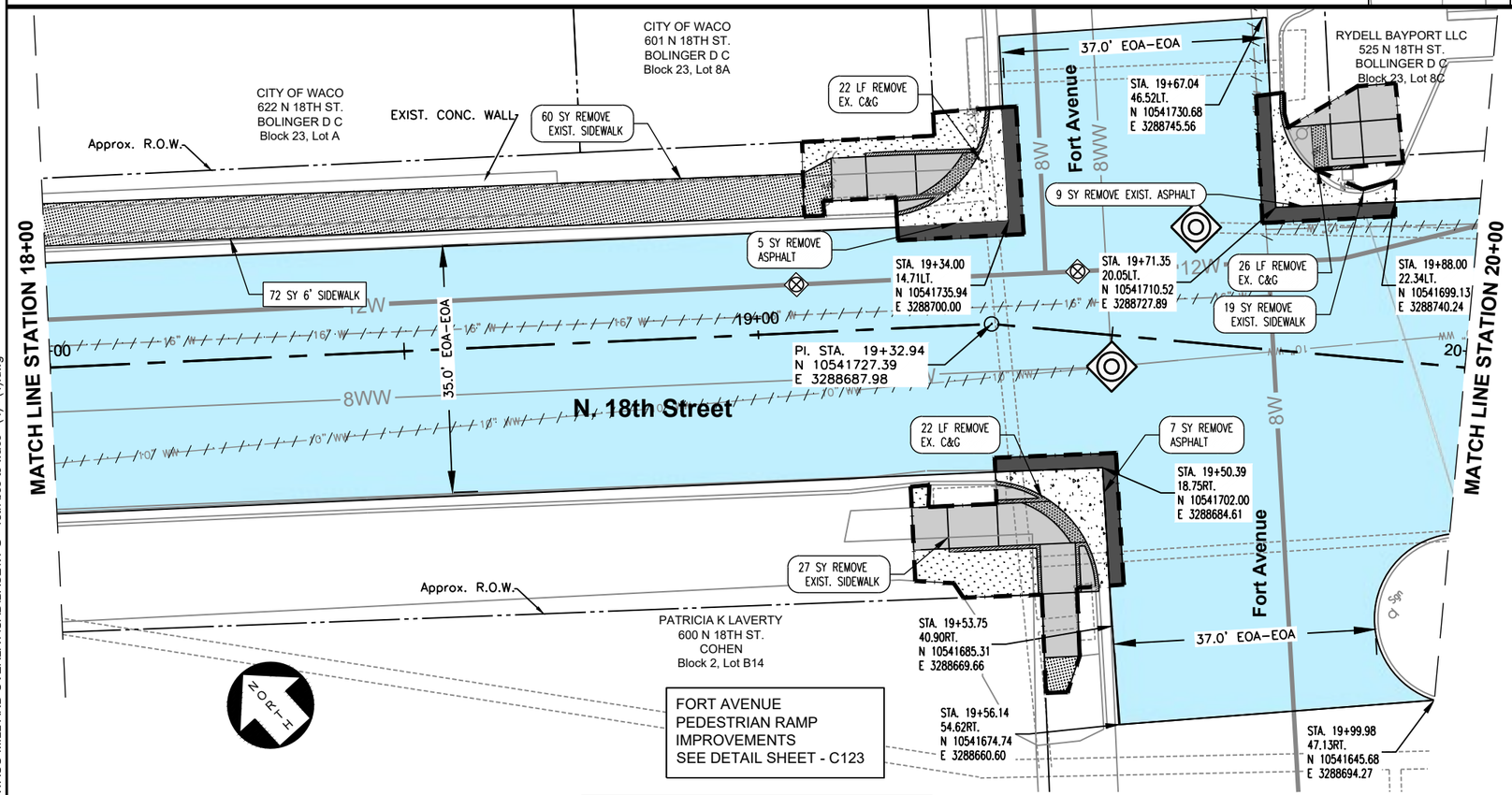

NORTH

0 10 20

HORIZONTAL SCALE IN FEET

ROAD BORING/CORING INFORMATION

BORING/ CORING ID	ASPHALT THICKNESS (INCHES)	BASE THICKNESS (INCHES)
C-3	3	7.5

NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
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STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	1848 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	3 EA
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	2 EA
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	0
	PROPOSED SIDEWALK	204 SY
	PROPOSED RAMP	3 EA
	BASE REPAIR	0
	PROPOSED DRIVE APPROACH	0

!!!WARNING!!!

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STREET DEMO (NOT COVERED IN REPAIR LEGEND)	
REMOVE SIDEWALK	194 SY
REMOVE CURB & GUTTER	70 LF
REMOVE ASPHALT	21 SY

BENCHMARKS

PT.	NORTH	EAST	ELEV.	DESC.
100	10543070.79	7003,287446.01	100,541.54	600,BS100-80DNS
101	10542575.40	7003,287718.49	000,530.86	200,TS101-80DNS
102	10542260.83	800,288134.33	100,512.26	400,TS102-80DNS
103	10542034.89	400,288404.85	000,498.20	400,TS103-80DNS
104	10541601.44	400,288653.26	200,482.79	000,TS104-MAGNS
105	10541639.20	700,288687.88	100,478.63	400,TS104A-MAGNS

STREET REFRENCE LEGEND	
	THIS AREA QUANTIFIED ON PEDESTRIAN RAMP OR DRIVEWAY DETAIL SHEETS

CITY OF WACO

PUBLIC WORKS ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 16+00 TO STATION 20+00

NO.	REVISION	DATE

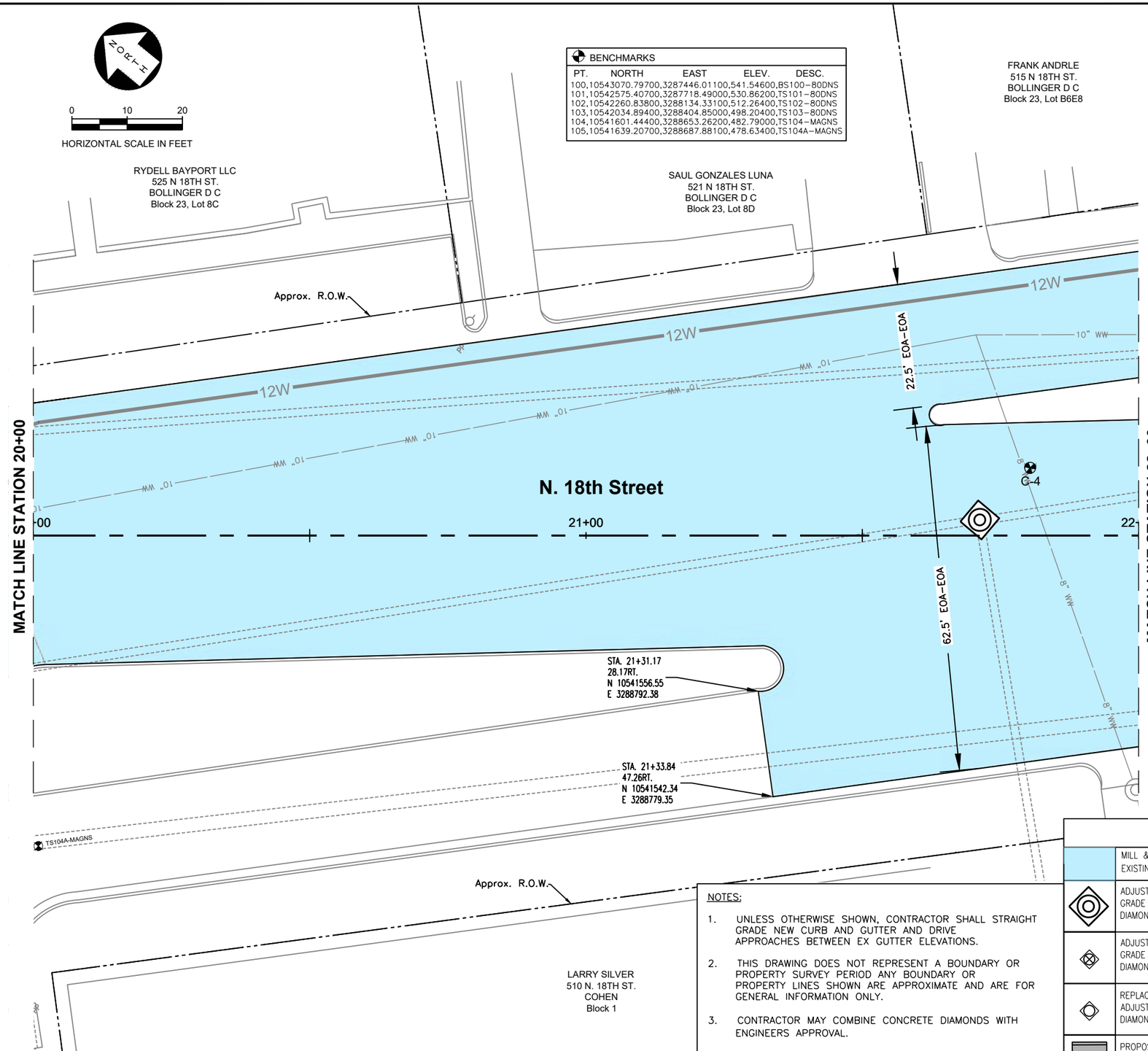
STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

