

**Exhibit 1**  
**Scope of Work**  
**On-Call Design, Bidding, and Construction Phase Services for Sunset Acres Subdivision**

# **Sunset Acres Revised Final Design**

## **Project Background**

During the design phase of the Sunset Acres Improvements Project (“the Project,” as described in City of San Marcos Contract #218-394 and its Changes in Service #1 – #6), Plummer Associates, Inc. (“Plummer”) and the City of San Marcos (“City”) determined that the improvements needed to be phased as follows:

1. Phase 1: Wastewater Improvements
2. Phase 2: Detention Pond Improvements
3. Phase 3: Neighborhood Improvements, Phase 1
4. Phase 4: Neighborhood Improvements, Phase 2

In April 2024, the City received notification that it is the recipient of a United States Department of Transportation (“USDOT”) grant that will allow the City to combine Phases 3 and 4 into a single phase (henceforth to be referred to as “Phase 3”), to be bid and constructed as a single project. The funding for this Phase will be administered by the USDOT, requiring coordination with USDOT and environmental permitting per USDOT standards. Phase 2 will be bid and constructed as a single project separate from Phase 3; it will not rely on USDOT funding and thus will not require USDOT coordination or environmental permitting. (Phase 1 is under construction and will not be included in this contract, except for the Phase 1 As-Built GPS Data survey described in Task Order 1.)

To facilitate Plummer’s work in Phases 2 and 3 above, the City asked Plummer to prepare this Task Order Contract to address the design, bidding, and construction of those phases, as well as the environmental permitting and USDOT coordination required for Phase 3. Because this is a Task Order Contract, the City shall authorize each task order as necessary to complete that portion of the work towards the overall Project. The Scope identified in the following paragraphs is based on the current understanding of the project needs; it may need to be adjusted prior to issuance of individual Task Orders to accommodate future changes in site conditions and City needs. Correspondingly, all fees shown are estimates; final fees will be determined at the time of task order issuance.

## **Project Summary**

### **Proposed Improvements**

Proposed improvements were originally detailed in the July 2019 Preliminary Engineering Report (PER) on Sunset Acres Storm Drain improvements submitted by Plummer to the City, as well described in Contract #218-394 and its Changes in Service #1 – #6. A summary of the improvements is as follows:

1. Phase 1 Improvements:
  - a. Replacement of wastewater line within Broadway Street
  - b. Replacement of wastewater line in easement behind homes on east side of Parkdale Street.
  - c. Phase 1 is under construction and therefore not included in this contract, except for the Phase 1 As-Built GPS Data survey.
2. Phase 2 Improvements:
  - a. Existing detention pond will be expanded onto the Mendez Elementary School property. The pond location will be adjusted from the description in PER to match the most recent site plan for the Mendez Elementary School replacement.
  - b. Existing stormwater channel will be modified northwest of Leah Ave to split flows between the existing stormwater channel towards Peter Garza Drive and the existing detention pond (flowing towards the South System described below).
3. Phase 3 Improvements:
  - a. Roadway:
    - i. Full depth replacement of roadways within the project boundaries to allow for reconstruction with crowns and gutters per City standard details and allow for improved drainage per modeling identified during design.
    - ii. Full roadway pavement striping shall be performed for Broadway Street.
    - iii. Striping of stop signs and school zone boundaries shall be performed at existing stop signs and school zones.
  - b. Stormwater:
    - i. North System 1:
      1. *Patricia Dr (Between I-35 N Frontage Rd and Ebony St)*: Increase in main drainage line, extension of new drainage line, upsizing existing inlets (3), and addition of new curb inlet (1).
      2. *Parker Dr (Between Patricia Dr and Broadway St)*: Increase in main drainage line, upsizing existing inlets (4), and addition of new curb inlets (3).
        - a. Plummer shall perform modeling of the existing Parker Drive storm drain to determine if the following value engineering changes can be implemented in lieu of Parker Drive improvements shown above:
          - i. Upsize the existing Parker Drive storm drain inlets (instead of constructing an entirely new storm drain).
          - ii. Upsize the proposed Ebony Street storm drains to manage flows diverted from the Parker Drive storm drain system.
      3. *Ebony St (Between Patricia Dr and Parker Dr)*: Addition of new main drainage line, and addition of new curb inlets (3).
      4. Abandonment of Existing Storm Drain: The existing RCP line connecting Parker Dr, Ebony St, and Oakdale St will be disconnected from the manholes and either removed or filled with concrete and abandoned in place.

ii. North System 2:

1. *Ebony St (Between I-35 N Frontage Rd and Patricia Dr)*: Replace existing storm drain to add box culvert for TxDOT trunk line tie-in.
2. *Patricia Dr (Between Ebony St and Broadway St)*: Increase in the main drainage line, upsizing existing inlets (2), and addition of new curb inlets (2).
3. *Oakdale Dr (Between Patricia Dr and Parker Dr)*: Installation of new main drainage line, upsizing existing inlets (1), addition of new curb inlets (4), and addition of new area inlets (2).
4. *Lockwood St (Between Oakdale Rd and Broadway St)*: Increase in the main drainage line, upsizing existing inlets (2), and addition of new curb inlets (1).
5. *Magnolia Dr (Between Lockwood St and Parker Dr)*: Addition of new main drainage line, and addition of new grate inlets (1).
6. *Candlelight Ln (Between Patricia Dr and Broadway St)*: Addition of new main drainage line, upsizing existing inlets (3), addition of new curb inlets (4), and addition of new area inlet (1).

iii. South System:

1. *Broadway St (Between I-35 N Frontage Rd and Parker Dr)*: Increase in main drainage line and alignment modifications, addition of new curb inlets (6), and addition of area inlets (3).
2. *Parker Dr (Immediately south of Broadway St)*: Upsizing of existing curb inlet (1).
3. *Parkdale St (Between Broadway St and Del Sol Dr)*: Increase in the main drainage line, upsizing existing inlets (2), the addition of new curb inlet (1), and addition of stormwater channel within easements on the backside of homes on the east side of the street.
4. *Lockwood St (Between Broadway St and Del Sol Dr)*: Installation of new main drainage line, and addition of new curb inlets (3).
5. *Candlelight Ln (Between Broadway St and Del Sol Dr)*: Increase in the main drainage line, upsizing existing inlets (1), and addition of new curb inlet (1).
6. *Patricia Dr (Between Broadway St and Del Sol Dr)*: Increase in the main drainage line and upsizing existing inlets (2).
7. *Del Sol Dr and Peter Garza Dr (Between I-35 N Frontage Rd and Parkdale St)*: Increase in the main drainage line, upsizing existing inlets (2), and addition of new curb inlets (2).

c. Water:

- i. Existing 12" water main within TxDOT ROW shall be relocated, starting approx. 600 LF south of the intersection of Texas SH 123 and the I-35 N Frontage Rd and ending at the intersection of Del Sol Drive and the I-35 N Frontage Rd.
- ii. The proposed water main shall be 12" in diameter and be located within Patricia Drive as much as possible, with replacement within the TxDOT ROW where necessary.

- d. Wastewater:
  - i. The following wastewater lines shall be removed and replaced within their existing alignments:
    - 1. 750± LF Wastewater Line between Patricia Dr and Candlelight Ln.
    - 2. 850± LF Wastewater Line between Candlelight Ln and Lockwood St.
    - 3. 950± LF Wastewater Line between Lockwood St and Parkdale St.

#### Assumptions and Exclusions Used in Scope Preparation

Plummer utilized the following assumptions when preparing this scope:

- 1. General:
  - a. Plans, specifications, and Opinion of Probable Construction Cost (OPCC) shall be designed and formatted per the latest versions (at the time of the first Notice to Proceed for each Phase) of the City's Design Criteria Manuals, Standard Details, City Plan Review Checklist, and City standard forms.
  - b. Demolition and/or abandonment sheets providing details of individual structures shall not be necessary.
  - c. Project is entirely outside of the bounds of Edwards Aquifer Recharge, Transition, or Contributing Zone Boundaries and therefore engineering to address TCEQ requirements for Edwards Aquifer shall not be required.
  - d. Drafting and acquisition of easements by Plummer shall not be necessary.
  - e. Deliverables shall be provided to the City in files in PDF format, unless noted otherwise. All GIS Submittals shall be in DWG format per the City's GIS Submittal Checklist.
  - f. The use of Plummer technical specifications shall be considered an Additional Service.
- 2. Survey (Included in part/full in Task Orders 1, 4, 8, 14 and 18):
  - a. Point of Contact (POC) for access coordination will be provided by City to the field crew before deployment.
  - b. Boundary Survey Services are not included in this scope.
  - c. Work shall be supervised by RPLS registered in the state of Texas.
  - d. Survey shall meet the following:
    - i. Based on the Texas State Plane coordinate system of 1983 (nad\_83 (2011)) in the South Central Zone (4204).
    - ii. Distances will be grid values represented in U.S. survey feet or surface adjustment factor supplied by the City.
    - iii. All deliverables shall be in accordance with most recent version of the City's GIS Submittal Checklist.
  - e. Phase 3 Survey of SMEU Improvements shall be completed as a separate effort from the rest of the Phase 3 Design Survey because of the unknown timing of the completion of construction of the SMEU project.
  - f. Plummer will check into the control monumentation network on-site for data coordination with project limits.
- 3. Hydrology and Hydraulic Modeling (Included in part/full in Task Orders 3 and 12):
  - a. The proposed storm sewer and pond layout will remain as described in the Project Summary above and shall be designed to meet the following criteria:
    - i. Convey the 25-year storm flows within street curbs and the storm drain system.

- ii. Convey the 100-year storm flows within the defined street rights of way and easements.
  - iii. Follow the criteria and methods outlined in the City's Stormwater Technical Manual.
- b. Model will be updated with design data at 60% and 90% design. Final changes made for 100% design are anticipated to be minimal, therefore modeling during 100% design will not be performed.
- c. Atlas 14 will not be evaluated.
- d. Assumptions for downstream boundary conditions (i.e., HGL) will be derived from the TxDOT proposed drainage improvements along the I-35 frontage road or the top of soffit elevation if TxDOT boundary conditions are not available.
- 4. Phase 2 Design (Task Orders 4, 5, and 6):
  - a. Initial design deliverable for detention pond shall be considered 60% design, with additional design deliverables to be created for 90%, 99%, and 100% design.
  - b. Detention pond redesign shall not begin until the City has provided a finalized site plan upon which to base pond design.
  - c. The entirety of Phase 2 construction shall be on SMCISD property, meaning that easement acquisition and traffic control plan shall not be necessary.
  - d. Design shall be based upon SMCISD site development utilized by Plummer during the Feasibility Study referenced above. Should further revisions (affecting pond location or capacity) be made to SMCISD site development plans after the feasibility study has been started on site plans mentioned earlier in this paragraph, subsequent additional feasibility study shall be considered an additional service.
  - e. Revised pond design will allow for removal of School District improvements that were included in previous detention pond designs, including sports fields, walking paths, and pedestrian bridge.
  - f. Relocation of wastewater line servicing 800 Leah Ave (Sage Spring Senior Living) shall not be necessary. Relocation of wastewater line shall be considered an additional service.
- 5. Phase 3 Environmental Support Services (Task Order 13):
  - a. Tree Permitting: It is assumed that the City of San Marcos doesn't require tree permitting for utility projects. If it is determined that tree permitting is needed, this will be an Additional Service.
  - b. Meetings are assumed to be performed remotely via Microsoft Teams.
  - c. Development of additional permits for the project including but not limited to tree permits, endangered species survey permitting, floodplain development permits, Texas Antiquities Permit and Section 404 permits for impacts to Waters of the U.S. are not included in this scope. If required, these would be an Additional Service.
  - d. Development of a mitigation plan for unavoidable impacts is not included in this task. If required by City or regulatory agency, these would be an Additional Service.
- 6. Phase 3 Design (Task Orders 14, 15, and 16):
  - a. No driveways will be within TxDOT roadways, and thus TxDOT permit will not be required.
  - b. Sheets shall have the same stationing and (when possible) viewports as roadway grading sheets.

## Basic Services

### Task Order 1: Phase 1 As-Built GPS Survey

1. Plummer will provide GPS coordinates for utilities and assets installed for Phase 1, including directional changes, flowlines, valves, and manholes.

#### Deliverables:

1. Phase 1 As-Built GPS Data: GPS coordinates in a comma-delimited .txt format.

### Task Order 2: Phase 2 Project Management

1. Plummer shall manage and provide Project Management throughout the duration of the Project scope. Project management shall consist of developing and implementing a project management plan; tracking and managing internal schedules; monitoring and addressing issues related to the scope of work, budget, and deliverables; preparing and processing monthly billings; scheduling quality control reviews; developing subconsultants' scope of work; and management of subconsultants.
2. Plummer shall meet and coordinate with City monthly regarding goals, objectives, scope, schedule, and budget to define and clarify City's requirements for the Project and gather available data. Plummer shall advise City of need for City to provide data or services of the types described in Exhibit B which are not part of the Plummer's Basic Services.
  - a. Plummer shall prepare meeting agenda and meeting materials prior to progress meeting and shall prepare draft meeting notes within one week of the meeting for City review. Upon City approval, Plummer shall issue final meeting notes within one week.
  - b. Monthly meetings may be canceled at the direction or approval of the City's Project Manager.
  - c. Meetings shall consist of:
    - i. Up to twenty-four (24) monthly one-hour progress meetings including the City's Project Manager and Plummer personnel.
    - ii. Preparation of invoices for the 24-month duration of Phase 2 design, bidding, and construction.

#### Deliverables:

1. Monthly progress meeting notes and supporting documentation.
2. Monthly invoices and supporting documentation.

### Task Order 3: Phase 2 Hydrology and Hydraulic Modeling

1. Perform additional modeling and analysis related to the Sunset Acres detention pond and capacity, based on the revised detention pond design.
2. Update InfoWorks ICM model with revised grading and a new diversion configuration.
3. Evaluate the redesigned flow split structure.

#### Deliverables:

1. Updated Phase 2 hydraulic model results and drainage calculations (including flow split requirements), to be included in drainage plan sheets.

### Task Order 4: Phase 2 60% Design

1. Phase 2 Design Survey:
  - a. Plummer will obtain field survey for the areas within the Phase 2 boundaries.
  - b. Plummer will provide a topographic surface, with data to be collected via mobile-based LiDAR.
  - c. Plummer will provide CAD linework for above-ground hard features visible on-site, within the apparent project area, limited to the following: above-ground utilities, culvert details, manhole details, junction boxes, mailboxes, sidewalk ramps, signs, fences, tree survey within the project area, and topographic features.
2. Plummer shall prepare 60% design documents for Phase 2 (detention pond) of the expanded detention pond, based on the pond location feasibility study performed for CIS #6 of City Contract #218-394.
3. Prepare a 60% design plan set per the City's requirements for the improvements referenced above. Phase 2 plans shall consist of the following sheets:
  - a. Existing conditions, including roadway, structures, vegetation, and utilities.
  - b. Existing right-of-way lines, property lines, and permanent easements.
  - c. Proposed right-of-way lines, property lines, temporary and permanent easements lines.
  - d. Preliminary location (plan and profile) of existing and proposed utilities, showing proposed underground and overhead utilities to be reconstructed and/or relocated as part of Phase 2.
  - e. Preliminary location (plan and profile) of proposed storm drainage features.
  - f. Drainage area maps.
  - g. Sheets containing results of hydrologic and hydraulic analysis.
  - h. Tree protection locations and notes.
4. Phase 2 60% Technical Specifications:
  - a. Prepare technical specifications for the improvements listed above using the most recent published versions of the City of San Marcos standard specifications.
5. Phase 2 60% OPCC:
  - a. Prepare a Class 3 engineer's opinion of probable construction cost (OPCC) for the improvements listed above, using a Bid Schedule and bid items provided by the City and listed in their standard specifications, respectively.

6. Site Visits: Plummer shall conduct up to five (5) site visits for the purpose of becoming familiar with the project site and to aid in project design.

Deliverables:

1. Phase 2 Design Survey:
  - a. CAD file containing topographic surface and hard surface features
  - b. Certification letter signed and sealed by RPLS.
2. Phase 2 Design Documents:
  - a. 60% Plans
  - b. 60% Technical Specifications
  - c. 60% (Class 3) OPCC

### Task Order 5: Phase 2 90% Design

1. Update plans, specifications, and OPCC from Task Order 4 to 90% design per City review comments.
2. In addition to information provided in the 60% plans, the 90% plans submittal shall include and Erosion control plan.
3. In addition to addressing City's 60% OPCC comments, the 90% OPCC shall be updated from Class 3 to Class 1.
4. Plummer shall conduct up to five (5) site visits to aid in project design.

Deliverables:

1. Phase 2 90% Plans.
2. Phase 2 90% Technical Specifications.
3. Phase 2 90% (Class 3) OPCC.
4. Phase 2 90% decision log, detailing City review comments and Plummer design decisions.

### Task Order 6: Phase 2 Final Design

1. Update plans, specifications, and OPCC from Task Order 5 to 99% design, per City 90% review comments.
2. Upon receipt of 99% design review comments from City, Plummer shall update and seal final deliverables.
3. Site Visits: Plummer shall conduct up to two (2) site visits to aid in project design.

Deliverables:

1. 99% Design:
  - a. 99% Plans. (PDF and CAD files per the City's GIS Submittal Checklist.)
  - b. 99% Technical Specifications.
  - c. 99% (Class 2) OPCC.
  - d. 99% decision log, detailing City review comments and Plummer design decisions.



2. 100% Design:
  - a. Sealed Plans. (PDF and CAD files per the City's GIS Submittal Checklist.)
  - b. Sealed Technical Specifications.
  - c. Sealed (Class 1) OPCC.
  - d. Sealed decision log, detailing City review comments and Plummer design decisions.

#### Task Order 7: Phase 2 Advertisement/Bidding Phase Services

1. Plummer shall assist the City in the advertisement and bidding of Phase 2. It is anticipated the City will advertise and distribute the plans and specifications to prospective bidders. Plummer will provide the following services during this phase.
  - a. Pre-Bid Conference:
    - i. Plummer shall virtually attend a pre-bid conference via Microsoft Teams hosted by the City. Plummer shall prepare and distribute meeting notes to attendees.
  - b. Addenda:
    - i. Plummer shall respond to questions from prospective bidders and prepare and issue up to three (3) addenda to clarify the plans and specifications. Preparation and issuance of additional addenda shall be considered an Additional Service.
  - c. Bid Review and Award Recommendation:
    - i. Plummer shall review the bids received for the project, including the following:
      1. Using a spreadsheet provided by the City, prepare a bid tabulation indicating the amounts of bids submitted and indicating the lowest three bidders.
      2. Call and document at least three references listed by the low-bid contractor to indicate the quality of work.
      3. Assess the contractor's abilities to perform work (based on information submitted in bid package) and ability to meet the contract schedule.
    - ii. Plummer shall make a written formal award recommendation to the City.

#### Deliverables:

1. Pre-Bid Conference Meeting notes.
2. Up to three (3) addenda.
3. Bid tabulation.
4. Written formal award recommendation.

#### Task Order 8: Phase 2 Construction Phase Services

1. Plummer will assist the City in the construction phase of Phase 2. It is anticipated that the City will be responsible for construction field observation and coordination, except as outlined below. Plummer shall provide the following services:
  - a. Pre-Construction Meeting: Attend project pre-construction meeting prior to the commencement of the Project Work.

- b. Site Visits: Conduct up to twelve (12) site visits to meet and review construction progress with the City, Contractor, and inspectors, not including the final project walkthrough with the City and Contractor. Site visits shall be for the purpose of becoming familiar with the progress and quality of the work.
- c. Submittals: Review up to thirty (30) submittals (samples, catalog data, shop drawings, laboratory, shop and mill test of material and equipment, and other data) and ten (10) additional re-submittals submitted by the Contractor. Reviews shall be only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents Reviews; approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Review of excessive submittals and review of resubmittals beyond one resubmittal will be considered Additional Services and charged to the Contractor as part of the contract specifications.
- d. RFIs: Interpret the intent of the plans and specifications for the City and Contractor, responding to up to twenty (20) Requests for Information.
- e. Field and Change Orders: Review up to five (5) total Field Orders and/or Change orders for use by the Contractor. Plummer shall review Proposed Contractor Field/Change Orders and City requested changes. Engineers shall prepare technical documents supporting Proposed Construction Modifications for City review and Construction Manager processing. Review of additional change orders shall be considered Additional Services and charged to the Contractor as part of the contract specifications.
- f. Pay Estimates: Review and comment on up to twelve (12) monthly and final estimates for payment to Contractor. The City will confirm quantities and the Plummer will confirm the math and sign the estimate.
- g. Substantial and Final Completion Review:
  - i. Participate in a substantial completion review for conformance with the design concept of the project and general compliance with the contract documents and work with the Construction manager to provide a list of deficiencies to the Contractor.
  - ii. Participate, with the Construction Manager and City's representative, in a final review of the project. Plummer shall work with the Construction Manager to verify that items identified on the deficiency list from the substantial completion review have been completed and make recommendations for final payment to the contractor.
- h. Record Drawings: Revise the construction record drawings in accordance with the information (including redlined construction documents and construction notes) furnished by the Contractor reflecting changes in the Project made during construction.
- i. Phase 2 As-Built GPS Data:
  - i. Plummer will provide GPS coordinates for utilities and assets installed for Phase 2, including topographic surface, directional changes, flowlines, valves, and manholes.

Deliverables:

1. Draft and final meeting notes from bi-weekly progress meetings.
2. Official written responses to each submittal and re-submittal.
3. Official responses to each RFI.
4. Official responses to each field and/or Change order.
5. Signed pay estimates.
6. One set of reproducible prints of "Record Drawings" and PDF files shall be provided to the City. Plummer shall provide Record Drawings to the City within 60 days of receipt of the Contractor's redline drawings.
7. Phase 2 As-Built GPS Data: GPS coordinates in a comma-delimited .txt format.

## Task Order 9: Phase 3 Project Management

1. Plummer shall manage and provide Project Management throughout the duration of the Project scope. Project management shall consist of developing and implementing a project management plan; tracking and managing internal schedules; monitoring and addressing issues related to the scope of work, budget, and deliverables; preparing and processing monthly billings; scheduling quality control reviews; developing subconsultants' scope of work; and management of subconsultants.
2. Plummer shall meet and coordinate with the City monthly regarding goals, objectives, scope, schedule, and budget to define and clarify the City's requirements for the Project and gather available data. Plummer shall advise the City of the need for the City to provide data or services of the types described in Exhibit B which are not part of the Plummer's Basic Services.
  - a. Plummer shall prepare the meeting agenda and materials prior to progress meeting and shall prepare draft meeting notes within one week of the meeting for City review. Upon City approval, Plummer shall issue final meeting notes within one week.
  - b. Monthly meetings may be canceled at the direction or approval of the City's Project Manager.
  - c. Meetings shall consist of:
    - i. Up to sixty (60) monthly one-hour progress meetings including the City's Project Manager and Plummer personnel.
    - ii. Preparation of invoices for the 60-month duration of Phase 3 design, bidding, and construction.

### Deliverables:

1. Monthly progress meeting notes and supporting documentation.
2. Monthly invoices and supporting documentation.

## Task Order 10: Phase 3 USDOT Grant Coordination

1. Provide reports, documents, analysis, and information required for USDOT grant coordination process, as outlined in TxDOT's Local Government Project Procedure Qualification and Local Government Projects Construction Administration training courses. Labor and services beyond that outlined in those training courses shall be considered an Additional Service.
2. Coordinate with USDOT on compliance with the environmental review process, in accordance with their latest standards. Labor and services beyond that outlined in that toolkit shall be considered an Additional Service.
3. Evaluate design and coordinate with the City on proposed changes per environmental review process feedback.
4. Assist the City in preparing pay distribution applications.

### Deliverables:

1. Documentation for USDOT environmental review process.
2. Monthly signed pay applications.

## Task Order 11: Phase 3 Subsurface Utility Engineering

1. Plummer shall obtain Subsurface Utility Engineering (SUE) within the City rights of way and easements within the Phase 3 project boundaries.
2. SUE shall consist of the following items, performed to the standards as identified in the American Society of Civil Engineers 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities":
  - a. SUE Level B/C/D within project boundaries.
  - b. 20 SUE Level A bores, at up to 8' depth within pavement, including pavement restoration.
3. Plummer shall submit and receive approval by City's Project Manager of the proposed location and depth of SUE Level A bores for prior to excavation.
4. City shall provide utility coordination services and permitting required for Level A bores.

### Deliverables:

1. CAD and PDF files containing the surveyed utilities.
2. PDF files containing sealed test hole data sheets.

## Task Order 12: Phase 3 Hydrology and Hydraulic Modeling

1. Update hydraulics and models to reflect the most recent design.
2. Create InfoWorks ICM model to replicate the existing detention pond and storm drain system for the Sunset Acres subdivision. