



## Request for City Manager Signature (\$50,000 and higher)

|  |                                   |                 |
|--|-----------------------------------|-----------------|
| Project Name/Contract Number:                      | Wallace Addition Offsite Drainage | #219-129.3      |
| Department Contact / Department Name:              | Rohit Vij                         | Engineering/CIP |
| Date of City Council Approval:<br>(Past or Recent) | December 3, 2019                  |                 |
| Return Signed Document to:                         | Rohit Vij                         | Ext: 8133       |

Background/Purpose: A change in service is requested to provide additional services for Wallace Addition Offsite storm drain and Cape Road improvements including, field survey, environmental compliance, subsurface utility engineering, geotechnical investigation, design and bid phase services.

Funding:

| Project Number                              | Fund     | Phase  | GL Account     | Amount       |
|---|----------|--------|----------------|--------------|
| C731 Wallace Addition Offsite Drainage Imps | Drainage | Design | 51036370-70200 | \$515,447.00 |
|   |          |        |                |              |

**Reviewed / Approved:**

|                               |                  |       |                 |
|-------------------------------|------------------|-------|-----------------|
| User Department Director:     | <i>Lauri May</i> | Date: | <i>10/19/20</i> |
| Purchasing / Contracting POC: |                  | Date: |                 |
| Finance Director: (CDBG-DR)   |                  | Date: |                 |
| Purchasing Manager:           |                  | Date: |                 |
| Other Depts. as needed        |                  |       |                 |

**ATTACHMENT D**

**AUTHORIZATION OF CHANGE IN SERVICES  
CITY OF SAN MARCOS, TEXAS**

**PROJECT: Wallace Addition Offsite Drainage (Contract #219-129.3)  
CONSULTANT: BGE, Inc.**

**AUTHORIZATION NO.: 1**

**ORIGINAL CONTRACT DATE: December 3, 2019**

**AUTHORIZATION DATE:**

**WORK TO BE ADDED TO OR DELETED FROM SCOPE OF SERVICES**

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A change in service is requested to provide additional services for Wallace Addition Offsite storm drain and Cape Road improvements including, field survey, environmental compliance, subsurface utility engineering, geotechnical investigation, design and bid phase services

Previous Change In Services

#NA

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|   |                     |
|---|---------------------|
| Previous contract amount:                 | <u>\$165,105.00</u> |
| Net increase/decrease in contract amount: | <u>\$515,447.00</u> |
| Revised contract amount:                  | <u>\$680,552.00</u> |

Requested by:

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

Date: 10/19/20 \_\_\_\_\_

Roman D. Grijalva, Vice President

\_\_\_\_\_  
Printed name, title

Approved by:

City of San Marcos:

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

By: \_\_\_\_\_  
Bert Lumbreras, City Manager

**Exhibit 1**  
**Supplemental Scope and Fee Proposal**  
**for Change in Service #1**



## **PROJECT BACKGROUND & INTRODUCTION**

The Wallace Addition Drainage Improvements Project Preliminary Engineering Report (PER) dated August 2020 evaluated various offsite drainage improvements to reduce the flood risk to the Wallace Addition subdivision and surrounding areas. Drainage Alternative B as described in the report will be designed under this Change in Service #1 to existing professional services agreement 219-129.3. These drainage improvements consist of approximately 3,000 feet of reinforced concrete box culverts and associated stormwater collection system from Staples Road within a new drainage easement outfall along AE Wood State Fish Hatchery property to the San Marcos River. Also, approximately 1,000 feet of new concrete channel will be constructed to replace the existing grass channel which begins at Staples Road and runs parallel to Tampico Street and then Cape Road downstream to Flores Street. New culverts will be constructed underneath Monterey Street and Flores Street and the existing U-turn roadway at Tampico/Tamper Street will be removed to make room for the new concrete channel.

The vacant parcel situated between the existing Wallace Addition subdivision and the San Marcos River (River) has recently been purchased by Hays County. Although final horizontal alignments are undetermined at this time, both Cape Road and AE Woods stormwater outfalls will continue downstream into this parcel toward the River. This area contains a water body (pond) which is planned to be retrofitted to provide peak flow mitigation (attenuation) and water quality treatment to the extent practicable prior to outfall to the River. Cape Road will be reconstructed from Monterrey Street to Flores Street. The reconstruction will include full depth pavement, sidewalks on the south/east side of Cape Road, an adjustment to the turning radius at Flores Street, and parking along the north/west side of the road as space permits and the City approves. Finally, the Cape Road/Flores Street intersection will be designed to accommodate a future sidewalk connection with ADA requirements along Cape Road north of the intersection.

## **SCOPE OF SERVICES**

The following scope of services defines the tasks recommended to prepare final construction plans and specifications, coordinate with City, State, and Federal agencies, and provide limited engineering services through the Project's bid phase. The various tasks and deliverables are to be performed and submitted in accordance with the City of San Marcos (City) Design and Construction Guide, and approved project schedule and budget.

### **TASK 01      PROJECT MANAGEMENT**

#### **TASK 01A     MONTHLY REPORTS**

BGE will prepare monthly written progress reports for the duration of the Design Phase. The Project's schedule will be prepared prior to the onset of the Project's Notice-to-Proceed and will be updated as necessary and reissued to the City and Project Team throughout the design phase. The schedule will estimate the completion of major Project milestones in the Design and Bid Phases.

#### **TASK 01B     PROJECT MEETINGS/CONFERENCES**

Project Meetings/Conferences: BGE staff will attend and/or arrange for conferences at monthly intervals with the City for the purposes of describing completed design activities and review of schedule for

completion of remaining activities. Meetings are assumed to be located at the City of San Marcos offices. Other meetings may be held via conference calls.

#### **TASK 01C      QUALITY CONTROL PLAN (QCP)**

BGE will implement and manage the Project QCP to reflect the proposed scope of work and team for the preparation of final construction documents. BGE will provide independent quality control reviews of the bid documents and supporting calculations at the 60% interim 60%, 90%, and 100% milestones.

#### **TASK 02      DATA COLLECTION AND REPORTS**

The following data collection tasks will be initiated upon receipt of the design phase notice to proceed.

##### **TASK 02A      FIELD SURVEY (DESIGN)**

BGE will perform field surveys and related office computations and drafting for collecting information required for design.

Such surveys will meet the following contract requirements:

- Horizontal and vertical control adequately documented on the final plans.
- Staking and referencing of points of intersections (PI's), points of curvature (PC's), points of tangency (PT's), and benchmarks (BM's) necessary to establish the Project construction in the field.
- If necessary, establish Static GPS Control Monuments with U.S. Geological Survey (USGS) NAD 83 (2011 Adjustment, Epoch 2010) and NAVD 88
- Horizontal control for facilities shall be on the Texas State Grid Coordinate System Central Zone Grid Coordinates carried to second-order accuracy to permit actual construction staking to third order accuracy.
- The vertical control shall be based on USGS NAVD 88 datum and BM's shall be established not more than 1000 feet apart at an accuracy of 0.01 feet.
- Visible topographic features will be tied to the Project baseline(s) or centerline(s) and will include, but not limited to, existing property or lease lines, property or lease corners, utilities and appurtenances, roadways, structures, railroad structures, trees over eight inches in diameter, and other features within the limits of construction and twenty-five (25) feet beyond.
- Project control must be complete and staked in the field at the time of advertisement for bid so that construction staking can be accomplished immediately thereafter, by others.
- 8-inch caliper or larger trees will be surveyed within or adjacent to the projected impacted areas.

Additionally:

- "Heritage" trees will only be labeled on the drawing with caliper size and identification of tree species.
- For non-ditch/creek areas, BGE will provide a topographic survey with 1' contours within the survey limits.
- For ditch/creek areas, BGE will provide channel cross sections spaced at no less than 50' apart, delineating the flow line, toe, and high banks.
- Survey data will be taken at all geotechnical bores, infiltration tests, and SUE locate points.

## **TASK 02B ENVIRONMENTAL COMPLIANCE DOCUMENTATION**

The proposed project is assumed to be locally funded and not subject to National Environmental Policy Act (NEPA) requirements. Environmental compliance documentation will be prepared as described below to comply with environmental regulations. Should federal funding be identified for the proposed project, NEPA requirements would be triggered and additional compliance efforts would need to be completed. These additional tasks are covered under **NEPA COMPLIANCE DOCUMENTATION** below.

### **Section 404 of the Clean Water Act Jurisdictional Determination Report**

BGE will provide a professional opinion in determining the presence or absence of jurisdictional waters on the Tract per Section 404 of the Clean Water Act and the newly implemented Navigable Waters Protection Rule as regulated by the U.S. Army Corps of Engineers (USACE). BGE will deliver a Jurisdictional Determination Report and .kmz of potential jurisdictional features. The limits of jurisdictional water features will be provided for inclusion in the design plans in .kmz format.

### **Endangered Species Act and Texas Parks and Wildlife Code Analysis**

BGE will complete an analysis of State and Federal listed species for the project area to document compliance with the Endangered Species Act and Texas Parks and Wildlife Code. BGE will prepare an analysis report documenting preliminary findings and any necessary next steps (i.e. habitat survey, species survey, etc.).

### **Antiquities Code of Texas and Section 106 of the National Historic Preservation Act**

BGE will conduct a desktop review and archeological background study for the project area and submit a consultation initiation request to the Texas Historical Commission (THC) via the electronic THC Review and Compliance (eTRAC) system. The purpose of coordination will be to determine if further studies or surveys are warranted for the proposed project (not included in this scope of services).

### **Hazardous Materials Analysis Memorandum**

Preliminary review of the TCEQ known hazardous material sites identified that the project area is at a minimum, adjacent to a Superfund site and a Leaking Petroleum Storage Tank site. BGE will conduct research into the status of these sites. A memorandum will be completed to summarize findings and recommend if additional analysis is warranted.

## **NEPA COMPLIANCE DOCUMENTATION**

If Federal funding is identified for the proposed project, additional compliance efforts would need to be completed and the project schedule will need to be revisited. Results from previously completed environmental tasks would be utilized and incorporated into the NEPA documentation, as applicable. It is anticipated that funding would come through the Department of Housing and Urban Development (HUD) Community Development Block Grant program.

### **Department of Housing and Urban Development Environmental Assessment**

Environmental assessments are prepared under NEPA to determine whether a project requires an environmental impact statement or a finding of no significant impact. BGE will follow HUD guidance to complete the required environmental assessment. NEPAassist will be accessed to provide preliminary screening of environmental assessment indicators for the project area to streamline the review process and identify important environmental issues at the earliest stages of project development. *Part 58 Environmental Assessment Form* (December 2013) will be completed with required attachments. No additional reports/forms are included such as the *Additional Factors to Consider for Environmental Assessments Form* since it is assumed all resources will be covered in the EA.

## TASK 02C GEOTECHNICAL INVESTIGATION AND REPORT

See attached Scope of Services from Arias and Associates, Inc. (Exhibit 4).

## TASK 02D SUBSURFACE UTILITY ENGINEERING (SUE)

See attached Scope of Services from The Rios Group (Exhibit 5).

## TASK 03 CONTRACT DOCUMENTS

For construction to proceed for the project, final bid documents must be prepared and approved, and required permits obtained. Contract documents consist of construction plans, specifications, and cost estimates for the project. The development of contract documents will involve the following milestones: 60% interim, 60% Preliminary Design Documents; 90% Final Design Documents; and 100% Final Construction Documents.

**60% Interim Conceptual Design Documents** - Preparation will start immediately upon receipt of the Design Phase Notice-to-Proceed and will be based upon the final PER and best available information available at the time of preparation.

The 60% interim documents will include:

- QA/QC (Task 01C)

**60% Preliminary Design Documents** – Preparation of 60% documents will start immediately upon receipt of the 60% Interim Documents QC comments from the City. Documents will represent project proposed infrastructure, field survey, and Level ‘A’ SUE data.

The 60% preliminary design documents will include:

- General Information and Drainage Plans Sheets (Task 03B and 03C)
- 60% Construction Cost Estimate (Task 03H)
- QA/QC Confirmation (Task 01C)
- Standard Details List (Task 03G)
- Specifications List (Task 03G)
- Special Provisions (Task 03G)
- Plan Review Checklist (Tasks 03B, 03C, 03D, and 03E)
- Erosion and Sediment Control (EPIC) Plan Sheet(s) (Task 03E)
- Utility Coordination and Utility Relocation Plan Sheets (Task 03D)
- Utility Conflict Matrix (Task 03D)
- Roadway Plan Sheets (Task 03N)
- Traffic Control Plan Sheets (Task 03O)
- Tree Survey (Task 02A)
- Tree Mitigation Plans/Table and Landscape Irrigation Design (Task 03F)
- Easement Acquisitions Map (Task 03K)
- Stormwater Facility Design Plans (Task 03L)

**90% Final Design Documents** – Preparation of the 90% documents will start immediately upon receipt of 60% QC comments from the City.

The 90% documents will include:

- Responses to one (1) round of 60% City comments.

- 60% document items as listed above.
- Draft Project Manual (Task 03G) with any special provisions or specifications provided.
- Updated cost estimate.
- Easement Acquisitions Map (Task 03K)

**100% Final Construction Documents** – BGE will prepare 100% final bid documents, which incorporate the City’s comments, and submit to the City for final review prior to bid.

The 100% documents will include:

- Responses to one (1) round of 90% comments.
- 90% document items as listed above.
- Final Project Manual (Task 03G) with any special provisions or specifications provided.
- Updated cost estimate (Task 03H).
- Final design calculations (H&H and ICM Model update) Task 03A.

Bid documents will not be printed until City authorizes BGE to do so. (Task 03J).

#### **TASK 03A DESIGN CALCULATIONS**

This task includes the update of the H&H calculations and ICM model. The ICM model will be updated and submitted once at the 100% contract document submittal.

#### **TASK 03B GENERAL INFORMATION PLAN SHEETS**

BGE will prepare General Information sheets to include a project cover sheet, sheet index, general notes, abbreviations, legends, and overall project maps, including any proposed phasing. General Information plans will be provided at the 60%, 90% and 100% contract document submittals.

#### **TASK 03C DRAINAGE PLAN SHEETS**

BGE will prepare drainage plans, details, and specifications for the project. The drainage plan sheets to include the project drainage area map, summaries of hydrologic and hydraulic calculations, existing condition maps, demolition and security access plans, site and grading plan, storm drain plan and profiles, and standard site and drainage details. City of San Marcos and TXDOT standard details and specifications will be used whenever possible. Drainage plans will be provided at the 60%, 90% and 100% contract document submittals.

#### **TASK 03D UTILITY COORDINATION AND UTILITY RELOCATION PLAN SHEETS**

Not included in this phase of work. Services to be added after completion of SUE field work and refinement of design. Electric, water, wastewater, and reclaimed water to be relocated by contractor. Gas to be relocated by private utility.

#### **TASK 03E EROSION AND SEDIMENTATION CONTROL (EPIC) PLAN SHEET(S)**

BGE will prepare ESC plan sheets to delineate the project’s limits of construction and to protect existing conditions from erosion and sedimentation due to construction. Plans will be prepared per City of San Marcos standard details and requirements. ESC (EPIC) Plans will be provided at 60% 90%, and 100% contract document submittals.

#### **TASK 03F TREE MITIGATION PLANS AND LANDSCAPE IRRIGATION DESIGN**

Not included in this phase of work. Services to be added after refinement of design.

### TASK 03G PROJECT MANUAL

The City will prepare the front-end documents and compile/assemble the manual for bid. BGE will assemble specifications (90% documents) and use City Standard Specifications whenever possible. It is assumed that the Project will not require a revision or special provision to the specifications for this project. If said documents become necessary, BGE will provide an additional services scope and fee for the City's approval prior to completion of said work. TXDOT bid package will not be utilized for this project.

### TASK 03H CONSTRUCTION COST ESTIMATE

BGE will prepare and update construction cost estimates at each major project milestone (60%, 90%, and 100%). The estimate will utilize City of San Marcos and TXDOT pay items and appropriate contingencies. If the estimate exceeds the City construction budget at a milestone, the consultant shall consult with the City as to what action to take. If the City requires revisions to the project design to reduce the project construction cost, the Consultant shall, for additional compensation, then make such revisions to the project construction documents. BGE will provide an additional services scope and fee for the City's approval prior to completion of said work.

### TASK 03J SUBMITTALS

BGE will provide three (3) full and eight (8) half size (11"x17") copies of final bidding documents (consisting of plans, details, and the Project Manual). In addition, BGE will provide 1 copy of electronic files on CD-ROM, or other comparable durable electronic media containing the final Bidding Documents in both .pdf and AutoCAD format.

Phased (60% interim, 60%, 90%, and 100%) documents will be submitted to the City for review and comment. A 28-calendar day review by the City is assumed at each milestone review. BGE will formally respond to one (1) round of City comments per phase (60% interim, 60%, 90%, and 100%). BGE will provide an additional services scope and fee for the City's approval for any additional round of comments.

### TASK 03K EASEMENT ACQUISITION SUPPORT

BGE will provide an Easement Acquisitions Map to the City to acquire permanent and temporary easements for construction. If any other exhibits or tasks including metes and bounds survey is required those services will be added. BGE is not responsible for acquisition of any real estate associated with the Project.

### TASK 03L STORMWATER FACILITY DESIGN PLANS

Not included in this phase of work. Services to be added. As previously stated, the vacant parcel situated between the existing Wallace Addition subdivision and the San Marcos River (River) has recently been purchased by Hays County. Once additional survey and geotechnical data is collected this existing water body will be further analyzed and design plans will be developed to provided peak flowrate mitigation and stormwater quality treatment to the extent practicable.

### TASK 03M TXDOT COORDINATION

Staples Road (FM 621) within the project limits is a TXDOT right-of-way. As such BGE will coordinate the design documents with this Agency. BGE will provide plans to TXDOT for review at the 60%, 90% and 100% submittals. These reviews are anticipated run concurrent with the City review submittals. Up to 3 response to review comments will be addressed. No in person meetings are anticipated.



### **TASK 03N ROADWAY PLAN SHEETS**

BGE will prepare roadway plans, details, and specifications for the project. The roadway plan sheets to include the roadway plan and profile sheets, roadway typical sections, roadway cross sections at 50-foot intervals, an intersection layout and grading plan for the Cape Road and Flores Street intersection, table showing driveway details along Cape Road, signing and pavement marking plan and roadway standard details. City of San Marcos and TXDOT standard details and specifications will be used whenever possible. Roadway plans will be provided at the 60%, 90% and 100% contract document submittals.

### **TASK 03O TRAFFIC CONTROL PLAN SHEETS**

BGE will prepare a traffic control plan for the construction along Cape Road. City of San Marcos and TXDOT standard details and specifications will be used whenever possible. Traffic Control plans will be provided at the 60%, 90% and 100% contract document submittals.

### **TASK 04 BID SERVICES**

#### **04A Pre-Bid Conference**

BGE shall participate in the pre-bid conference.

#### **04B Addenda**

BGE shall prepare and issue addenda (a total of 3 addenda assumed).

#### **04C Bid Review**

BGE shall analyze Contractor bids and qualifications and provide a recommendation to the City regarding the bidder(s) qualifications within (7) calendar days following the bid opening.

#### **04D Conformed Plans (As- Built)**

BGE shall submit a conformed set of construction plans including the following: (1) 3 full size and 3 half size (11"x17") Plans; (2) 3 Project Manuals, and (3) copies of electronic files.

### **TASK 05 CONSTRUCTION PHASE SERVICES**

Not included in this phase of work. Services to be added prior to construction phase of work.

### **INFORMATION TO BE PROVIDED BY OWNER (within or adjacent to the project area)**

1. All available utility location information, record drawings, and field locations.
2. All available existing geotechnical information.
3. Right of Entry authorization for BGE representatives on private property. Property list to be provided by BGE.

### **ADDITIONAL SERVICES**

The Scope of Services and the budget presented herein does not include the following services. At such time that it is determined that these services or other additional services may be required, BGE will obtain authorization from the City prior to performing any of these additional services. Also, it is assumed that Federal Funding will not be utilized.

1. Construction phase services.
2. Travel and subsistence required of BGE and authorized by City to points other than local governmental agencies, consultant offices, and Project site.
3. Significant revisions by the City after receiving initial direction by City staff or after obtaining approvals from City and other permitting authorities.

4. Unless specifically stated otherwise, filing, review, permit, inspection, or other fees assessed by City, County, or State permitting authorities are excluded.
5. FEMA CLOMR/LOMR coordination, submittals, and approvals.
6. U.S. Army Corp of Engineers (USACE) Section 404 permitting, coordination, or approvals.
7. U.S. Fish and Wildlife Service (USFWS) consultation or approvals.
8. Texas Parks and Wildlife (TPWD) coordination or approval.
9. Surveys including threatened or endangered species presence/absence, species habitat, karst, geologic, archeological, hazardous materials (Phase I, Phase II, or sampling).
10. Structural details/plan sheets and structural design are not included but may be added as additional services.
11. Existing wastewater, water, reclaimed water, electric, and gas line relocations are not included and will be added as additional services.
12. Landscape planning or architecture services.
13. Irrigation system design for landscaping and/or tree mitigation.
14. Survey support (metes and bounds) for easements acquisition
15. Any other TXDOT coordination beyond submittal reviews.

## **SCHEDULE**

Upon receiving Notice-to-Proceed (NTP) Final Construction Documents and all permits are scheduled to be completed in approximately 15 months. This schedule will be reevaluated in conjunction with additional services to be determined around 60% completion. A six (6) month bid advertisement and award period would immediately follow the completion of Final Construction Documents. An 18-month construction duration is anticipated.

## **COMPENSATION**

Compensation for the above Scope of Services shall be in accordance with the terms of the existing professional services agreement 219-129.3. An itemization of the labor fees and expenses is included in the attached fee schedule, which includes the projected fees of all subconsultants. All compensation will be on an **Hourly-Not-to-Exceed (NTE)** basis in accordance with the terms of our Professional Services Agreement. The total compensation for the above Scope of Services is tabulated below:

|                                  |                  |
|----------------------------------|------------------|
| <b>Design Phase:</b>             | <b>\$498,929</b> |
| <b>Bid Phase:</b>                | <b>\$16,518</b>  |
| <b>Construction Phase:</b>       | <b>\$0 (TBD)</b> |
| <b>Total Compensation (NTE):</b> | <b>\$515,447</b> |

**EXHIBIT 2**  
**City of San Marcos - Engineering & Capital Improvements Department**  
**FEE PROPOSAL BREAKDOWN**

Project: **Wallace Addition Drainage Improvements Final Design**  
 Prime Consultant: **BGE, Inc.**  
 Proposal Date: **10/15/2020**  
 Prepared By: **Ken Carper, PE**

|   | Principal (QA/QC)<br>\$271.00 | Sr. Environmental Scientist<br>\$240.00 | Sr. Project Manager<br>\$234.00 | RPLS<br>\$212.00 | Sr. Project Engineer<br>\$219.00 | Project Engineer<br>\$177.00 | EIT II<br>\$130.00 | Survey Crew<br>\$165.00 | Environmental Scientist II<br>\$88.00 | CADD Tech III / Eng Tech III (GIS)<br>\$135.00 | Admin/Clerical<br>\$105.00 | TASK HOURS        | TASK / PHASE FEE        |
|---|-------------------------------|---|---------------------------------|------------------|----------------------------------|------------------------------|--------------------|-------------------------|---------------------------------------|--|----------------------------|-------------------|-------------------------|
| <b>TASK CODE AND DESCRIPTION</b>  | <b>HOURS</b>                  | <b>HOURS</b>                            | <b>HOURS</b>                    | <b>HOURS</b>     | <b>HOURS</b>                     | <b>HOURS</b>                 | <b>HOURS</b>       | <b>HOURS</b>            | <b>HOURS</b>                          | <b>HOURS</b>                                   | <b>HOURS</b>               | <b>TASK HOURS</b> | <b>TASK / PHASE FEE</b> |
| <b>Task 1 - Project Control/Management</b>                                | <b>48</b>                     | <b>0</b>                                | <b>176</b>                      | <b>0</b>         | <b>14</b>                        | <b>30</b>                    | <b>6</b>           | <b>0</b>                | <b>0</b>                              | <b>0</b>                                       | <b>16</b>                  | <b>290</b>        | <b>\$65,028.00</b>      |
| a. Monthly Reports (18) and Subconsultant Coordination                    |                               |   | 143                             |                  |                                  |                              |                    |                         |                                       |  | 4                          | 147               | \$33,882.00             |
| b. Progress (4) and Public Information (2) Meetings/Consultation          |                               |   | 30                              |                  | 8                                | 30                           |                    |                         |                                       |  | 12                         | 80                | \$15,342.00             |
| c. QA/QC Reviews (4)  | 48                            |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            | 48                | \$13,008.00             |
| d. TXDOT Coordination (Staples Road)                                      |                               |   | 3                               |                  | 6                                | 6                            |                    |                         |                                       |  |                            | 15                | \$2,796.00              |
| <b>Task 2 - Data Collection and Reports</b>                               | <b>15</b>                     | <b>76</b>                               | <b>0</b>                        | <b>12</b>        | <b>0</b>                         | <b>0</b>                     | <b>0</b>           | <b>154</b>              | <b>152</b>                            | <b>56</b>                                      | <b>0</b>                   | <b>465</b>        | <b>\$71,195.00</b>      |
| a. Design Survey  |                               |   |                                 | 12               |                                  |                              |                    | 154                     |                                       | 56   |                            | 222               | \$35,514.00             |
| b. Environmental Compliance Documentation (non-NEPA)                      | 10                            | 44                                      |                                 |                  |                                  |                              |                    |                         | 82                                    |  |                            | 136               | \$20,486.00             |
| c. Environmental Compliance Documentation (NEPA EA)                       | 5                             | 32                                      |                                 |                  |                                  |                              |                    |                         | 70                                    |  |                            | 107               | \$15,195.00             |
| <b>Task 3 - 60% Contract Documents (includes 30% interim QC review)</b>   | <b>0</b>                      | <b>0</b>                                | <b>21</b>                       | <b>0</b>         | <b>38</b>                        | <b>120</b>                   | <b>266</b>         | <b>0</b>                | <b>0</b>                              | <b>417</b>                                     | <b>10</b>                  | <b>962</b>        | <b>\$138,183.00</b>     |
| a. Utility Relocation Plans (not included)                                | 0                             |   | 0                               |                  |                                  | 0                            | 0                  |                         |                                       |  | 0                          | 0                 | \$0.00                  |
| b. Stormwater Drainage Design and Calculations                            |                               |   | 12                              |                  |                                  | 64                           | 104                |                         |                                       | 64   | 7                          | 251               | \$37,031.00             |
| c. Stormwater Facility Design Plans (not included)                        |                               |   | 0                               |                  |                                  | 0                            |                    |                         |                                       | 0  |                            | 0                 | \$0.00                  |
| d. Erosion and Sediment Control Plans (EPIC)                              |                               |   | 2                               |                  |                                  | 10                           | 35                 |                         |                                       | 50   |                            | 97                | \$13,538.00             |
| e. 60% Cost Estimate  |                               |   | 2                               |                  | 4                                | 8                            | 32                 |                         |                                       | 24   |                            | 70                | \$10,160.00             |
| f. General Information and Drainage Plan Sheets, Project Manual TOC       |                               |   | 2                               |                  |                                  | 10                           | 60                 |                         |                                       | 95   | 3                          | 170               | \$23,178.00             |
| g. Response to Comments (2)   |                               |   | 2                               |                  |                                  | 20                           | 35                 |                         |                                       | 30   |                            | 87                | \$12,608.00             |
| h. Roadway Plan and Profile Sheets  |                               |   |                                 |                  | 10                               | 20                           | 30                 |                         |                                       | 30   |                            | 60                | \$8,840.00              |
| i. Roadway Typical Sections   |                               |   |                                 |                  | 2                                | 5                            | 8                  |                         |                                       | 8  |                            | 15                | \$2,168.00              |
| j. Roadway Cross Sections   |                               |   |                                 |                  | 4                                | 8                            | 24                 |                         |                                       | 24   |                            | 36                | \$5,156.00              |
| k. Intersection Layouts and Grading                                       |                               |   |                                 |                  | 6                                | 10                           | 18                 |                         |                                       | 18   |                            | 34                | \$5,044.00              |
| l. Traffic Control Plan   |                               |   |                                 |                  | 8                                | 14                           | 22                 |                         |                                       | 22   |                            | 44                | \$6,542.00              |
| m. Easement Aquisitions Map   |                               |   | 1                               | 1                |                                  | 8                            | 24                 |                         |                                       | 40   |                            | 74                | \$10,382.00             |
| n. Pavement Marking and Signing Plan                                      |                               |   |                                 |                  |                                  | 8                            | 12                 |                         |                                       | 12   |                            | 24                | \$3,536.00              |
| <b>Task 3 - 90% Contract Documents</b>                                    | <b>1</b>                      | <b>0</b>                                | <b>23</b>                       | <b>1</b>         | <b>4</b>                         | <b>68</b>                    | <b>181</b>         | <b>0</b>                | <b>0</b>                              | <b>192</b>                                     | <b>84</b>                  | <b>573</b>        | <b>\$81,208.00</b>      |
| a. General Information and Drainage Plan Sheets (Update)                  | 1                             |   | 10                              |                  |                                  | 14                           | 54                 |                         |                                       | 74   |                            | 153               | \$22,099.00             |
| b. Stormwater Facility Design Plans (Update)                              | 0                             |   | 0                               |                  | 0                                | 0                            | 0                  |                         |                                       | 0  |                            | 0                 | \$0.00                  |
| c. Easement Aquisitions Map (Update)                                      |                               |   | 1                               | 1                |                                  | 4                            | 12                 |                         |                                       | 20   |                            | 38                | \$5,414.00              |
| d. Draft Project Manual   |                               |   | 4                               |                  | 2                                | 16                           | 34                 |                         |                                       | 24   | 6                          | 86                | \$12,496.00             |
| e. 90% Cost Estimate  |                               |   | 2                               |                  | 1                                | 4                            | 20                 |                         |                                       | 4  |                            | 31                | \$4,535.00              |
| f. Response to Comments   |                               |   | 6                               |                  |                                  | 30                           | 12                 |                         |                                       | 10   |                            | 58                | \$9,624.00              |
| g. Roadway Plan and Profile Sheets  |                               |   |                                 |                  | 5                                | 10                           | 10                 |                         |                                       | 14   | 18                         | 47                | \$6,175.00              |
| h. Roadway Typical Sections   |                               |   |                                 |                  | 1                                | 4                            | 4                  |                         |                                       | 6  | 5                          | 16                | \$2,074.00              |
| i. Roadway Cross Sections   |                               |   |                                 |                  | 2                                | 4                            | 12                 |                         |                                       | 4  | 24                         | 42                | \$5,058.00              |
| j. Intersection Layouts and Grading                                       |                               |   |                                 |                  | 3                                | 6                            | 6                  |                         |                                       | 10   | 8                          | 27                | \$3,627.00              |
| k. Traffic Control Plan   |                               |   |                                 |                  | 4                                | 8                            | 8                  |                         |                                       | 12   | 15                         | 39                | \$5,111.00              |
| l. Pavement Marking and Signing Plan                                      |                               |   |                                 |                  | 5                                | 9                            | 9                  |                         |                                       | 14   | 8                          | 36                | \$4,995.00              |
| <b>Task 3 - 100% Contract Documents</b>                                   | <b>1</b>                      | <b>0</b>                                | <b>13</b>                       | <b>1</b>         | <b>12</b>                        | <b>76</b>                    | <b>147</b>         | <b>0</b>                | <b>0</b>                              | <b>102</b>                                     | <b>24</b>                  | <b>376</b>        | <b>\$55,005.00</b>      |
| a. General Information, Drainage and Utility Plan Sheets (Update)         |                               |   | 4                               |                  |                                  | 10                           | 14                 |                         |                                       | 26   |                            | 54                | \$8,036.00              |
| b. Stormwater Facility Design Plans (Update)                              |                               |   | 0                               |                  |                                  | 0                            | 0                  |                         |                                       | 0  |                            | 0                 | \$0.00                  |
| c. Final Project Manual   |                               |   | 2                               |                  |                                  | 4                            | 8                  |                         |                                       | 4  | 4                          | 22                | \$3,176.00              |
| d. Final Design H&H Calculations and Model(s) Update                      |                               |   | 2                               |                  |                                  | 50                           | 75                 |                         |                                       | 24   |                            | 151               | \$22,308.00             |
| e. 100% Cost Estimate   |                               |   | 2                               |                  | 2                                | 4                            | 12                 |                         |                                       | 8  |                            | 28                | \$4,254.00              |
| f. Response to Comments   |                               |   | 2                               |                  |                                  | 6                            | 10                 |                         |                                       | 8  |                            | 26                | \$3,910.00              |
| g. Easement Aquisitions Map (Update)                                      |                               |   | 1                               | 1                |                                  | 2                            | 6                  |                         |                                       | 10   |                            | 20                | \$2,930.00              |
| h. Final Roadway Plans  | 1                             |   | 10                              |                  |                                  | 0                            | 22                 |                         |                                       | 22   |                            | 75                | \$10,391.00             |
| <b>Task 4 - Bid Phase</b>   | <b>1</b>                      | <b>0</b>                                | <b>11</b>                       | <b>0</b>         | <b>4</b>                         | <b>24</b>                    | <b>38</b>          | <b>0</b>                | <b>0</b>                              | <b>27</b>                                      | <b>8</b>                   | <b>113</b>        | <b>\$16,518.00</b>      |
| a. Assist the City in Preparing Advertising Documents                     |                               |   | 1                               |                  |                                  | 2                            | 2                  |                         |                                       | 2  | 4                          | 11                | \$1,538.00              |
| b. Attend Pre-Bid Meeting   |                               |   | 2                               |                  |                                  | 2                            | 2                  |                         |                                       |  |                            | 4                 | \$822.00                |
| c. Respond to Contractor Questions  |                               |   | 4                               |                  | 2                                | 8                            | 10                 |                         |                                       | 8  |                            | 32                | \$4,732.00              |
| d. Prepare and Distribute Necessary Addenda (3)                           |                               |   | 1                               |                  | 2                                | 6                            | 12                 |                         |                                       | 5  | 2                          | 28                | \$3,741.00              |
| e. Prepare Confirmed Set of Plans and Specifications                      |                               |   | 1                               |                  |                                  | 2                            | 12                 |                         |                                       | 12   |                            | 27                | \$3,768.00              |
| f. Prepare Bid Tabulation and Letter of Recommendation                    | 1                             |   | 2                               |                  |                                  | 4                            | 2                  |                         |                                       |  | 2                          | 11                | \$1,917.00              |
| <b>Task 5 - Construction Phase (Assuming 14 months for Construction)</b>  | <b>0</b>                      | <b>0</b>                                | <b>0</b>                        | <b>0</b>         | <b>0</b>                         | <b>0</b>                     | <b>0</b>           | <b>0</b>                | <b>0</b>                              | <b>0</b>                                       | <b>0</b>                   | <b>0</b>          | <b>\$0.00</b>           |
| a. Review Contractor Pay Requests (14)                                    |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| b. Review / Negotiate Change Orders (4)                                   |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| c. Review Submittals (14)   |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| d. Respond to RFIs (7)  |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| e. Project Site Visits and Reports (14 Site Visits)                       |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| f. Participate in Contractor Progress Meetings (7)                        |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| g. Final Walkthrough and Punchlist Review (1)                             |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| h. Project Closeout (Record Drawings, Warranty Inspection)                |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | \$0.00                  |
| <b>Reimbursable Expenses (Mileage) - 10 round trips at 150 miles each</b> |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | <b>\$1,000.00</b>       |
| <b>Subconsultant: Arias - Geotechnical</b>                                |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | <b>\$39,660.00</b>      |
| <b>Subconsultant: Rios - Subsurface Utility Engineering (SUE)</b>         |                               |   |                                 |                  |                                  |                              |                    |                         |                                       |  |                            |                   | <b>\$47,650.00</b>      |
| <b>TOTAL BASE FEE WITH HOUR BREAKDOWN</b>                                 | <b>66</b>                     | <b>76</b>                               | <b>244</b>                      | <b>14</b>        | <b>91</b>                        | <b>318</b>                   | <b>638</b>         | <b>154</b>              | <b>152</b>                            | <b>794</b>                                     | <b>142</b>                 | <b>2779</b>       | <b>\$515,447.00</b>     |

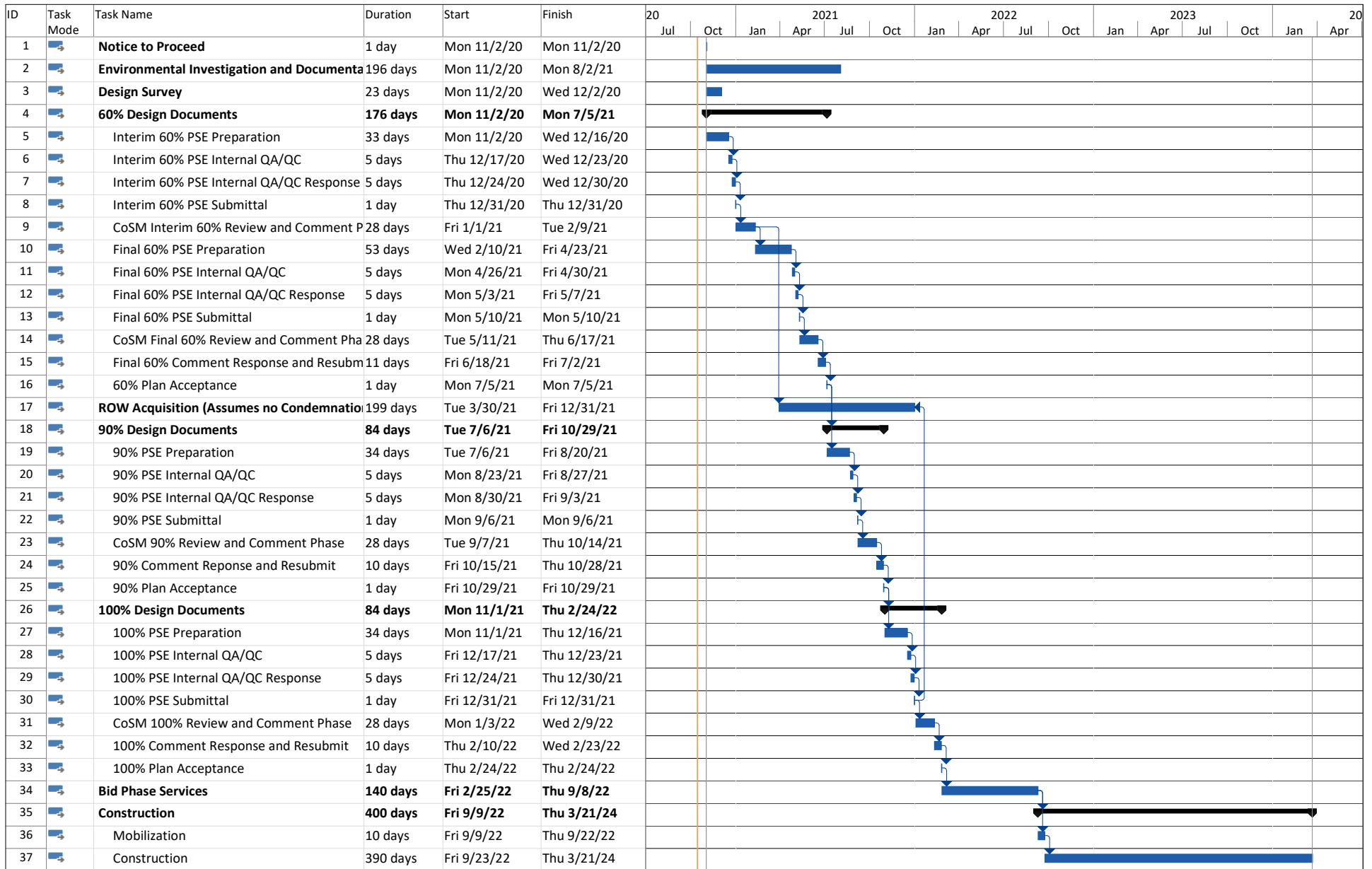


Exhibit 3 Design Phase Schedule  
Date: Thu 10/15/20

|                 |  |                    |  |                       |  |             |  |
|-----------------|--|--------------------|--|-----------------------|--|-------------|--|
| Task            |  | External Tasks     |  | Manual Task           |  | Finish-only |  |
| Split           |  | External Milestone |  | Duration-only         |  | Deadline    |  |
| Milestone       |  | Inactive Task      |  | Manual Summary Rollup |  | Progress    |  |
| Summary         |  | Inactive Milestone |  | Manual Summary        |  |             |  |
| Project Summary |  | Inactive Summary   |  | Start-only            |  |             |  |



13581 Pond Springs Road, Suite 210, Austin, Texas 78729 • Phone: (512) 428-5550 • Fax: (512) 428-5525

## EXHIBIT 4

October 7, 2020  
Arias Project No. 2020-950

VIA Email: [KCarper@bgeinc.com](mailto:KCarper@bgeinc.com)

Mr. Ken Carper, PE, CFM  
Senior Project Manager  
BGE, Inc  
7330 San Pedro, Suite 202  
San Antonio, Texas 78216

**RE: Proposal for Geotechnical Engineering Services**  
Wallace Addition Drainage Improvements  
San Marcos, Texas

Dear Mr. Carper,

Arias Geoprofessionals, Inc. (Arias) is pleased to provide this proposal for geotechnical engineering services for the above referenced project. Our understanding of the project is based on information provided by you. We have received the site plan showing the proposed site layout, and have discussed the project with you. The following sections present our understanding of the project, our proposed scope of services, fee compensation requirements, and proposed schedule.

### **Project Information**

The project site is located south of San Marcos in Texas, and is generally extended from Staples Road northeast to San Marcos River. Proposed construction will consist of approximately 1,000 LF of new concrete drainage channel replacing existing grass channel along Staple Road and Cape Street, and approximately 3,000 LF of 8'x3' new reinforced concrete box (RCB) culverts from Staple Road within a new drainage easement along AE Wood State Fish Hatchery property to the planned open channel/diversion structure in vacant area near the pond. The construction will include a new flexible pavements along Cape Street from Monterey Street and Flores Street and the State Fish Hatchery internal roadways for construction access. The anticipated depths and invert elevations of the channel and RCB is not available at this time; however, we do not expect those inverts to extend deeper than 10 feet below existing grade. If any the above information is not correct, we should be notified immediately in order to revise our proposal and the depth of the planned borings, as necessary.

### **Proposed Scope**

Based on published geologic mapping and nearby experience in the area, the site is likely underlain by surficial Alluvium (Qal) consisting of sand, silt, clay and gravel in various portions. Alluvium is likely underlain by limestone of the Pecan Gap formation. A geologic map is presented on the attached Exhibit A. Based on our understanding of the planned construction, we propose the following drilling scope:

| <b>Borings</b> | <b>Boring depth, ft</b> | <b>No. of Borings</b> | <b>Footage, ft</b> |
|----------------|-------------------------|-----------------------|--------------------|
| Alignment      | 15                      | 12                    | 180                |
| Piezometer     | 20                      | 2                     | 40                 |
| <b>Total</b>   |                         |                       | <b>220</b>         |

An approximate Boring Location Map is presented on attached Exhibit B. Arias personnel will mark the boring locations and will notify Texas One-Call at 72 hours prior to drilling. It is important to mention that the Texas One-Call system only clears public utilities. Arias requests assistance from BGE, Inc to obtain any existing utilities plans in private property prior to our site mobilization.

Arias will obtain a right of way (ROW) permit and lane closure permit in accordance with the City of San Marcos permit program. The borings will require traffic control for drilling in the public ROW.

The borings will be advanced using augering and sampling techniques using either push-tube sampling techniques (ASTM D1587) or split barrel sampler while performing the Standard Penetration Test (ASTM D1586). Arias personnel will locate the borings, coordinate traffic control, direct sampling efforts, visually classify recovered samples, and be present during drilling. Asphalt and base material thickness will be measured and reported for borings drilled through pavements.

If groundwater is encountered, the groundwater levels within the open borehole will be recorded at the time of the drilling and immediately following drilling. Each borehole will be backfilled with auger cuttings and bentonite and capped with at least 12 inches of sackrete and cold-patch asphalt to match existing surface elevation. Excess soil cuttings and drilling fluids will be spread and disposed at the site. No other site restoration measures, in addition to backfilling the boreholes, are included in this proposal.

Laboratory testing will be performed on recovered samples selected by the Geotechnical Engineer to aid in soil classification and to measure engineering properties. Laboratory testing is expected to include moisture content, Atterberg limits, grain size analyses, swell testing, unconfined compression strength testing of soil. The actual laboratory program will depend upon the type of soils encountered.

Two (2) piezometers will be installed in the vicinity of the pond, and Arias will coordinate with BGE, Inc to finalize the piezometer locations prior to our mobilization. Readings of the piezometers will occur weekly for a period of one month after completion of drilling, and monthly for a duration of twelve months. If requested, we can perform additional readings on a time and material basis.

Well Reports will be filed with the Texas Department of Licensing and Regulations (TDLR) for each piezometer, listing the Hays County as the owner. We have included costs for maintenance and plugging/abandoning the piezometer per TDLR requirements.

Seven (7) pavement cores will be received at Cape Street and Staple Road. The pavement cores will be returned to our laboratory for thickness measurements, bulk density and specific gravity testing. An approximate Pavement Core Location Map is presented on attached Exhibit B.

### **Reporting**

We will issue electronic copies of the Geotechnical Data (GDR) and Geotechnical Design Memorandum (GDM) prepared by a licensed professional engineer in the State of Texas. Specifically the report will include the following:

#### **Geotechnical Data Report (GDR):**

- Description of the field exploration program;
- Description of the laboratory testing program and results;
- Photographs of the soil and rock samples recovered;
- Soil boring plan that depicts borehole locations;
- Profiles of soil borings along the alignment using plan and profile design information provided by others;
- Soil boring logs with soil classifications based on the Unified Soil Classification System (ASTM D 2487);
- Generalized site stratigraphy and engineering properties developed from field and laboratory data at the explored locations; and
- Depth where groundwater, if encountered, and its potential impact on construction.

**Geotechnical Design Memorandum (GDM):** The geotechnical Design Memorandum will provide the following geotechnical recommendations:

- Lateral earth pressure coefficients and equivalent fluid density values for design of underground walls;
- Allowable bearing pressures and bearing depths for proposed structures;
- Bedding and backfilling recommendations for trenched excavations and RCB culverts;
- General earthwork and construction recommendations.
- Recommendations for design and construction of flexible pavements. We will use

COSM Transportation Design Manual and 1993 AASHTO design methodology, and check the results using FPS-21.

Arias will provide draft reports for review, comment, and requests for clarification, which will then be addressed in the final GDR and GDM reports.

Please be advised that Arias & Associates, Inc. performs Construction Materials Engineering and Testing (CoMET) per project requirements. We will be pleased to provide a separate proposal for construction materials testing at your request.

### **Proposed Fee**

We propose that the fee to perform the above outline preliminary scope of services on a time and material basis not to exceed (NTE) **\$39,660.00.00**. A geotechnical Cost Breakdown is presented on attached Exhibit C. Please note that for invoicing purposes the estimated quantities in the Geotechnical Cost Breakdown may vary (increase or decrease), depending the actual level of effort needed to perform each item, but the NTE amount will remain the same **\$39,660.00**.

We will invoice on a monthly basis. This proposal is based on the following assumptions:

- Required clearing of vegetation and/or debris and any grading operations required to access the site and the proposed boring/ piezometer locations, will be performed by others prior to our geotechnical exploration.
- Boring/piezometer location will be clear and accessible and ground conditions will allow a conventional truck-mounted drilling equipment to reach all the boring locations. This proposal does not include fees for clearing vegetation or obtaining the corresponding permits, removing obstructions or clearing debris;
- We will notify Texas 811 at least 72 hours prior to drilling. We request to be provided with any existing utilities plans, if available, prior to our site mobilization;
- Right of Entry (ROE) to access the boring/piezometer locations will be obtained by others prior to our mobilization; and
- The city of San Marcos will allow us to drill during normal working hours (8 am to 4 pm, Monday to Friday). If drilling hour limitations increase the number of days required for our field investigation, or if after hours or weekend drilling is required, we will need to discuss adjustments to our proposed fee.

### **Schedule**

Upon receiving written authorization, and weather and site conditions permitting, we can initiate our field investigation within 1 to 2 weeks. Permit submittal and approval from the City of San Marcos is expected to take 2 to 3 weeks. Drilling of the boreholes will take about 2-3 days depending on



weather conditions, traffic control requirements and restricted working hours. Installation of two (2) piezometers will take 1 day. Laboratory testing will take 2 to 3 weeks. We anticipate submitting a draft report about 8 to 9 weeks following receipt of written authorization. We will keep you verbally informed of our findings as they become available.

Delays sometime occur due to adverse weather, utility clearance requirements, site clearing requirements for drill rig access, obtaining ROW permits to drill, obtaining right-of-entry, and other factors outside of our control. In this event, we will communicate the nature of the delay with you and provide a revised schedule at the earliest possible date.

### **Proposal Acceptance**

Please let us know if this proposal meets your expectations. If acceptable, the authorization table at the end of this proposal should be completed as applicable. We will begin work upon receipt of a signed copy of the proposal by an authorized representative. Please return the entire signed proposal to us by fax, mail or email to [nzhang@ariasinc.com](mailto:nzhang@ariasinc.com). If the billing address is different, include that information as well.

Should you have any questions, please do not hesitate to contact us. The undersigned will manage and perform the work. Thank you for this opportunity.


Sincerely,

### **ARIAS & ASSOCIATES, INC.**

TBPE Registration No: F-32



Nan Zhang, Ph.D., P.E.  
Geotechnical Project Engineer



Alexandros Sioutis  
Graduate Engineer

### Attachments

- Exhibit A – Geologic Map
- Exhibit B – Boring and Pavement Core Location Map
- Exhibit C – Geotechnical Cost Breakdown
- General Conditions (20140214R1)

Exhibit A - Wallace Addition Drainage Improvement – Geologic Map

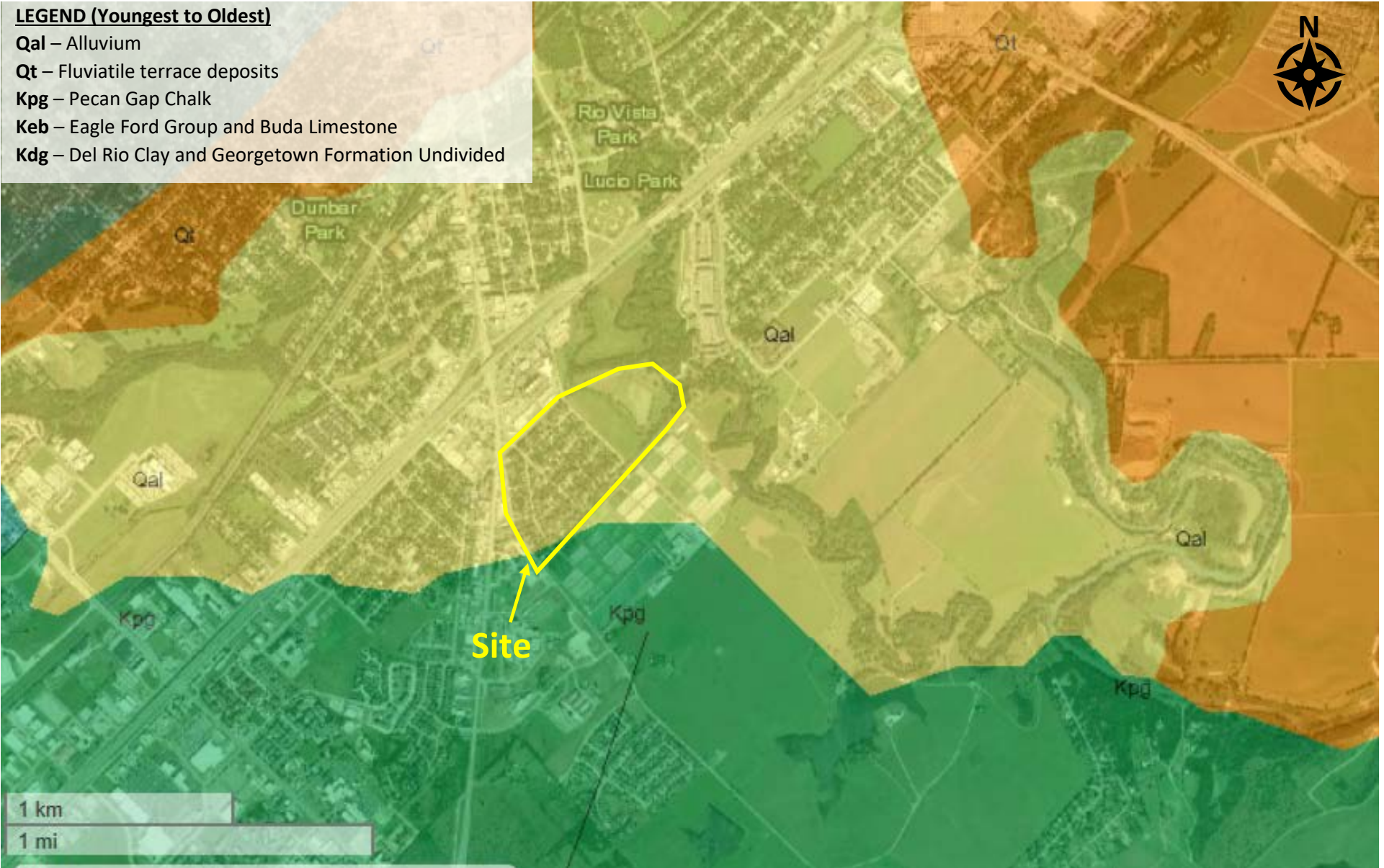


Exhibit B - Wallace Addition Drainage Improvement - Boring Location Plan





**Exhibit C - Geotechnical Cost Estimate  
Wallace Addition Drainage Improvements  
San Marcos, TX**

| Task  | Item Description   | Est. Qty. | Unit | Unit Price                       | Est. Total Price    |
|---|--|-----------|------|----------------------------------|---------------------|
| <b>1 Field Exploration</b>  |  |           |      |                                  |                     |
| <b>1.1 Planning and Coordination</b>  |  |           |      |                                  |                     |
|   | Engineering Technician (Staking of Borings, One-Call, Drilling Plan) | 10        | hr   | \$ 65.00                         | \$ 650.00           |
|   | Trip Charge  | 2         | trip | \$ 55.00                         | \$ 110.00           |
|   | Staff Engineer, EIT (COSM Permitting)                                | 4         | hr   | \$ 75.00                         | \$ 300.00           |
|   | Excavation Permits (3 streets)                                       | 1         | ls   | \$ 500.00                        | \$ 500.00           |
|   | Project Engineer   | 8         | hr   | \$ 140.00                        | \$ 1,120.00         |
|   |  |           |      | <b>1.1 Subtotal</b>              | <b>\$ 2,680.00</b>  |
| <b>1.2 Drilling and Sampling</b>  |  |           |      |                                  |                     |
|   | Mobilization (drill rig, support equipment, air compressor)          | 1         | ea   | \$ 450.00                        | \$ 450.00           |
|   | Drilling and Sampling (Soil Borings)                                 | 180       | ft   | \$ 20.00                         | \$ 3,600.00         |
|   | Backfill Boreholes (Cuttings/Bentonite)                              | 180       | ft   | \$ 6.00                          | \$ 1,080.00         |
|   | Patch Holes - Concrete / Asphalt                                     | 5         | ea   | \$ 50.00                         | \$ 250.00           |
|   | Drill Logger   | 40        | hr   | \$ 65.00                         | \$ 2,600.00         |
|   | Trip Charge (Logger)   | 3         | trip | \$ 55.00                         | \$ 165.00           |
|   | Traffic control  | 2         | day  | \$ 2,000.00                      | \$ 4,000.00         |
|   |  |           |      | <b>1.2 Subtotal</b>              | <b>\$ 12,145.00</b> |
| <b>1.3 Observation Wells Construction</b>   |  |           |      |                                  |                     |
|   | Observation Well, 2"-diameter 20 ft deep                             | 40        | ft   | \$ 22.00                         | \$ 880.00           |
|   | Flush Mounted Well Pad (2'8"x2'8")                                   | 2         | ea   | \$ 450.00                        | \$ 900.00           |
|   | Wells maintenance  | 1         | ls   | \$ 100.00                        | \$ 100.00           |
|   | Plug/Abandon Well (Minimum Daily Rig Charge), per TDLR               | 2         | ea   | \$ 1,200.00                      | \$ 2,400.00         |
|   |  |           |      | <b>1.3 Subtotal</b>              | <b>\$ 4,280.00</b>  |
| <b>1.4 Observation Well Readings and Reports (Weekly for 1 month and monthly thereafter for 1 year)</b> |  |           |      |                                  |                     |
|   | Engineering Technician   | 45        | hr   | \$ 65.00                         | \$ 2,925.00         |
|   | Trip Charge  | 15        | ea   | \$ 55.00                         | \$ 825.00           |
|   | Staff Engineer, EIT  | 12        | hr   | \$ 75.00                         | \$ 900.00           |
|   | Project Engineer   | 4         | hr   | \$ 140.00                        | \$ 560.00           |
|   |  |           |      | <b>1.4 Subtotal</b>              | <b>\$ 5,210.00</b>  |
|   |  |           |      | <b>Field Exploration TOTAL:</b>  | <b>\$ 24,315.00</b> |
| <b>2 Laboratory Soil Testing</b>  |  |           |      |                                  |                     |
|   | Moisture Content   | 25        | ea   | \$ 15.00                         | \$ 375.00           |
|   | Atterberg Limits   | 16        | ea   | \$ 75.00                         | \$ 1,200.00         |
|   | Grain Size Analysis (Includes Percent passing #200 Sieve)            | 16        | ea   | \$ 75.00                         | \$ 1,200.00         |
|   | Unconfined Compressive Strength Soil/Rock                            | 6         | ea   | \$ 75.00                         | \$ 450.00           |
|   | Swell Test   | 2         | ea   | \$ 160.00                        | \$ 320.00           |
|   | Sulfate Content  | 4         | ea   | \$ 55.00                         | \$ 220.00           |
|   | Laboratory Manager   | 2         | hr   | \$ 85.00                         | \$ 170.00           |
|   |  |           |      | <b>Laboratory Testing TOTAL:</b> | <b>\$ 3,935.00</b>  |
| <b>3 Pavement Coring</b>  |  |           |      |                                  |                     |
|   | Trip Charge (round-trip)   | 1         | ea   | \$ 55.00                         | \$ 55.00            |
|   | Filed Tech Time (on-site only, 2-hour minimum)                       | 8         | hr   | \$ 65.00                         | \$ 520.00           |
|   | Equipment Charge   | 8         | hr   | \$ 55.00                         | \$ 440.00           |
|   | Core Bit Surcharge ( in addition to base equipment charge)           |           |      |                                  |                     |
|   | 6-inch diameter core   | 42        | inch | \$ 10.00                         | \$ 420.00           |
|   | Pavement Core Test (bulk density and specific gravity)               | 7         | ea   | \$ 60.00                         | \$ 420.00           |
|   | Laboratory Manager   | 2         | hr   | \$ 85.00                         | \$ 170.00           |
|   |  |           |      | <b>Laboratory Testing TOTAL:</b> | <b>\$ 2,025.00</b>  |
| <b>4 Engineering and Reporting</b>  |  |           |      |                                  |                     |
|   | Senior Engineer  | 8         | hr   | \$ 175.00                        | \$ 1,400.00         |
|   | Project Engineer   | 26        | hr   | \$ 140.00                        | \$ 3,640.00         |
|   | Staff Engineer, EIT  | 55        | hr   | \$ 75.00                         | \$ 4,125.00         |
|   | Data Processing  | 4         | hr   | \$ 55.00                         | \$ 220.00           |
|   |  |           |      | <b>Engineering TOTAL:</b>        | <b>\$ 9,385.00</b>  |
|   | <b>Project Total</b>   |           |      |                                  | <b>\$ 39,660.00</b> |

**ARIAS & ASSOCIATES, INC.**  
**PROFESSIONAL SERVICES AGREEMENT**  
**GEOTECHNICAL AND ENVIRONMENTAL**  
**GENERAL CONDITIONS**  
(20140214R1)

This Professional Services AGREEMENT between Arias & Associates, Inc., hereinafter defined as "ARIAS" and CLIENT includes the attached Proposal and these General Conditions which constitute the AGREEMENT. ARIAS will perform its Services under this Agreement as an independent contractor.

1. Parties. CLIENT is defined as the entity that authorizes performance of services as stated in the Proposal by ARIAS and any entity that accepts responsibility for payment as stated in these General Conditions. If the CLIENT is ordering the services on behalf of another, the CLIENT represents and warrants that the CLIENT is authorized to act on behalf of said party in ordering and directing ARIAS' services. ARIAS will provide the proposed services to and for the CLIENT. The AGREEMENT is not intended to benefit any other person or entity. CONTRACTOR is defined as the CONTRACTOR or contractors, and including its/their subcontractors of every tier, retained to perform construction Work on the Project for which ARIAS is providing Services under this AGREEMENT.
2. Work. Work is defined as the labor, materials, equipment and services of CONTRACTOR.
3. Testing. Testing is defined as the measurement, examination, performance of tests, and any other activities to determine the characteristics or performance of materials.
4. Scope of Services. The scope of services is outlined in the Proposal, which along with these General Conditions, constitutes the Agreement. "Services" means the specific analytical, testing or other service to be performed by ARIAS & ASSOCIATES INC, hereinafter referred to as ARIAS, as set forth in ARIAS' proposal, CLIENT's acceptance thereof and these General Conditions. The CLIENT has sole responsibility for determining whether the scope of ARIAS' services is adequate and sufficient based on the CLIENT's needs and budgetary constraints. The verbal or written ordering of services of ARIAS shall constitute acceptance of the terms of ARIAS' proposal and these General Conditions, regardless of the terms of any subsequently issued document. Arias has no right or responsibility to approve, accept, reject or stop work of any agent or the CLIENT, including CONTRACTOR.
5. On-Site Responsibilities and Risks. Unless otherwise agreed, CLIENT will furnish right-of-entry and obtain permits as required for ARIAS to perform the fieldwork. ARIAS will take reasonable precautions to minimize damage to land and other property caused by ARIAS's operations, but ARIAS has not included in the fee the cost of restoration of damage that may occur. If CLIENT desires ARIAS to restore the site to its former conditions and if ARIAS agrees to do so, ARIAS will undertake the repairs and add the cost to the fee.
6. Toxic and Hazardous Materials. CLIENT will provide ARIAS with all information within its possession or knowledge as to the potential occurrence of toxic or hazardous materials at the site being investigated. ARIAS is entitled to reasonably rely on all such information. If toxic or hazardous materials are encountered though not anticipated as stated in ARIAS's Proposal, ARIAS reserves the right to demobilize field operations at CLIENT's expense. Remobilization may proceed upon agreement by ARIAS and with CLIENT's acceptance of proposed safety fee adjustments.
7. Utilities and Pipelines/Subsurface Indemnification. While performing fieldwork, ARIAS will take reasonable precautions to avoid damage to sub-surface structures, pipelines and utilities. CLIENT AGREES TO DEFEND, INDEMNIFY AND HOLD ARIAS AND ITS OFFICERS, AGENTS, EMPLOYEES AND SUBCONTRACTORS HARMLESS FROM ALL CLAIMS, SUITS, LOSSES, COSTS AND EXPENSES INCLUDING REASONABLE ATTORNEY'S FEES AS A RESULT OF PERSONAL INJURY, DEATH OR PROPERTY DAMAGE OCCURRING WITH RESPECT TO THE PERFORMANCE OF ARIAS'S SERVICES AND ARISING FROM SUBSURFACE CONDITIONS WHICH ARE NOT CALLED TO ARIAS'S ATTENTION AND/OR CORRECTLY SHOWN ON PLANS FURNISHED.
8. Representations. CLIENT acknowledges that subsurface conditions may vary from those encountered at the location where borings, surveys, tests or explorations are made and that ARIAS'S data, interpretations and recommendations are based solely on the information available to ARIAS, constitutes ARIAS'S opinion based on professional judgment and should not be interpreted as representations of fact. CLIENT represents that it has disclosed to ARIAS all information about conditions at the site of which CLIENT or any representative of CLIENT is aware.
9. Use of Information by Others. ARIAS is not responsible for the interpretation by those other than the CLIENT of the information provided to our CLIENT, including the Instruments of Professional Service.
10. Limitation of Liability. THE TOTAL CUMULATIVE LIABILITY OF ARIAS, ITS SUBCONSULTANTS AND SUBCONTRACTORS, AND ALL OF THEIR RESPECTIVE SHAREHOLDERS, DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS (COLLECTIVELY "ARIAS ENTITIES") TO CLIENT ARISING FROM SERVICES UNDER THIS AGREEMENT, INCLUDING ANY AMENDMENT HERETO, INCLUDING ANY REIMBURSEMENT OF ATTORNEY'S FEES AND/OR INDEMNITY OBLIGATION UNDER THIS AGREEMENT, WILL NOT EXCEED THE GROSS COMPENSATION RECEIVED BY ARIAS UNDER THIS AGREEMENT OR \$50,000, WHICHEVER IS GREATER. THIS LIMITATION APPLIES TO ALL LAWSUITS, CLAIMS OR ACTIONS THAT ALLEGE ERRORS OR OMISSIONS IN THE ARIAS ENTITIES'S SERVICES, WHETHER ALLEGED TO ARISE IN TORT, CONTRACT, WARRANTY OR OTHER LEGAL THEORY.
11. Invoices and Payment. An invoice will be submitted monthly or upon completion of ARIAS' scope of services. Payment is due upon receipt of invoice. CLIENT agrees to pay a finance charge of 1.5% per month or the maximum legal rate on past due accounts.
12. Credit Check. ARIAS reserves the right to inquire with third parties as to CLIENT's credit and ARIAS reserves the right to cancel this Proposal and Agreement with CLIENT if ARIAS, in its sole discretion, is not fully satisfied with such inquiry.
13. Construction Observation. ARIAS shall not supervise, direct or have control over the CONTRACTOR's Work nor have any responsibility for the construction means, methods, techniques, sequences or procedures selected by the CONTRACTOR. Arias is not responsible for the CONTRACTOR's safety precautions or programs in connection with the Work. These rights and responsibilities are solely those of the CONTRACTOR in accordance with the Contract Documents. ARIAS shall not be responsible for any acts or omissions of the CONTRACTOR, subcontractor, or any entity performing any portions of the Work, or any agents or employees of any of them. ARIAS does not guarantee the performance of the CONTRACTOR and shall not be responsible for the CONTRACTOR's failure to perform its Work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

Observations and standardized sampling, inspection and testing procedures employed by ARIAS will indicate conditions of materials and construction activities only at the precise location and time where and when Services were performed. CLIENT recognizes that conditions of materials and construction activities at other locations may vary from those measured or observed and that conditions at one location

and time do not necessarily indicate the conditions of apparently identical materials(s) at other locations and times. Services of ARIAS, even if performed on a continuous basis, should not be interpreted to mean that ARIAS is observing, verifying, testing or inspecting all materials on the Project. ARIAS is responsible only for those data, interpretations, and recommendations regarding the actual materials and construction activities observed, sampled, inspected or tested and is not responsible for other parties' interpretations or use of the information developed. ARIAS may make certain inferences based upon the information derived from these procedures to formulate professional opinions regarding conditions in other areas.


14. Termination of Services. This Agreement may be terminated with or without cause by the CLIENT or ARIAS upon written notice. In the event of termination, the CLIENT shall pay ARIAS for all services rendered to the date of termination and all reimbursable expenses due to termination. If termination for cause is determined not to exist, then the termination will be considered a termination for convenience.
15. Changed Conditions. The CLIENT shall rely on ARIAS' judgment as to the continued adequacy of the Scope of Services of this Agreement in light of occurrences or discoveries that were not originally contemplated by or known to ARIAS. Should ARIAS call for contract renegotiation, ARIAS shall identify the changed project or subsurface conditions necessitating renegotiation and the CLIENT shall promptly and in good faith enter into renegotiation of this Agreement. If terms cannot be agreed to, the parties agree that either party has the absolute right to terminate this Agreement. ARIAS reserves the right to refuse to perform services not expressly included in the scope of services outlined in the proposal.
16. Indemnification. THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY, DEFEND AND HOLD HARMLESS ARIAS, ITS OFFICERS, DIRECTORS, EMPLOYEES AND SUBCONSULTANTS (COLLECTIVELY, "ARIAS ENTITIES") AGAINST ALL DAMAGES, LIABILITIES OR COSTS INCLUDING REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS, ARISING OUT OF, RELATED TO OR CAUSED BY THE CLIENT'S ACTS IN CONNECTION WITH THE PROJECT AND THE ACTS OF ITS REPRESENTATIVES, CONTRACTORS, SUBCONTRACTORS, OR CONSULTANTS OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE, OR THE FAILURE TO MAINTAIN OR REPAIR THE PROJECT BY ANYONE.
17. Mediation/Choice of Law & Venue. All disputes between the parties regarding this Agreement or the services performed hereunder shall be subject to mandatory mediation prior to either party instituting arbitration or litigation. All disputes shall be resolved in accordance with the laws of the State of Texas and the parties agree that the venue for any mediation, arbitration, or litigation shall be in Bexar County, Texas.
18. Duration of Offer. The rate pricing, scope, and conditions offered in this proposal will remain in force and effect for a period of 60 days from the date of this proposal. If the proposal has not been accepted by execution and returned within the 60-day period, ARIAS reserves the right to revise any rate pricing, scope or condition in the proposal as may be necessary.
19. Third-Party Beneficiaries. Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the CLIENT or ARIAS. ARIAS' services under this Agreement are being performed solely for the CLIENT'S benefit, and no other party or entity shall have any claim against ARIAS because of this Agreement or the performance or nonperformance of services hereunder. The CLIENT and ARIAS agree to require a similar provision in all contracts with CONTRACTORS, subcontractors, subconsultants, vendors and other entities involved in the Project to carry out the intent of this provision.
20. Assignment. During the term of this AGREEMENT and following its termination for any reason, neither party to this Agreement shall transfer, sublet or assign any rights under or interest in this Agreement (including but not limited to monies that are due or monies that may be due) without the prior written consent of the other party. Subcontracting to subconsultants normally contemplated by ARIAS shall not be considered as an assignment for purposes of this Agreement.
21. No Personal Liability. CLIENT and ARIAS intend that ARIAS' services will not subject ARIAS' individual employees, officers or directors to any personal liability. Therefore, and notwithstanding any other provision of this Agreement, CLIENT agrees as its sole and exclusive remedy to direct or assert any claim, demand or suit only against Arias & Associates, Inc.
22. Insurance. ARIAS will maintain the following minimum coverages: Statutory Workers' Compensation/Employer's Liability Insurance; Commercial General Liability Insurance with a combined single limit of \$1,000,000; Automobile Liability Insurance, including liability for all owned, hired and non-owned vehicles with minimum limits of \$1,000,000 for bodily injury per person, \$1,000,000 property damage, and \$1,000,000 combined single limit per occurrence; and ; Professional Liability Insurance in amounts of \$1,000,000 per claim and annual aggregate. ARIAS will provide CLIENT with certificates of insurance evidencing the existence of these policies. Except for Professional Liability and Workers' Compensation Insurance, all policies required under this AGREEMENT shall contain a waiver of subrogation.
23. Integration and Severability. This AGREEMENT reflects the parties' entire Agreement with respect to its terms and limitations and supersedes all prior Agreements, written and oral. If any portion of this AGREEMENT is found void or voidable, such portion will be deemed stricken and the AGREEMENT reformed to as closely approximate the stricken portions as law allows. These terms and conditions survive the completion of the Services under and the termination of the Agreement, whether for cause or for convenience.
24. Standard of Care. In providing services under this AGREEMENT, ARIAS will endeavor to perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances at the same time as the Project. Upon notice to ARIAS and by mutual AGREEMENT between the parties, ARIAS will without additional compensation, correct those services not meeting this standard. ARIAS makes no warranty, express or implied, as to its professional services rendered under this AGREEMENT.
25. Consequential Damages. Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the CLIENT nor ARIAS, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the Project or to this Agreement. This mutual waiver of consequential damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, delay, loss of reputation or any other consequential damages that either party may have incurred from any cause of action including but not limited to negligence, strict liability, breach of contract and breach of strict or implied warranty.
26. Instruments of Professional Service. Instruments of Professional Service are defined as all documents and information – e.g., letters, memoranda, reports, boring logs, maps, field data, field notes, drawings and specifications and test data – prepare by ARIAS. Except as otherwise agreed to by CLIENT and ARIAS, Instruments of Professional Service are and shall remain ARIAS' property, and ARIAS has the right, in its sole discretion, to dispose of or retain the Instruments of Professional Service. CLIENT will not provide Instruments of Professional Service to any other person or entity without ARIAS' prior written consent.
27. Unauthorized Use. Any reuse or modification of the Instruments of Professional Service by CLIENT or anyone obtaining it through CLIENT will be at CLIENT'S sole risk and without liability to ARIAS. CLIENT will defend, indemnify and hold ARIAS harmless from all third

party claims, demands, actions, and expenses (including reasonable attorney's fees, expert fees, and other costs of defense) arising out of or in any way related to the reuse or modification of the Instruments of Professional Service by CLIENT or anyone obtaining the Instruments of Professional Service through CLIENT.

28. Statutes of Limitations. The Parties hereto agree that any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events no later than the date of substantial completion of ARIAS'S services hereunder.

ARIAS and CLIENT hereby agree to the terms and conditions of this Proposal and have caused this AGREEMENT to be executed by their duly authorized officers and made effective as of the day and year first written above.

Consultant: **ARIAS & ASSOCIATES, INC.**

By:  \_\_\_\_\_ Date: October 7, 2020  
Printed Name: John S. Landwermeyer, P.E. Title: Managing Principal, Austin Operations  
Address: 13581 Pond Springs Road, Suite 210  
Austin, Texas 78729  
Phone: (512) 428-5550 Fax: (512) 428-5525

CLIENT: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_



## EXHIBIT 5

October 2, 2020  
Rev.1

Ken Carper, P.E., CFM  
BGE, Inc.  
7330 San Pedro Ave.  
Suite #202  
San Antonio, Texas 78216  
210.518.3600 office  
[KCarper@bgeinc.com](mailto:KCarper@bgeinc.com)

**RE: Subsurface Utility Engineering  
San Marcos Wallace Offsite Drainage – San Marcos, Texas**

Dear Mr. Carper:

The Rios Group, Inc. (TRG) is pleased to submit a revised cost proposal for Subsurface Utility Engineering (SUE) for the above referenced project. This proposal is based on information provided via email on September 9, 2020 & October 1, 2020.

### **Introduction**

TRG will perform SUE services for this project in general accordance with the recommended practices and procedures described in ASCE publication CI/ASCE 38-02 “Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.” As described in the publication, four levels have been established to describe and depict the quality of subsurface utility information. The four quality levels are as follows:

- Quality Level D (QL“D”) – Information obtained from existing utility records.
- Quality Level C (QL“C”) – Surveyed data depicting visible above-ground features supplemented with QL“D” information.
- Quality Level B (QL“B”) – Two-dimensional horizontal information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as “designating,” this level incorporates QL“C” information and provides horizontal positioning of subsurface utilities to within approximately 1.0 foot.
- Quality Level A (QL“A”) – Three-dimensional horizontal and vertical information obtained through non-destructive vacuum excavation equipment to expose utilities at critical points. Also known as “locating,” this level incorporates QL“B” information and provides horizontal and vertical positioning of subsurface utilities to within approximately 0.05 feet.

### **Scope of Work**

Based on information provided by BGE, Inc. (Client), TRG has developed a proposed scope for SUE services on this project. This scope may be modified, with Client and TRG concurrence, during the performance of work if warranted by changing or unexpected field conditions.



The scope of this proposal includes QL “B” and QL “A” SUE. In general, SUE services are requested within the limits of the San Marcos Wallace Offsite Drainage project in San Marcos, TX. TRG will research utility records and attempt to designate (QL “B”) existing underground utilities within the limits as shown clouded in red on Exhibit B to this proposal. As agreed to with the Client, this scope of work includes mapping of the following utilities: water, reclaimed water, chilled water, wastewater, natural gas, gas/oil pipelines, electric, telephone, fiber, duct banks, cable TV, and storm sewer. Overhead utilities and irrigation lines are excluded from this scope of work.

This proposal also includes up to **twenty-three (23) QL“A” SUE test holes** on various utilities to determine the vertical location of existing utilities at specific locations. To layout the test hole locations, TRG will perform QL“B” SUE designating in accordance with the *QL“B” – Designating* procedures described below. Proposed test hole locations will be determined by the Client at a later date. It is assumed that all test holes will fall within the limits clouded in red within Exhibit B attached to this proposal.

The survey of QL “B” and QL “A” SUE information is also included in this scope of work. It is assumed that the Client will provide TRG with the necessary survey control information.

Any necessary Right-of-Entry (ROE) permits, including railroad ROE, will be provided by the Client prior to the start of TRG field work.

## **TRG Procedures**

### *QL“D” and “C” – Records Research and Surface Feature Survey*

It is the responsibility of the SUE provider to perform due-diligence with regard to records research and the acquisition of available utility records. The due-diligence provided for this project will consist of contacting the applicable One Call agency and associated utility owners/municipalities, visually inspecting the work area for evidence of utilities, and reviewing available utility record information. Additional utilities not identified through these efforts will be referred to as Unknown utilities.

### *QL“B” – Designating*

Following a review of the project scope and available utility records with the project manager, TRG field personnel will begin designating the approximate horizontal position of known subsurface utilities within the project area. A suite of geophysical equipment that includes magnetic and electromagnetic induction will be used to designate conductive utilities. Where access is available, a sonde will be inserted into non-conductive utilities to provide a medium for transmission which can then be designated using geophysical equipment. Non-conductive utilities can also be designated using other proven methods, such as rodding and probing. TRG will make a reasonable attempt to designate Unknown utilities identified during field work; however, no guarantee is made that all Unknown utilities will be designated. Utilities will be marked and labeled to distinguish type and ownership. Field data depicting the designated utilities, as well as relevant surface features, will be produced to ensure accuracy and completeness of subsequent

survey data. The TRG project manager will review the collected survey data, field data, and utility records for accuracy and completeness.

### QL“A” – Locating

TRG will utilize non-destructive vacuum excavation equipment to excavate test holes at the requested locations. To layout the test holes, TRG will follow the *QL“B” – Designating* procedures described above. Once each utility is located, TRG will record the size, type, material, and depth. Test holes will be uniquely marked. Excavations will be backfilled by mechanical means with the appropriate material, and the original surface will be restored. If necessary, TRG can core pavement up to a depth of 12 inches. Asphalt surfaces will be repaired with an asphalt cold patch, and concrete cores will be epoxied in place, flush with the surrounding surface. TRG assumes that full-section pavement repair (including sidewalks) will not be required to restore the original pavement surface. If requested, these services can be provided at an additional cost.

TRG will establish any necessary routine traffic control measures at no additional cost. However, if non-routine traffic control measures (lane closures, traffic detours, flagpersons, etc.) are required, this service will be invoiced as a direct expense. Due to the risk of damage, TRG will not attempt to probe or excavate test holes on AC water lines unless approval is obtained from the owner in advance. Additionally, excavation in rock, or to a depth greater than 18 feet, is considered beyond the scope of this proposal.

TRG has made the following assumptions with regard to the test holes on this project:

- All test holes will be accessible to truck-mounted vacuum excavation equipment.
- Right-Of-Way (ROW) permits from the City of San Marcos (COSM) and/or Texas Department of Transportation (TxDOT) will be required. TRG will obtain all required COSM & TxDOT permit and ensure that coordination and compliance is provided.
- Designed traffic control plans will **not** be required.
- Non-routine traffic control measures will be required. TRG will acquire the services of a qualified Maintenance-Of-Traffic (MOT) Subcontractor and ensure that adequate traffic control is provided.
- The coring of pavement **may** be required.

### Deliverables

TRG will provide the following as a final deliverable to the Client:

- A utility file in CAD format depicting all designated and located utilities. The Client will provide TRG with any necessary background files for use in completing the final deliverables.
- A summary sheet of all test hole coordinate data and depth information.
- 8.5” x 11” Test Hole Data Forms for all test hole locations completed. These plans will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.

- 11” x 17” SUE Plan Sheets depicted all designated and located utilities. These plans will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.

### **Schedule**

TRG can mobilize within three (3) weeks of receiving Notice-To-Proceed (NTP). TRG estimates that the QL “B” work can be completed in fifteen (15) working days, broken down as follows:

- QL“B” field work – 3 days
- QL“B” survey and preparation of data – 5 days
- QL“B” deliverable preparation – 7 days

TRG estimates that the QL“A” SUE work can be completed in twenty-four (24) working days, broken down as follows:

- Layout test holes – 2 days
- QL“A” field work – 10 days
- QL“A” survey and preparation of data – 5 days
- QL“A” deliverable preparation – 7 days

### **Estimated Fee**

The total estimated cost to complete the work described herein is **Forty-Seven Thousand Six Hundred Fifty Dollars and NO/100 (\$47,650.00)**. An itemized breakdown of cost is provided in Exhibit A. Please note that these pricings are based on an assumption of quantities, and that only actual quantities will be invoiced – up to the total Contract amount.

We look forward to working with you on this project. If there are any questions, please do not hesitate to call at 210.981.3050.

Respectfully,

**The Rios Group, Inc.**



**Albert John Saldivar**

Project Manager



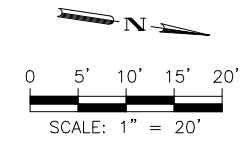
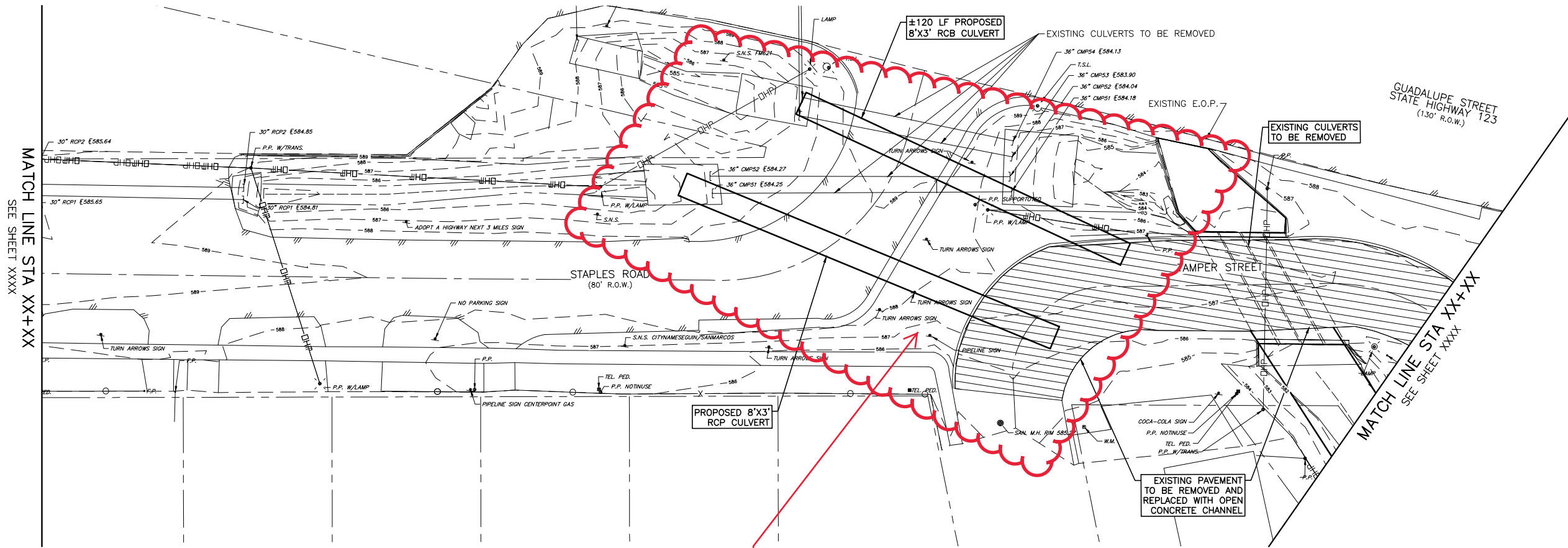
THE RIOS GROUP

**Estimate for Subsurface Utility Engineering**  
**Wallace Offsite Drainage**  
**San Marcos, Tx**

**EXHIBIT A**  
 Rev.1

| <b>Direct Expenses</b>       | <i>Rate</i> | <i>Assumed Quantity</i> | <i>Unit of Measure</i> | <i>Sub-Total</i>    |
|------------------------------|-------------|-------------------------|------------------------|---------------------|
| ROW Permits                  | \$ 270.00   | 1                       | EA                     | \$ 270.00           |
| ROW Permit Acquisition       | \$ 500.00   | 1                       | LS                     | \$ 500.00           |
| Traffic Control w/TMA        | \$ 750.00   | 2                       | DAY                    | \$ 1,500.00         |
| Traffic Control (Standard)*  | \$ 350.00   | 3                       | DAY                    | \$ 1,050.00         |
| Deliverable Preparation      | \$ 2,000.00 | 1                       | LS                     | \$ 2,000.00         |
| Flowable Backfill            | \$ 270.00   | 8                       | EA                     | \$ 2,160.00         |
| Survey (RPLS)                | \$ 2,250.00 | 2                       | DAY                    | \$ 4,500.00         |
| <b>Sub-Total</b>             |             |                         |                        | <b>\$ 11,980.00</b> |
| <b>QL"B" SUE Designating</b> |             |                         |                        |                     |
|                              | <i>Rate</i> | <i>Assumed Quantity</i> | <i>Unit of Measure</i> | <i>Sub-Total</i>    |
| Test Hole Setup (1 Man)      | \$ 150.00   | 20                      | HR                     | \$ 3,000.00         |
| 2-Man Crew QL-B              | \$ 255.00   | 24                      | HR                     | \$ 6,120.00         |
| <b>Sub-Total</b>             |             |                         |                        | <b>\$ 9,120.00</b>  |
| <b>QL"A" SUE Test Holes</b>  |             |                         |                        |                     |
| <b>Unit Rate - Depth</b>     | <i>Rate</i> | <i>Assumed Quantity</i> | <i>Unit Of Measure</i> | <i>Sub-Total</i>    |
| 0 - 4 feet                   | \$ 850.00   | 14                      | EA                     | \$ 11,900.00        |
| 4 - 8 feet                   | \$ 1,150.00 | 4                       | EA                     | \$ 4,600.00         |
| 8 - 12 feet                  | \$ 1,450.00 | 5                       | EA                     | \$ 7,250.00         |
| 12 - 18 feet                 | \$ 2,300.00 |                         | EA                     | \$ -                |
| Pavement Coring              | \$ 350.00   | 8                       | EA                     | \$ 2,800.00         |
| Test Hole Total              |             | 23                      |                        |                     |
| <b>Sub-Total</b>             |             |                         |                        | <b>\$ 26,550.00</b> |
| <b>Total Estimated Cost</b>  |             |                         |                        | <b>\$ 47,650.00</b> |

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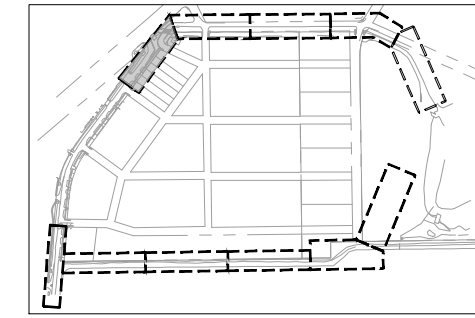


REFER TO GENERAL NOTE SHEET FOR LEGEND, ABBREVIATIONS AND NOTES

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.  
 RESPONSIBLE ENGINEER:  
 BGE, INC.  
 ENGINEERS, INC.  
 F-1046  
 KEN CARPER, P.E.  
 TEXAS REGISTRATION NO. 128022  
 AUGUST XX, 2020

QLB SUE Limits  
 QLA - 6 TH's

**NOT FOR CONSTRUCTION**  
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF KENNETH A. CARPER TEXAS NO: 128022 DATE: XX/XX/XX IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.



THE CITY OF SAN MARCOS



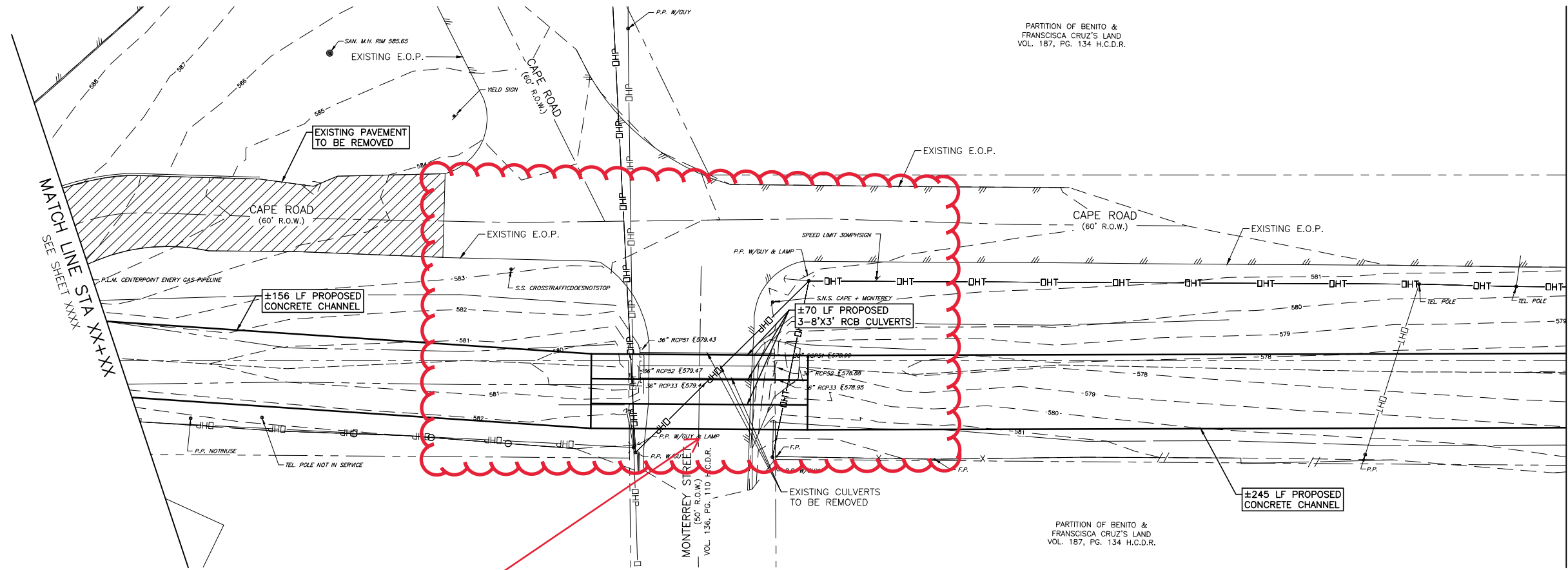
BGE, INC.  
 7330 SAN PEDRO, SUITE 202  
 SAN ANTONIO, TX 78216  
 TEL: 210-581-3600  
 CIVIL ENGINEERS AND SURVEYORS  
 TBPE REGISTRATION NO. F-1046

CAPE ROAD  
 PLAN AND PROFILES

|          |                   |                       |        |             |
|----------|-------------------|-----------------------|--------|-------------|
| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 |        | HIGHWAY NO. |
| GRAPHICS | X                 |                       |        |             |
| CHECK    | STATE             | DISTRICT              | COUNTY | SHEET NO.   |
| CHECK    | CONTROL           | SECTION               | JOB    | 111         |

30% SUBMITTAL

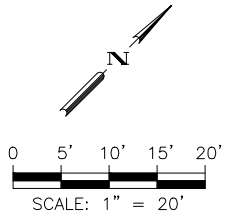
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QLB SUE Limits  
QLA - 4 TH's

PARTITION OF BENITO & FRANCISCA CRUZ'S LAND VOL. 187, PG. 134 H.C.D.R.

PARTITION OF BENITO & FRANCISCA CRUZ'S LAND VOL. 187, PG. 134 H.C.D.R.



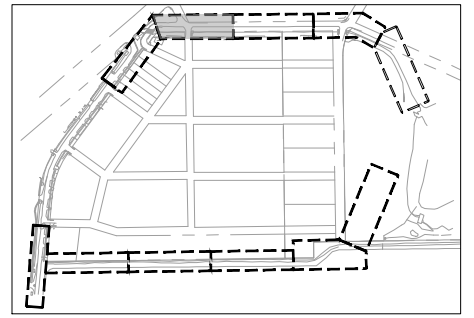
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TEXAS REGISTRATION NO. 128022  
AUGUST XX, 2020

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KEY PLAN  
NOT TO SCALE



THE CITY OF SAN MARCOS



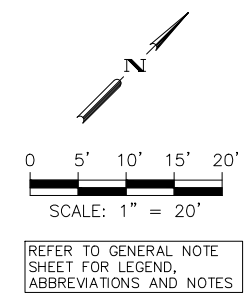
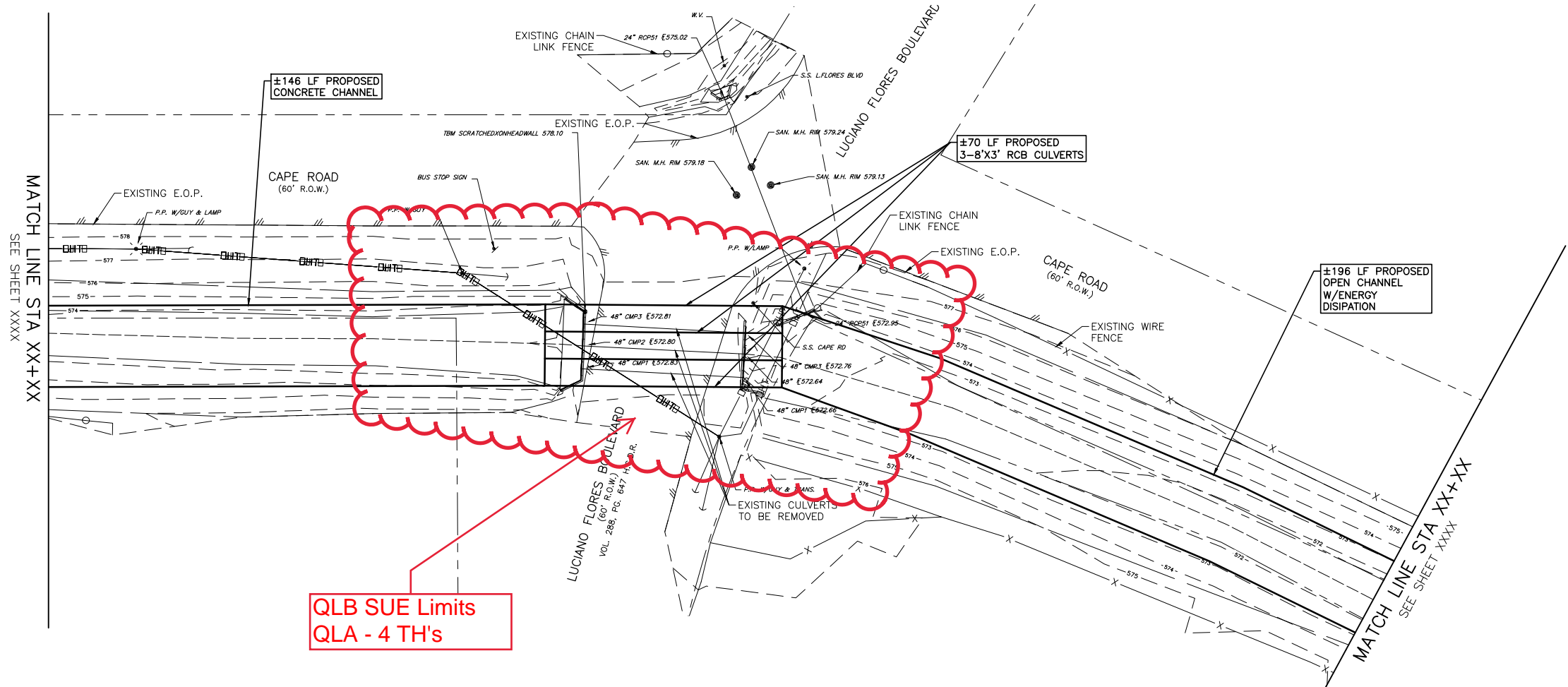
BGE, INC.  
7330 SAN PEDRO, SUITE 202  
SAN ANTONIO, TX 78216  
TEL: 210-581-3600  
CIVIL ENGINEERS AND SURVEYORS  
TBPE REGISTRATION NO. F-1046

CAPE ROAD  
PLAN AND PROFILES

|          |                   |                       |             |
|----------|-------------------|-----------------------|-------------|
| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 | HIGHWAY NO. |
| GRAPHICS | X                 |                       |             |
| CHECK    | STATE             | DISTRICT              | COUNTY      |
| CHECK    | CONTROL           | SECTION               | JOB         |
|          |                   |                       | 112         |

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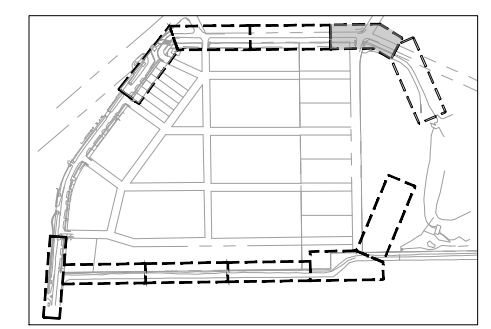
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REFER TO GENERAL NOTE SHEET FOR LEGEND, ABBREVIATIONS AND NOTES

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 RESPONSIBLE ENGINEER:  
 BGE, INC.  
 ENGINEERS, INC.  
 F-1046  
 KEN CARPER, P.E.  
 TEXAS REGISTRATION NO. 128022  
 AUGUST XX, 2020

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**KEY PLAN**  
 NOT TO SCALE



**THE CITY OF SAN MARCOS**

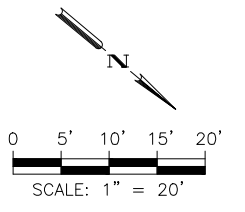


BGE, INC.  
 7330 SAN PEDRO, SUITE 202  
 SAN ANTONIO, TX 78216  
 TEL: 210-581-3600  
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 TBPE REGISTRATION NO. F-1046

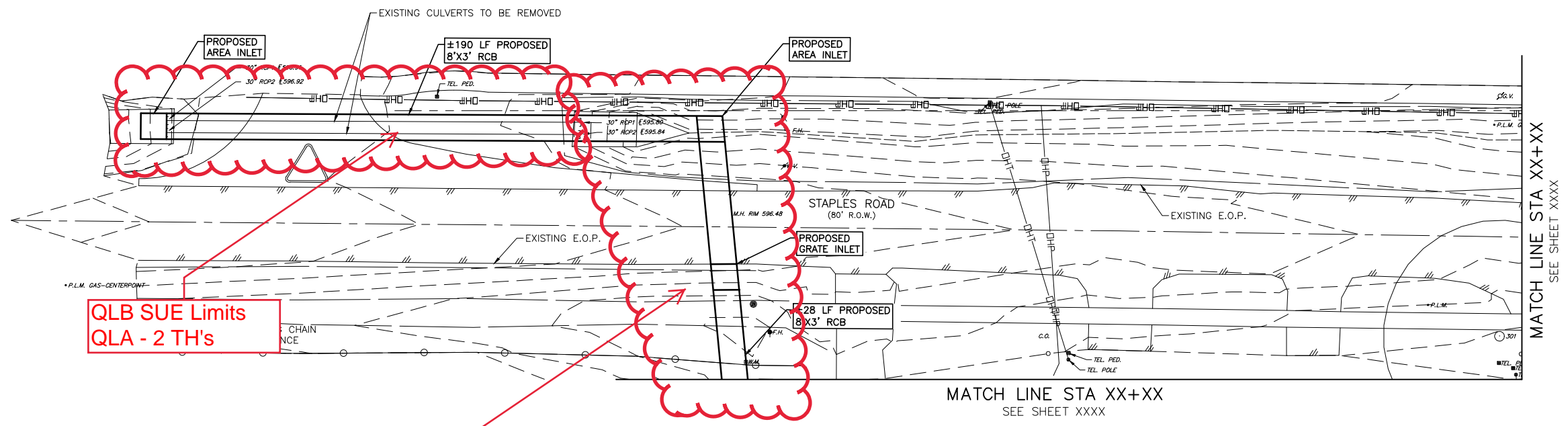
**CAPE ROAD  
 PLAN AND PROFILES**

|          |                   |                       |          |             |
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| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 |          | HIGHWAY NO. |
| GRAPHICS | X                 | STATE                 | DISTRICT | COUNTY      |
| CHECK    |                   | CONTROL               | SECTION  | JOB         |
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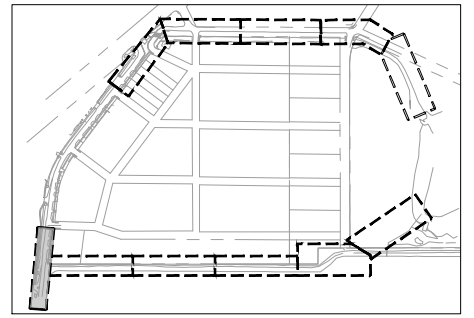


QLB SUE Limits  
QLA - 2 TH's

QLB SUE Limits  
QLA - 4 TH's

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TEXAS REGISTRATION NO. 128022  
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AE WOOD  
PLAN AND PROFILES

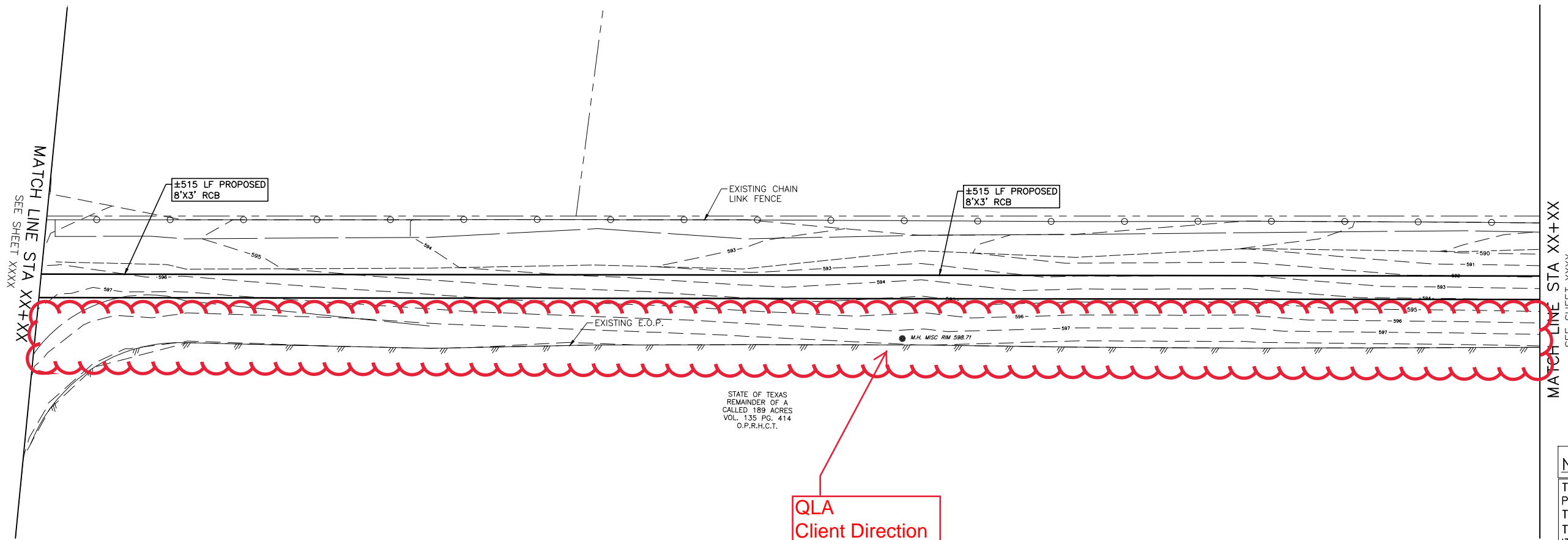
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| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 |        | HIGHWAY NO. |
| GRAPHICS | X                 |                       |        |             |
| CHECK    | STATE             | DISTRICT              | COUNTY | SHEET NO.   |
| CHECK    | CONTROL           | SECTION               | JOB    | 116         |

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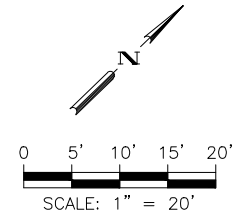
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QLA  
Client Direction



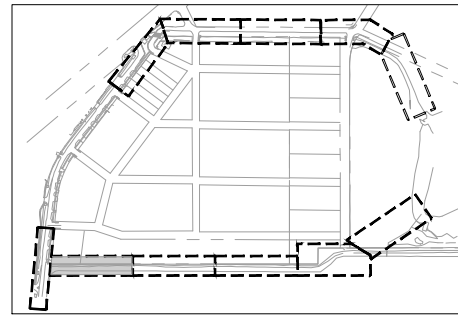
REFER TO GENERAL NOTE SHEET FOR LEGEND, ABBREVIATIONS AND NOTES

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TBPE REGISTRATION NO. F-1046

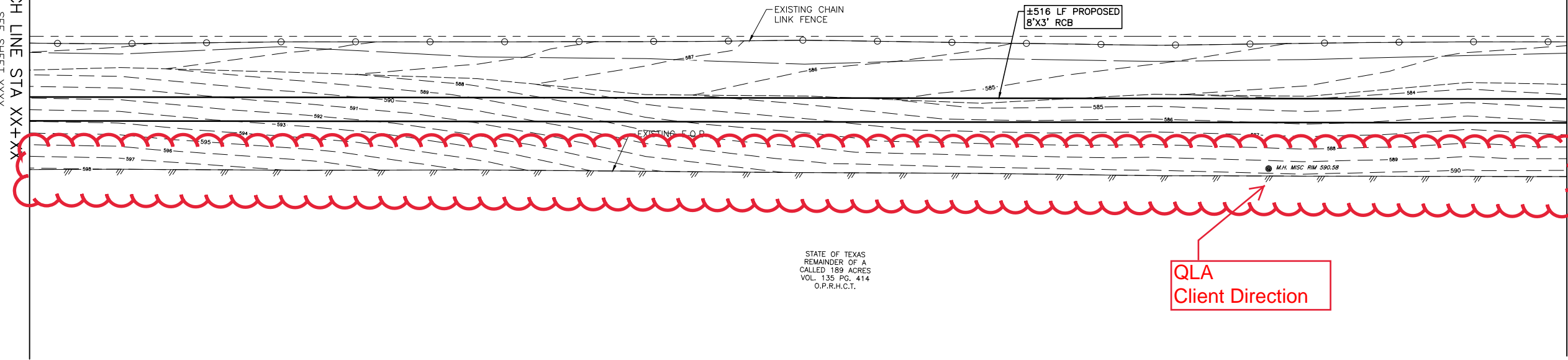
AE WOOD  
PLAN AND PROFILES

|          |                   |                       |        |             |
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| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 |        | HIGHWAY NO. |
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| CHECK    | STATE             | DISTRICT              | COUNTY | SHEET NO.   |
| CHECK    | CONTROL           | SECTION               | JOB    | 117         |

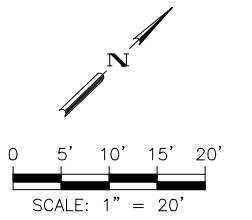
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G:\TXC\Projects\City\_SanMarcos\7319-00\_Wallice Addition\_Drainage\03\_CADD\01\_Shts\B AE Woods Drain C.dwg Layout: AE WOODS C-3 Plotted: 8/19/2020 1:42:28 PM Manuel Hernandez

MATCH LINE STA XX+XX  
SEE SHEET XXXX



MATCH LINE STA XX+XX  
SEE SHEET XXXX



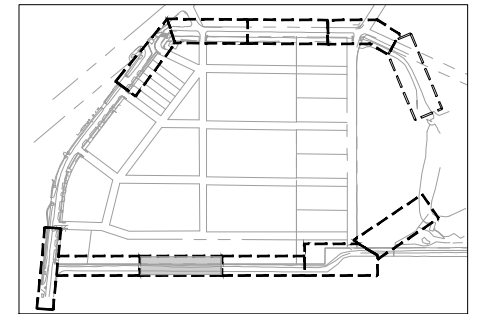
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TBPE REGISTRATION NO. F-1046

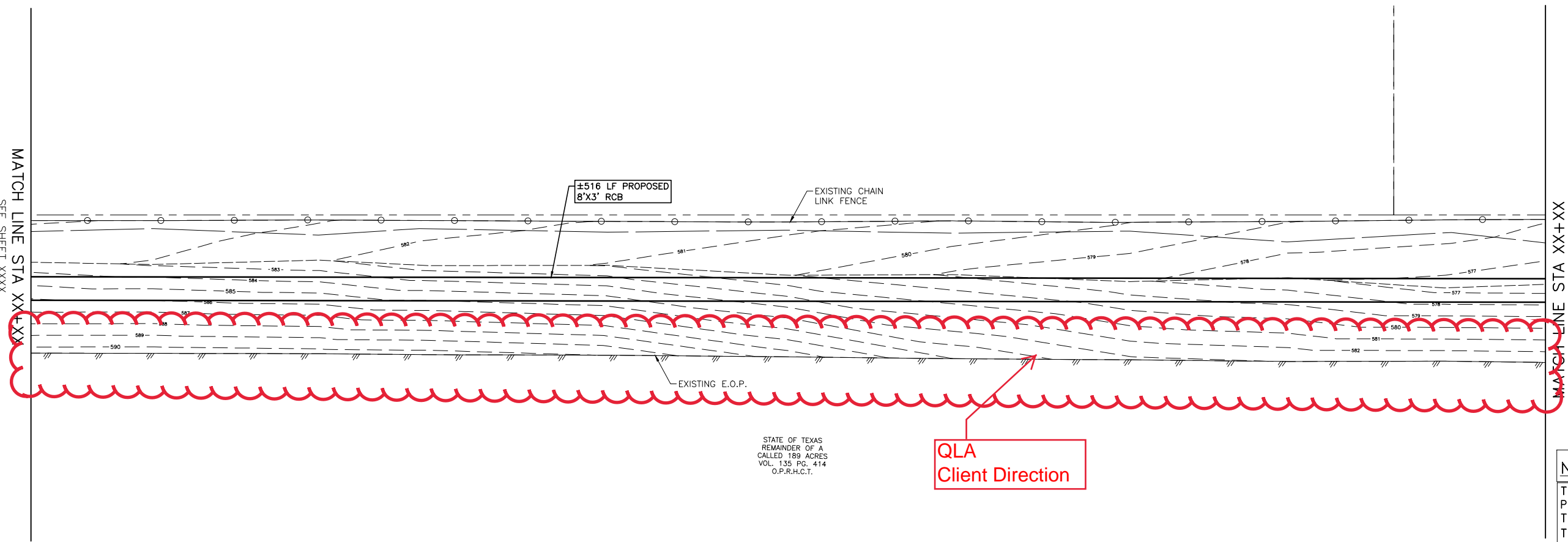
AE WOOD  
PLAN AND PROFILES

|          |                   |                       |        |             |
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| CHECK    | CONTROL           | SECTION               | JOB    | 118         |

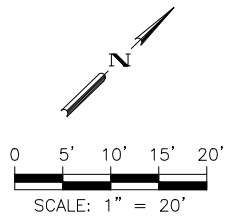
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G:\TXC\Projects\City\_SanMarcos\7319-00\_Wallice Addition\_Drainage\03\_CADD\01\_Shts\B AE Woods Drain C.dwg Layout: AE WOODS C-4 Plotted: 8/19/2020 1:43:08 PM Manuel Hernandez

MATCH LINE STA XX+XX  
SEE SHEET XXXX



QLA  
Client Direction



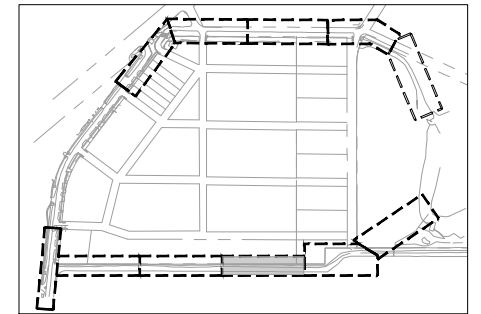
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THE CITY OF SAN MARCOS



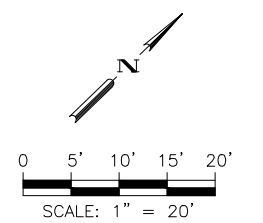
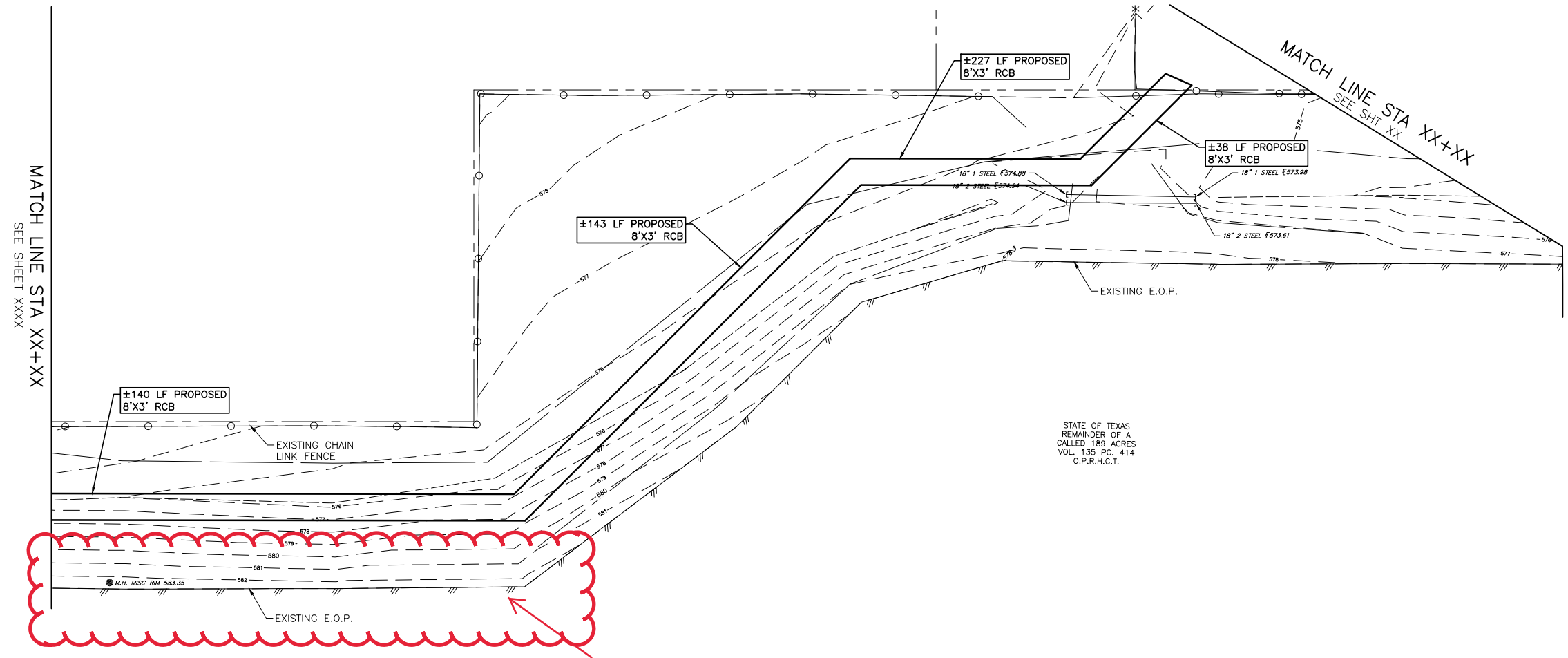
BGE, INC.  
7330 SAN PEDRO, SUITE 202  
SAN ANTONIO, TX. 78216  
TEL: 210-581-3600  
CIVIL ENGINEERS AND SURVEYORS  
TBPE REGISTRATION NO. F-1046

AE WOOD  
PLAN AND PROFILES

|          |                   |                       |        |             |
|----------|-------------------|-----------------------|--------|-------------|
| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 |        | HIGHWAY NO. |
| GRAPHICS | X                 |                       |        |             |
| CHECK    | STATE             | DISTRICT              | COUNTY | SHEET NO.   |
| CHECK    | CONTROL           | SECTION               | JOB    | 119         |

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G:\TXC\Projects\City\_SanMarcos\7319-00\_Wallice Addition\_Drainage\03\_CADD\01\_Shts\B AE Woods Drain Cdwg Layout: AE WOODS C-5 Plotted: 8/19/2020 1:44:01 PM Manuel Hernandez



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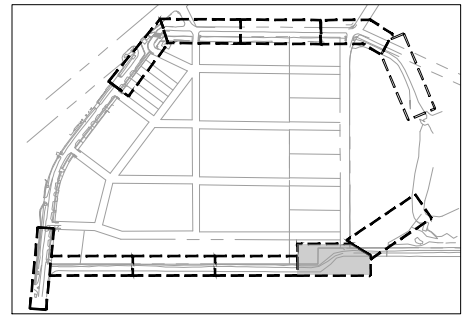
KEN CARPER, P.E.  
TEXAS REGISTRATION NO. 128022  
AUGUST XX, 2020

STATE OF TEXAS  
REMAINDER OF A  
CALLED 189 ACRES  
VOL. 135 PG. 414  
O.P.R.H.C.T.

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**THE CITY OF SAN MARCOS**

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TBPE REGISTRATION NO. F-1046

**AE WOOD  
PLAN AND PROFILES**

|          |                   |                       |          |             |
|----------|-------------------|-----------------------|----------|-------------|
| DESIGN   | FED. RD. DIV. NO. | PROJECT NO: 219-129.3 |          | HIGHWAY NO. |
| GRAPHICS | X                 | STATE                 | DISTRICT | COUNTY      |
| CHECK    | CONTROL           | SECTION               | JOB      | 120         |

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