Name: 10-21-22 Date

Design: DJP Approved: ARS
Checked: ARS Project Mgr.: ARS

Project No: 18ST2101B
Sheet Size: 11x17
Issue Date: Oct-22
Sheet No. C113

P:\Waco\2020\2020-157 WACO MILL AND OVERLAY\CAD\BASE\VFG - 18th bos to waco - (4) - (4).dwg



ROAD BORING/CORING INFORMATION

BORING/ CORING ID	ASPHALT THICKNESS (INCHES)	BASE THICKNESS (INCHES)
C-4	5.5	7

STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	1430 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	1 EA
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	0
	PROPOSED SIDEWALK	0
	PROPOSED RAMP	0
	BASE REPAIR	0
	PROPOSED DRIVE APPROACH	0

NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
3. CONTRACTOR MAY COMBINE CONCRETE DIAMONDS WITH ENGINEERS APPROVAL.
4. CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES.
5. 2' WIDE 6" TOPSOIL AND SOD REQUIRED BEHIND ALL SIDEWALK, RAMP, CURB & GUTTER WORK ADJACENT TO NATURAL GROUND. REFER TO SPECIAL PROJECT PROVISIONS FOR DETAILS, AND SCHEDULE OF QUANTITIES FOR ESTIMATED AREA.

!!!WARNING!!!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE 'ONE CALL' LOCATOR SERVICE AT (800)344-8377 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

P:\Waco\2020\2020-157 WACO MILL AND OVERLAY\CAD\BASE\VFG - 18th bos to waco - (4) - (4).dwg

CITY OF WACO
PUBLIC WORKS
ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 20+00 TO STATION 22+00

NO.	REVISION	DATE

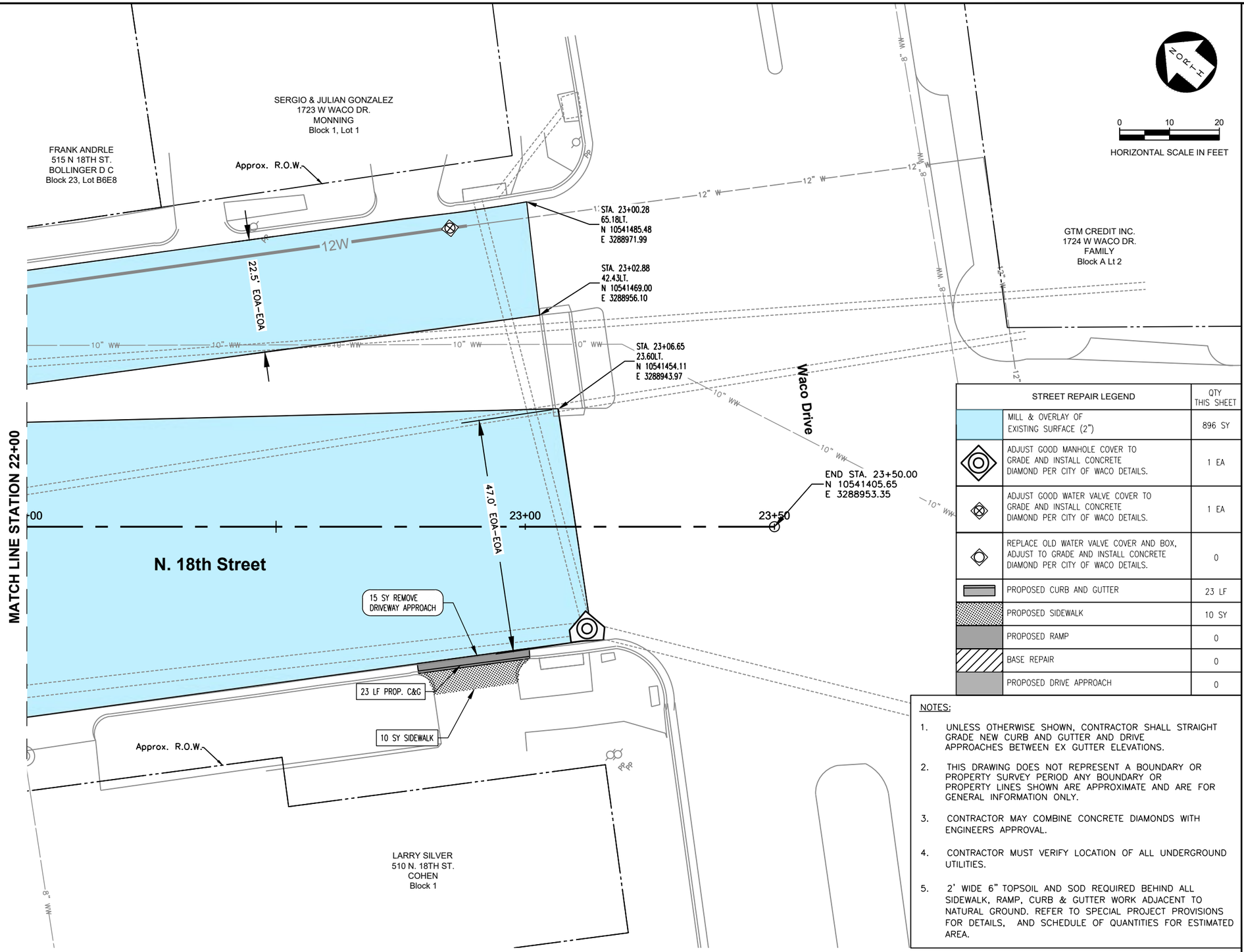
STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

Name: Date: 10-21-22

Design: DJP Approved: ARS
Checked: ARS Project Mgr.: ARS

Project No: 18ST2101B
Sheet Size: 11x17
Issue Date: Oct-22

Sheet No. C114



STREET REPAIR LEGEND		QTY THIS SHEET
	MILL & OVERLAY OF EXISTING SURFACE (2")	896 SY
	ADJUST GOOD MANHOLE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	1 EA
	ADJUST GOOD WATER VALVE COVER TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	1 EA
	REPLACE OLD WATER VALVE COVER AND BOX, ADJUST TO GRADE AND INSTALL CONCRETE DIAMOND PER CITY OF WACO DETAILS.	0
	PROPOSED CURB AND GUTTER	23 LF
	PROPOSED SIDEWALK	10 SY
	PROPOSED RAMP	0
	BASE REPAIR	0
	PROPOSED DRIVE APPROACH	0

NOTES:

1. UNLESS OTHERWISE SHOWN, CONTRACTOR SHALL STRAIGHT GRADE NEW CURB AND GUTTER AND DRIVE APPROACHES BETWEEN EX GUTTER ELEVATIONS.
2. THIS DRAWING DOES NOT REPRESENT A BOUNDARY OR PROPERTY SURVEY PERIOD ANY BOUNDARY OR PROPERTY LINES SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY.
3. CONTRACTOR MAY COMBINE CONCRETE DIAMONDS WITH ENGINEERS APPROVAL.
4. CONTRACTOR MUST VERIFY LOCATION OF ALL UNDERGROUND UTILITIES.
5. 2' WIDE 6" TOPSOIL AND SOD REQUIRED BEHIND ALL SIDEWALK, RAMP, CURB & GUTTER WORK ADJACENT TO NATURAL GROUND. REFER TO SPECIAL PROJECT PROVISIONS FOR DETAILS, AND SCHEDULE OF QUANTITIES FOR ESTIMATED AREA.

STREET DEMO (NOT COVERED IN REPAIR LEGEND)	
REMOVE DRIVEWAY APPROACH	15 SY

BENCHMARKS

PT.	NORTH	EAST	ELEV.	DESC.
100	10543070.79700	3287446.01100	541.54600	BS100–80DNS
101	10542575.40700	3287718.49000	530.86200	TS101–80DNS
102	10542260.83800	3288134.33100	512.26400	TS102–80DNS
103	10542034.89400	3288404.85000	498.20400	TS103–80DNS
104	10541601.44400	3288653.26200	482.79000	TS104–MAGNS
105	10541639.20700	3288687.88100	478.63400	TS104A–MAGNS

!!!WARNING!!!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE 'ONE CALL' LOCATOR SERVICE AT (800)344-8377 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

CITY OF WACO
PUBLIC WORKS
ENGINEERING DIVISION

KASBERG, PATRICK & ASSOCIATES, LP
CONSULTING ENGINEERS
TEMPLE, TEXAS 76501
Firm Registration No. F-510

2021 MILL AND OVERLAY PHASE 4

N. 18TH STREET - BOSQUE TO WACO DRIVE
STATION 22+00 TO END

NO.	REVISION	DATE

STATE OF TEXAS
ALVIN R. SUTTON, III
96530
LICENSED
PROFESSIONAL ENGINEER

Name: Date: 10-21-22

Design: DJP Approved: ARS
Checked: ARS Project Mgr.: ARS

Project No: 18ST2101B
Sheet Size: 11x17
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Sheet No. C115

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WATER METER VAULT AND LID - NOTES

1. STANDARD METER BOX FOR 3/4 IN. AND 1 IN. METERS IS A CARSON 1017 12 IN. BOX WITH SOLID POLYMER LID OR PRE-APPROVED EQUAL.

2. ALL 1 -1/2 IN. AND LARGER METERS SHALL BE SENSUS OMNI METERS WITH ITRON CONNECTORS.

3. THE STANDARD METER BOX FOR 1-1/2 IN. METERS IS AN OLDCASTLE SERIES 65 METER BOX OR POLYMER DFW65C-14-AF1T BODY. LID SHALL BE 65 C DFW POLYMER LID WITH AMI HOLE OR PRE-APPROVED EQUAL.

MINIMUM VAULT CHARACTERISTICS

MAIN SIZE	BY PASS	L	W	H	INSIDE DIMENSIONS
2 IN.	1 IN.	6'-0"	6'-0"	4'-5"	5'-0"X 5'-0"X 3'-5"
3 IN.	2 IN.	8'-6"	5'-6"	5'-6"	7'-6"X 4'-6"X 4'-6"
4 IN.	2 IN.	8'-6"	5'-6"	5'-6"	7'-6"X 4'-6"X 4'-6"
6 IN.	4 IN.	13'-0"	7'-0"	6'-0"	12'-0"X 6'-0"X 5'-0"

4. METERS 2 IN. AND LARGER SHALL BE INSTALLED IN A CONCRETE VAULT.

5. METERS 8 IN. AND LARGER REQUIRE PROJECT SPECIFIC DESIGN PLANS SEALED BY A PROFESSIONAL ENGINEER.

6. VAULTS SHALL HAVE A MINIMUM 12 IN. WORKING CLEARANCE, EXCEPT FOR PENETRATIONS WHICH SHALL HAVE 6 IN. OF CLEARANCE BETWEEN FIRST FITTING AND INSIDE FACE OF WALL.

7. CONCRETE VAULTS SHALL HAVE VAULT WALLS AND FOUNDATIONS OF A MINIMUM THICKNESS OF 6 INCHES.

8. SWEATED, GALVANIZED, OR PVC JOINTS SHALL NOT BE ACCEPTED. NON-LEADED BRASS, COPPER TUBING WITH THREADED OR COMPRESSION COUPLINGS, OR POLY PIPE WITH STAINLESS STEEL INSERTS WILL BE ACCEPTED.

9. THE METER IS TO BE LOCATED IN A NON-TRAFFIC GREEN SPACE IN THE RIGHT OF WAY. ALL OTHER LOCATIONS MUST BE APPROVED BY THE CITY ENGINEER.

10. WITH PRIOR APPROVAL FROM THE CITY, A METER MAY BE LOCATED IN AN AREA EXPOSED TO TRAFFIC. IN THIS CASE THE STANDARD BOX FOR METERS OF THESE SIZES IS AN OLDCASTLE SERIES 30 METER BOX WITH 1324 DFW POLYMER LID WITH AMI HOLE OR PRE-APPROVED EQUAL.WHERE METER BOX IS EXPOSED TO TRAFFIC, OR IN SIDEWALK, USE A CONCRETE BOX WITH DFW POLYMER LID WITH AMI HOLE.

11. ALL METER BY-PASS INSTALLATIONS SHALL BE LOCKABLE.

NON-TRAFFIC LOCATION

1. STANDARD ACCESS DOOR IS 2.5 FT. X 4 FT. CLEAR, ALUMINUM HATCHWAY AND SPRING ASSISTED. DOOR SHALL BE CAST IN AND MOUNTED FLUSH HINGED 1/4 IN. ALUMINUM DIAMOND PLATE COVER, WITH 1/4 IN. EXTRUDED ALUMINUM FRAME. HATCH TO BE FURNISHED WITH STAINLESS STEEL HARDWARE.

2. CONCRETE: CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. ALL CONCRETE JOINTS SEALED WATERTIGHT WITH MANUFACTURERS GASKET.

3. ALL WALLS AND SLABS SHALL BE DESIGNED FOR HS20 LOADING.

TRAFFIC LOCATION - REQUIRES PRIOR APPROVAL OF CITY OF WACO ENGINEER

1. STANDARD ACCESS DOOR IS 2.5 FT. X 4 FT. CLEAR, AND SPRING ASSISTED. DOOR SHALL BE CAST IN FLUSH.

2. SINGLE OR DOUBLE LEAF STEEL LID, DESIGNED TO WITHSTAND AASHTO HS20 LOADINGS.

3. VAULT SHALL BE PLACED ON A 6 IN. BASE OF 1 IN. WASHED ROCK.

4. CONCRETE DESIGN IN ACCORDANCE WITH AASHTO HS20 TRAFFIC LOADING USING 4200 PSI COMPRESSIVE STRENGTH ASTM A-706 STEEL REINFORCEMENT PER CALCULATION NUMBER. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. ALL CONCRETE JOINTS SEALED WATERTIGHT WITH MANUFACTURERS GASKET.

MANHOLE NOTES

1. PIPES LAID THROUGH MANHOLES ARE TO BE CAREFULLY REMOVED TO ALLOW ACCESS TO SEWER MAIN AFTER INVERT IS CONCRETED.

2. INVERT TO BE SHAPED AND FINISHED SMOOTH BY HAND FLOAT AND TROWEL.

3. STANDARD 4 FT. DIAMETER MANHOLES TO BE CONSTRUCTED ON PIPE 10 IN. AND SMALLER IN DIAMETER AND LESS THAN 10 FT. DEEP.

4. STANDARD 5 FT. DIAMETER MANHOLES TO BE CONSTRUCTED ON PIPE 12 TO 15 IN. DIAMETER AND LESS THAN 20 FT. DEEP. EXCEPT FOR THE CONE, MANHOLE RISER DIAMETER REDUCTIONS ARE NOT PERMITTED.

5. STANDARD 6 FT. DIAMETER MANHOLES TO BE CONSTRUCTED ON PIPE GREATER THAN 15 IN. IN DIAMETER. EXCEPT FOR THE CONE, MANHOLE RISER DIAMETER REDUCTIONS ARE NOT PERMITTED.

6. A MAXIMUM OF 2 IN. OF MORTAR MAY BE USED TO BRING RING AND COVER TO GRADE.

7. IN STREET SECTION ONLY, GRADE RINGS AND GROUT MAY BE APPLIED TO A MANHOLE CONE TO ALLOW FOR FUTURE ADJUSTMENT. TOTAL DEPTH OF GRADE RING AND GROUT SHALL BE BETWEEN 4 IN. MINIMUM AND 12 IN. MAXIMUM. GRADE RINGS AND COVER SHALL BE SECURED IN A SET BED OF GROUT.

8. MANHOLE COVERS SHALL HAVE THE WORDS "SANITARY SEWER", "CITY OF WACO", AND THE "FLYING W" LOGO RAISED ON THE OUTWARD FACE.

9. STANDARD DETAIL S-13 SHALL BE USED WHERE MANHOLES ARE INSTALLED IN UNDEVELOPED AREAS, SUCH AS FIELDS.

10. PRECAST CONCRETE MANHOLES, WITH APPROVED COATING, ARE PERMITTED. THE MANHOLES SHALL CONFORM TO CITY OF WACO MANHOLE DETAILS AND TO ASTM C-478. CONTRACTOR SHALL SUBMIT DESIGN INFORMATION ON PRECAST MANHOLES STAMPED BY A PROFESSIONAL ENGINEER FOR CITY ENGINEER'S APPROVAL. IF PRECAST MANHOLES ARE USED, THEY SHALL BE PLACED ON A BEDDING OF 6 IN. MINIMUM OF 3/4 IN. WASHED ROCK SEE NOTE 17.

11. MEASUREMENT DEPTH FOR PAYMENT OF MANHOLES SHALL BE FROM THE FLOWLINE TO THE TOP SURFACE OF THE MANHOLE COVER.

12. VACUUM AIR TEST MANHOLES AFTER GRADE RINGS AND COVER RINGS ARE IN PLACE IN ACCORDANCE TO TESTING PROCEDURES IN ASTM #C1244. (COVER OMITTED FOR TESTING).

13. SURFACE REPLACEMENT SHALL BE INCLUDED IN THE PRICE FOR THE MANHOLE.

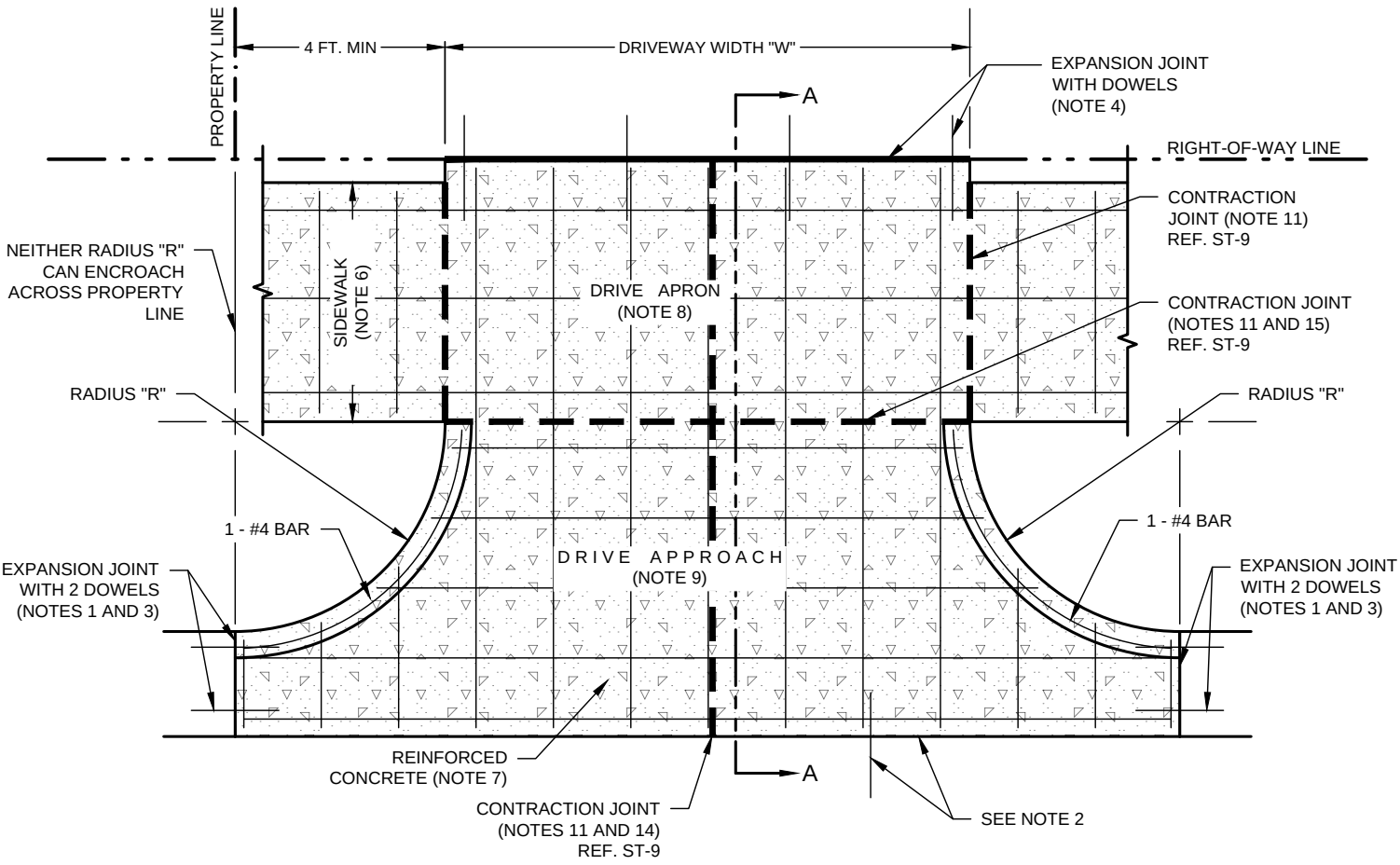
14. MANHOLE GRADE RINGS AND THE INTERIOR AND EXTERIOR SURFACES OF THE MANHOLE SHALL BE PRIMED WITH TNEMEC SERIES 218 FOLLOWED BY A COAT OF TNEMEC SERIES 436 AT 60.0 DRY MILS.

15. CAST IN PLACE MANHOLE WILL REQUIRE A SEALED DESIGN SUBMITTED BY A LICENSED PROFESSIONAL ENGINEER, AND APPROVED BY CITY ENGINEER. CAST IN PLACE BASE MUST BE MINIMUM 8 IN. THICK WITH #5 BARS @ 12 IN. OCEW AND SHALL EXTEND 1 FT. BEYOND MANHOLE.

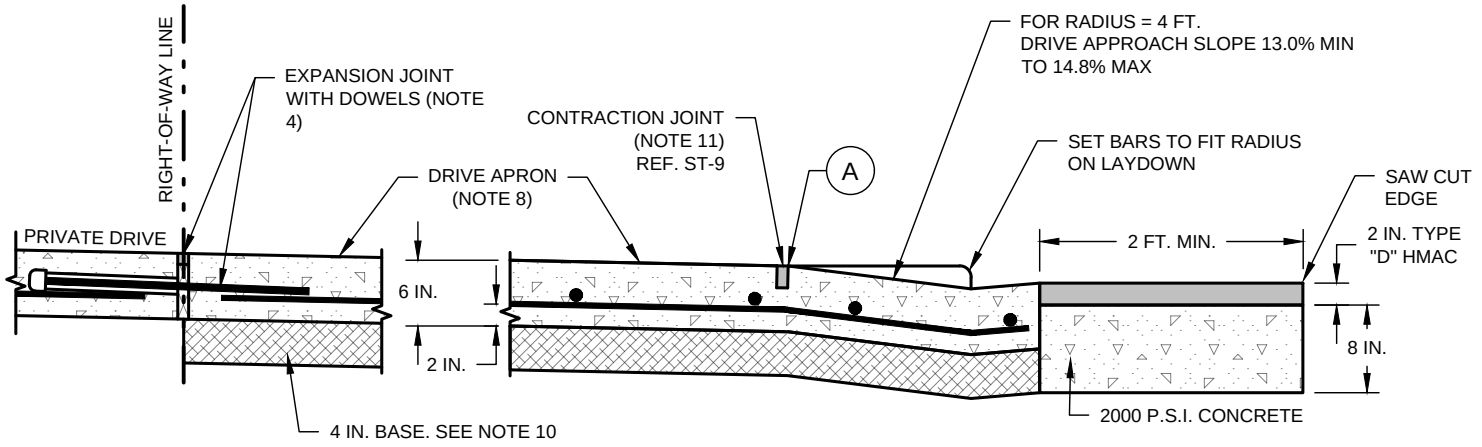
16. MAXIMUM MANHOLE SPACING IS 450 LF.

17. 3/4 IN. WASHED ROCK SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM A.2.a, CRUSHED STONE EMBEDMENT, OF SECTION 4.2 PART 2, EXCEPT THE GRADATION SHALL BE:

3/4 IN. WASHED ROCK	
SIEVE	PERCENTAGE RETAINED
1 1/2 IN.	0%
3/4 IN.	100%



PLAN VIEW



Ⓐ ELEVATION 1 IN. MIN. TO 2 IN. MAX ABOVE TOP OF "ADJACENT CURB FOR RADIUS = 4 FT.

SECTION A - NEW APPROACH ON EXISTING ASPHALT STREET

(NO SCALE)

STANDARD RESIDENTIAL DRIVE APPROACH

(NO SCALE)

SEE ST-23B FOR ADDITIONAL DETAILS

WACO

ENGINEERING DIVISION

REVISIONS

NO.	COMMENTS	BY	DATE
2	ADD NOTES	MZ	09/12/2022
1	ADD NOTE	MZ	01/31/2022
##	DESCRIPTION	FL	MM/DD/YYYY

DATE 01/31/2022

ST-23A

RESIDENTIAL DRIVE APPROACH GENERAL NOTES

NOTES:

1. WHEN CONSTRUCTING DRIVE AT EXISTING CURB, CURB MUST BE SAWED. IF THE RADIUS RETURN IS WITHIN 3 FT. OF AN EXISTING JOINT, THE EXISTING CURB AND GUTTER SHALL BE REMOVED AND REPLACED TO THE NEXT EXISTING JOINT.

2. ON CONCRETE STREETS: EXPANSION JOINT WITH DOWELS 3/4 IN. Ø X 24 IN. LONG SMOOTH DOWEL BARS WITH 3/4 IN. Ø PVC PIPE SLEEVE WITH CAPPED END AT 36 IN. OC. (REF ST-9)

3. EXPANSION JOINT: 2 EACH 3/4 IN. Ø X 24 IN. LONG SMOOTH DOWEL BARS WITH 3/4 IN. Ø PVC PIPE SLEEVE WITH CAPPED END. WHEN ADDING TO EXISTING DRIVE APPROACH, JOINT MUST BE SAW-CUT. REF. ST-9 FOR ADDITIONAL REQUIREMENTS.

4. EXPANSION JOINT WITH 3/4 IN. Ø X 24 IN. LONG SMOOTH DOWEL BARS WITH 3/4 IN. Ø PVC PIPE SLEEVE WITH CAPPED END AT 36 IN. OC. (REF ST-9)

5. SEE ST-4 STANDARD ALLEY SECTION FOR ADDITIONAL INFORMATION WHEN CONNECTING TO A RESIDENTIAL ALLEY.

6. SIDEWALK: SEE CODE OF ORDINANCES FOR REQUIREMENTS OF SIDEWALK.
   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

7. 6 IN. REINFORCED CONCRETE WITH #4 BARS AT 18 IN. OCEW (CONCRETE CHAIRS REQUIRED). CONTINUOUS THROUGH DRIVE APPROACH, DRIVE APRON, AND SIDEWALK.

8. DRIVE APRON. MAXIMUM SLOPE SHALL BE 1.5% FORMED. ANY SLOPE EXCEEDING 2% SHALL NOT BE ACCEPTED.

9. DRIVE APPROACH: FOR RADIUS = 4 FT., SLOPE SHALL BE 13.0% MIN. TO 14.8 % MAX.

10. 4 IN. 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. OR 4 IN. RECYCLED CRUSHED CONCRETE (TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM 247 FLEXIBLE BASE TYPE D, GRADE 1-2, EXCLUDING TYPE A MATERIALS, WITH A MINIMUM P.I. OF FOUR).

11. CONTRACTION JOINT MAY BE TOOLED. SEE ST-9 FOR DETAILS.

12. UPON REQUEST, CONTRACTOR SHALL SHOW INSPECTOR SIDEWALK COMPLIANCE.

13. FOR GRADING OF AREAS TO BE VEGETATED ENSURE CONCRETE WORK IS DONE TO PROVIDE FOR COMPLIANCE WITH CODE OF ORDINANCES SEC. 22-73. - DIMENSIONS--PARKWAY.
    (a) THE PARKWAY SHALL BE THAT SPACE BETWEEN THE FACE OF THE STREET CURB AND THE PROPERTY LINE. THIS PARKWAY SHALL HAVE A MINIMUM SLOPE OF ONE-QUARTER OF AN INCH PER ONE FOOT AND A MAXIMUM SLOPE OF ONE-HALF OF AN INCH PER ONE FOOT TOWARD THE STREET.

14. A LONGITUDINAL CONTRACTION JOINT SHALL BE PLACED AT CENTERLINE OF ALL DRIVEWAYS. FOR DRIVEWAYS WIDER THAN 20 FEET ADDITIONAL LONGITUDINAL CONTRACTION JOINTS SHALL BE PLACED, SPACED EQUALLY AT 10 FT. MAXIMUM SPACING.

15. IF DISTANCE BETWEEN INITIALLY REQUIRED TRANSVERSE JOINTS EXCEEDS 10 FT. THEN ADDITIONAL CONTRACTION JOINT(S) SHALL BE PLACED TO ENSURE DISTANCE BETWEEN TRANSVERSE JOINTS DOES NOT EXCEED 10 FEET. THESE ADDITIONALLY REQUIRED CONTRACTION JOINTS SHALL BE PLACED TO PROVIDE EQUAL SPACING BETWEEN TRANSVERSE JOINTS TO THE EXTENT PRACTICAL.

RESIDENTIAL DRIVEWAY STANDARDS		
DRIVEWAY TYPE	"W" DRIVEWAY WIDTH	"R" BACK OF CURB RADIUS
SINGLE	10 FT MIN ~ 12 FT MAX	4 FT MIN ~ 15 FT MAX
DOUBLE	18 FT MIN ~ 24 FT MAX	4 FT MIN ~ 15 FT MAX
ALLEY (NOTE 5)	MATCH ALLEY R.O.W. WIDTH	4 FT MIN ~ 15 FT MAX
SEE CITY OF WACO DEVELOPMENT GUIDE FOR MORE DETAILS		

SEE ST-23A FOR ADDITIONAL DETAILS

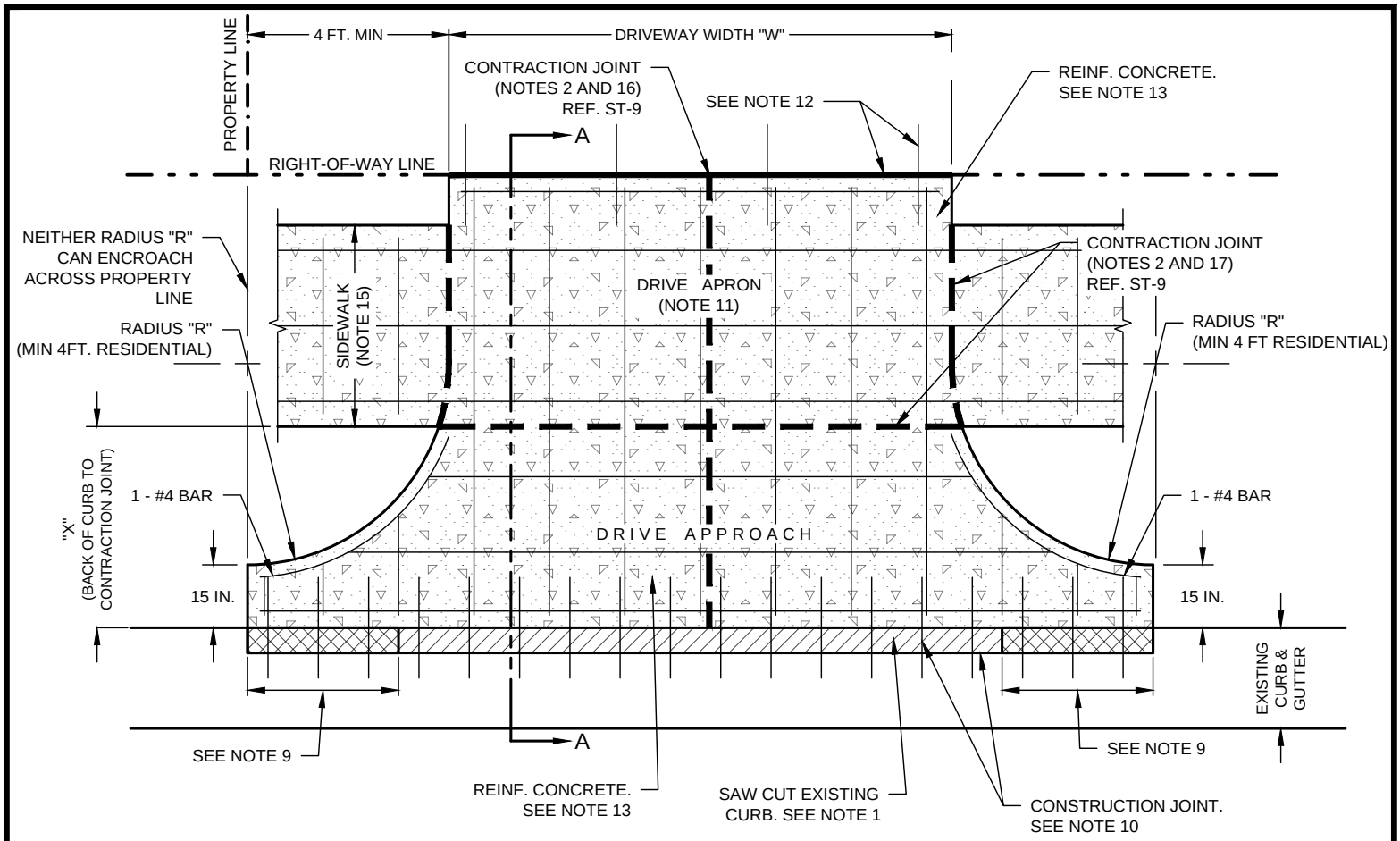
WACO

ENGINEERING DIVISION

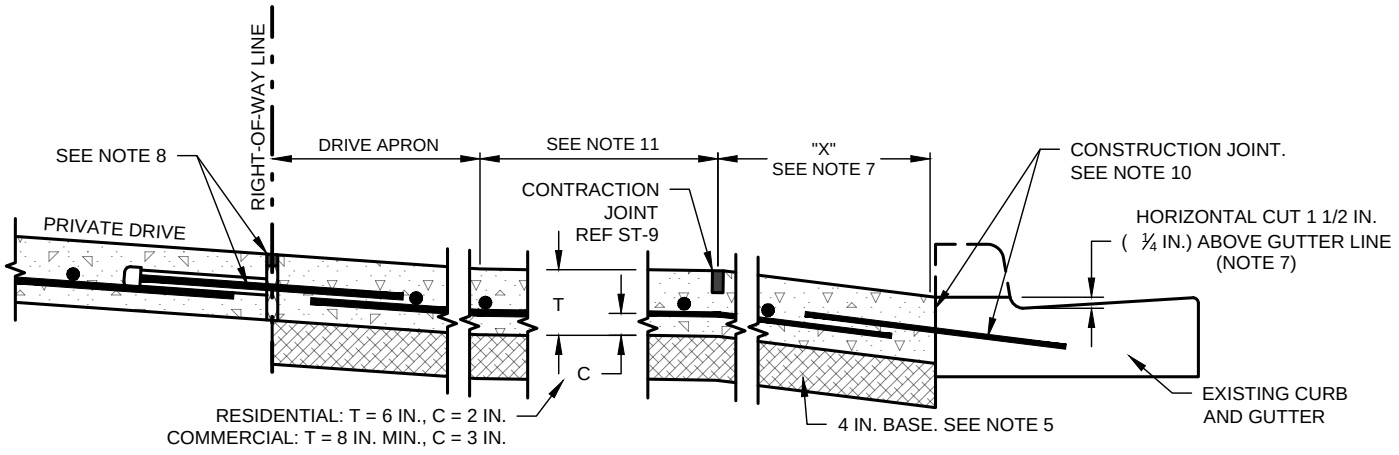
REVISIONS			
NO.	COMMENTS	BY	DATE
2	ADD NOTES	MZ	09/12/2022
1	ADD NOTES 11 AND 12	MZ	01/31/2022
##	DESCRIPTION	FL	MM/DD/YYYY

DATE 01/31/2022

ST-23B



PLAN VIEW



SECTION A - NEW APPROACH ON EXISTING STANDARD CURB AND GUTTER
WITH HORIZONTAL AND VERTICAL SAW CUT
(NO SCALE)

SAW CUT STANDARD CURB AND GUTTER DRIVE APPROACH

(NO SCALE)

SEE ST-25B FOR
ADDITIONAL DETAILS

WACO

ENGINEERING
DIVISION

REVISIONS			
NO.	COMMENTS	BY	DATE
3	ADD NOTES	MZ	09/12/2022
2	CHANGE 1 IN. HORIZ CUT TO 1 1/2 IN. HORIZ CUT	MZ	05/16/2022
1	REVISE NOTES; ADD 30 IN. TAPERED CUT NOTE	MZ	01/31/2022
##	DESCRIPTION	FL	MM/DD/YYYY

DATE
01/31/2022

ST-25A

SAW CUT STANDARD CURB AND GUTTER DRIVE APPROACH GENERAL NOTES

NOTES:

1. CURB MUST BE SAW CUT HORIZONTALLY AND WITH A UNIFORM TAPER PER DETAIL.

2. CONTRACTION JOINT MAY BE TOOLED. SEE ST-9 FOR DETAILS.

3. SEE ST-23A AND ST-23B STANDARD RESIDENTIAL DRIVEWAY APPROACH DETAILS FOR ADDITIONAL REQUIREMENTS.

4. SEE ST-24A AND ST-24B STANDARD COMMERCIAL DRIVEWAY APPROACH DETAILS FOR ADDITIONAL REQUIREMENTS.

5. 4 IN. 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." OR 4 IN. RECYCLED CRUSHED CONCRETE (TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM 247 FLEXIBLE BASE TYPE D, GRADE 1-2, EXCLUDING TYPE A MATERIALS, WITH A MINIMUM P.I. OF FOUR).

6. UPON REQUEST, CONTRACTOR SHALL SHOW INSPECTOR SIDEWALK COMPLIANCE.

7. DRIVE APPROACH:
   - RESIDENTIAL: X = 4 FT. MINIMUM.
     SLOPE SHALL BE 11.5% MIN TO 13.5% MAX WHEN X = 4 FT. AND HORIZONTAL CUT EQUALS 1 ½ INCH. ELEVATION AT TOP OF CONTRACTION JOINT SHALL BE 1 IN. MIN TO 2 IN. MAX ABOVE TOP OF "ADJACENT" CURB WHEN X = 4 FT. AND HORIZONTAL CUT EQUALS 1 ½ INCH.
   - COMMERCIAL: SEE ST-24A AND ST-24B

8. EXPANSION JOINT WITH 3/4 IN. Ø x 24 IN. LONG SMOOTH DOWEL BARS W/ PVC CAPPED SLEEVE AT 36 IN. OC (REF ST-9)

9. 30 IN. TAPERED CUT (HEIGHT REMAINING TRANSITIONS FROM 1 ½ IN. TO 6 IN.)

10. CONSTRUCTION JOINT WITH #4 DEFORMED TIE BARS 24 IN. LONG AT 12 IN. SPACING.

11. DRIVE APRON AT EXISTING OR FUTURE SIDEWALK. MAXIMUM SLOPE SHALL BE 1.5% FORMED. ANY CROSS-SLOPE EXCEEDING 2% SHALL NOT BE ACCEPTED.

12. EXPANSION JOINT W/ 3/4 IN. Ø x 24 IN. LONG SMOOTH DOWEL BARS W/ PVC CAPPED SLEEVE AT 36 IN. OC (REF ST-9)

13. REINFORCED CONCRETE:
   - RESIDENTIAL: 6 IN. REINFORCED CONCRETE WITH #4 BARS AT 18 IN. OCEW (CONCRETE CHAIRS REQUIRED). CONTINUOUS THROUGH DRIVE APPROACH, DRIVE APRON, AND SIDEWALK.
   - COMMERCIAL: MINIMUM 8 IN REINFORCED CONCRETE WITH #4 BARS AT 18 IN. OCEW (CONCRETE CHAIRS REQUIRED). CONTINUOUS THROUGH DRIVE APPROACH, DRIVE APRON, AND SIDEWALK.

14. SEE ST-4 STANDARD ALLEY SECTION FOR ADDITIONAL INFORMATION WHEN CONNECTING TO AN ALLEY.

15. SIDEWALK: SEE CODE OF ORDINANCES FOR REQUIREMENTS OF SIDEWALK.
    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

16. A LONGITUDINAL CONTRACTION JOINT SHALL BE PLACED AT CENTERLINE OF ALL DRIVEWAYS. FOR DRIVEWAYS WIDER THAN 20 FEET ADDITIONAL LONGITUDINAL CONTRACTION JOINTS SHALL BE PLACED, SPACED EQUALLY AT 10 FT. MAXIMUM SPACING.

17. IF DISTANCE BETWEEN INITIALLY REQUIRED TRANSVERSE JOINTS EXCEEDS 10 FT. THEN ADDITIONAL CONTRACTION JOINT(S) SHALL BE PLACED TO ENSURE DISTANCE BETWEEN TRANSVERSE JOINTS DOES NOT EXCEED 10 FEET. THESE ADDITIONALLY REQUIRED CONTRACTION JOINTS SHALL BE PLACED TO PROVIDE EQUAL SPACING BETWEEN TRANSVERSE JOINTS TO THE EXTENT PRACTICAL.

SEE ST-25A FOR ADDITIONAL DETAILS

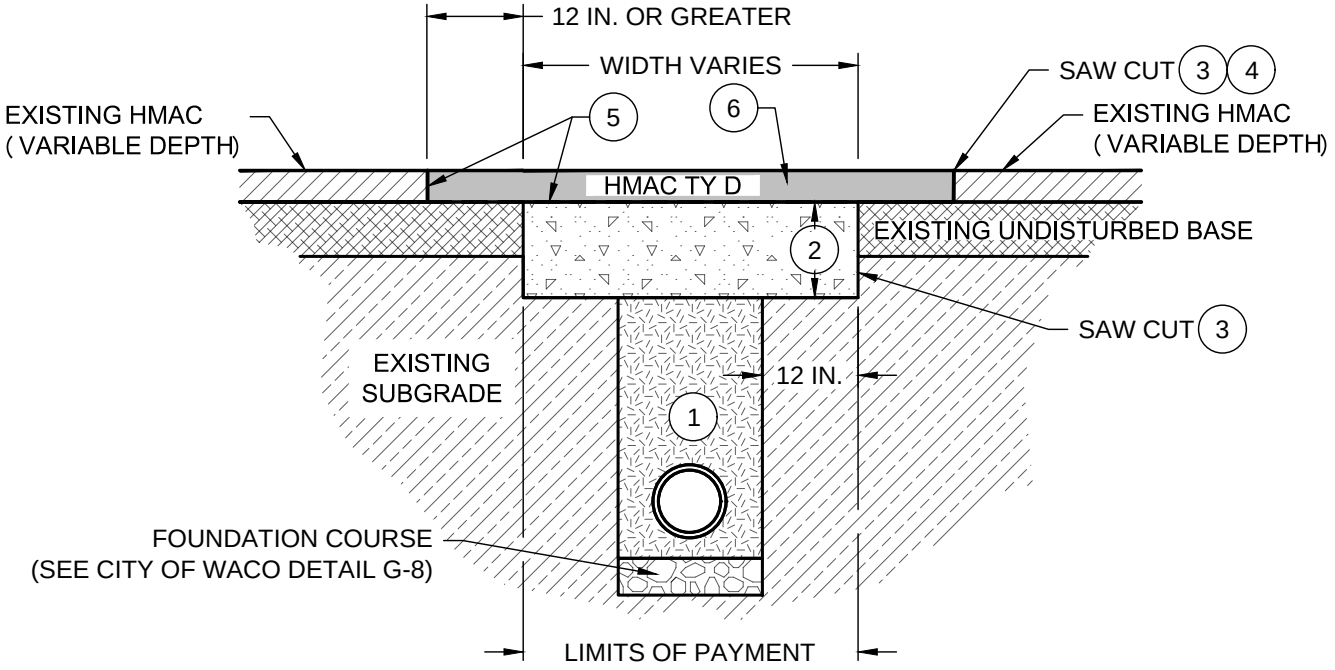
WACO

ENGINEERING DIVISION

REVISIONS			
NO.	COMMENTS	BY	DATE
1	ADD NOTES	MZ	09/12/2022
##	DESCRIPTION	FL	MM/DD/YYYY

DATE 08/24/2022

ST-25B



NOTES:

1. SEE G-7, G-8, G-9, AND G-10 FOR MATERIAL REQUIREMENTS AND INSTALLATION.

2. CONCRETE - MINIMUM 2,000 PSI.
   CLASS A INDUSTRIAL COLLECTOR & ARTERIAL = 12 IN.
   CLASS B RESIDENTIAL COLLECTOR & COMMERCIAL COLLECTOR = 10 IN.
   CLASS C LOCAL STREET = 8 IN.

3. SAW CUT EDGE OF EXISTING PAVEMENT ON ALL SIDES OF TRENCH TO PRODUCE A SMOOTH AND EVEN EDGE FOR SURFACE REPLACEMENT. EXISTING PAVEMENT SHOULD BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND IRREGULAR SHAPES.

4. SEE ST-33 AND/OR ST-34 FOR LIMITS OF THIS SAW CUTTING.

5. BONDING COURSE OF AE-P OR PRE-APPROVED EQUAL SHALL BE APPLIED TO SWEPT SURFACE AND ALLOWED TO BREAK.

6. CLASS A INDUSTRIAL COLLECTOR & ARTERIAL: HMAC (TYPE D) - MATCH EXISTING SURFACE THICKNESS WITH 3 IN. MINIMUM (GREATER THAN 3 IN. REQUIRES MORE THAN 1 LIFT).
   CLASS B RESIDENTIAL COLLECTOR & COMMERCIAL COLLECTOR: HMAC (TYPE D) - MATCH EXISTING SURFACE THICKNESS WITH 2 IN. MINIMUM.
   CLASS C LOCAL STREET: HMAC (TYPE D) - MATCH EXISTING SURFACE THICKNESS WITH 2 IN. MINIMUM.

7. IF BASE REPLACEMENT IS WITHIN 3 FT. OF PAVEMENT EDGE OR APPURTENANCE (CURB AND GUTTER, VALLEY GUTTER, ETC.), LIMITS OF CONCRETE AND SURFACE SHALL EXTEND TO PAVEMENT EDGE OR APPURTENANCE.

CLASS A, B & C (ASPHALTIC) PAVEMENT REPLACEMENT, TRENCH BACKFILL, & EMBEDMENT

(NO SCALE)

TRAFFIC CONTROL PLANS

GENERAL REQUIREMENTS

- MUST CONFORM WITH CURRENT TEXAS MUTCD STANDARD
- MULTIPLE PHASES OF CONSTRUCTION WILL REQUIRE A SEPARATE TCP FOR EACH PHASE. ALL MAY BE SUBMITTED AT ONE TIME FOR ACCEPTANCE.
- MUST BE DEVELOPED TO ADDRESS THE SPECIFIC CONDITIONS OF THE PLANNED CONSTRUCTION WORK ZONE LOCATION.
- MUST BE COMPILED BY TEXAS LICENSED PROFESSIONAL ENGINEER

TCP SUBMITTAL PROCESS:

- THE TCP SHALL BE SUBMITTED TO THE CITY OF WACO TRAFFIC ENGINEERING OFFICE 15 CALENDAR DAYS PRIOR TO THE ANTICIPATED START DATE, WITH COPY OF CURRENT CERTIFICATION.
- ALL SUBMITTALS SHALL BE IN PORTABLE DOCUMENT FORMAT (.pdf) AND SENT VIA EMAIL TO TCP_SUBMITTAL@WACOTX.GOV, EXCEPT THAT CITY OF WACO PROJECTS IN PROJECTMATES SHALL BE SUBMITTED THROUGH THE PORTAL AT: HTTPS://CITYOFWACO.PROJECTMATES.COM.

LOCAL ROADS

- TCP REQUIRED FOR ANY LANE OR ROAD CLOSURES EXCEEDING 4 HOURS
- MAY UTILIZE TX MUTCD TYPICAL DETAILS INSTEAD OF A SITE-SPECIFIC TCP

COLLECTORS & ARTERIALS

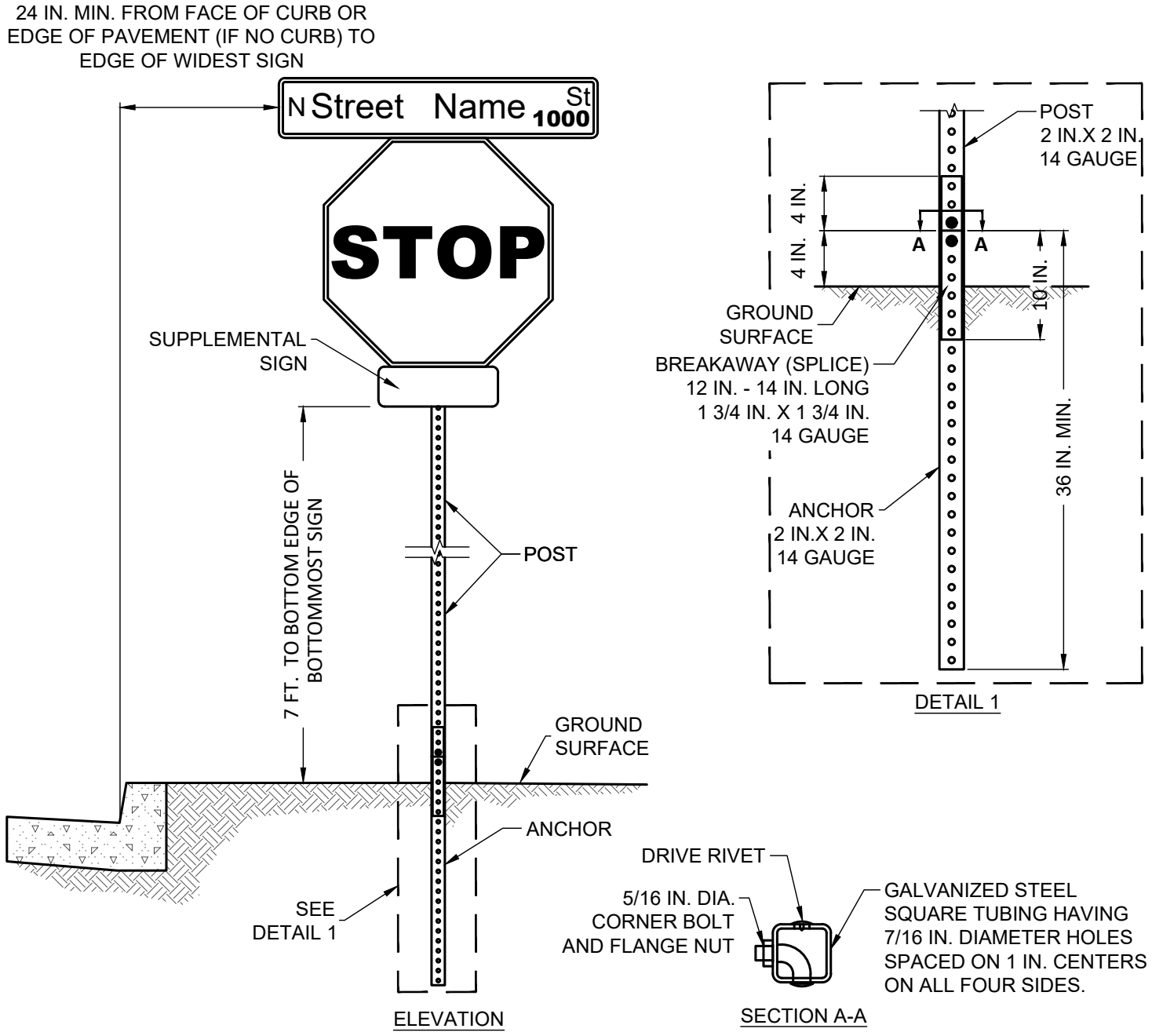
- TCP REQUIRED FOR ANY LANE OR ROAD CLOSURES REGARDLESS OF DURATION
- TCP MUST BE SITE-SPECIFIC TO ADDRESS THE SPECIFIC CONDITIONS OF THE CORRIDOR AND ACCESS TO ADJACENT PROPERTIES
- LANE CLOSURES WILL REQUIRE ARROW BOARDS
- ROAD CLOSURES MAY REQUIRE DYNAMIC MESSAGE BOARDS TO PROVIDE PRIOR WARNING AHEAD OF START DATE
- NO INTERFERENCE WITH TRAFFIC FLOW SHALL BE PERMITTED DURING THE HOURS OF 6:30 A.M. TO 9:30 A.M. AND 3:30 P.M. TO 6:30 P.M., MONDAYS THROUGH FRIDAYS, UNLESS DIRECTED OTHERWISE BY THE DIRECTOR OF PUBLIC WORKS. EMERGENCY CLOSURES DURING THESE HOURS SHALL BE WITH THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.

OTHER INFORMATION

- LANE OR ROAD CLOSURES ALONG STATE FACILITIES REQUIRE TXDOT APPROVAL
- REFERENCE CITY ORDINANCE: SEC. 23-25 TRAFFIC CONTROL

TCP IMPLEMENTATION

- CONTRACTOR SHALL PROVIDE A DESIGNATED CONTRACTOR'S RESPONSIBLE PERSON (CRP) FOR IMPLEMENTATION AND MAINTENANCE OF IMPLEMENTED TRAFFIC CONTROL PLAN.
- CONTRACTOR WILL HAVE TXDOT APPROVED TRAINING UNDER THE MATERIAL PRODUCER LIST HTTPS://WWW.TXDOT.GOV/BUSINESS/RESOURCES/PRODUCER-LIST.HTML



NOTES:

1. SIGN AND SIGN POST SHALL BE TWO SEPARATE PAY ITEMS.
2. SIGN POST SHALL BE PLUMB (TRUE VERTICAL) IN ALL DIRECTIONS, AND SIGNS SHALL BE BE PERPENDICULAR TO POST.
3. SIGN SHALL BE FASTENED TO POST USING JUMBO HEAD DRIVE RIVETS.
4. IF TRAFFIC CONTROL SIGN (E.G., STOP, YIELD) IS REQUIRED, IT SHALL BE LOCATED BELOW THE STREET NAME SIGN.
5. SUPPLEMENTAL SIGN(S) SHALL BE LOCATED BELOW THE TRAFFIC CONTROL SIGN.
6. DRIVE RIVETS SHALL BE JUMBO HEAD, SHALL HAVE 3/8 INCH DIAMETER SHANK, AND SHALL HAVE A 1 INCH DIAMETER HEAD.
7. 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.

SIGN POST INSTALLATION

(NO SCALE)

WACO

ENGINEERING DIVISION

REVISIONS			
NO.	COMMENTS	BY	DATE
##	DESCRIPTION	FL	MM/DD/YYYY

DATE 07/01/2022

T-6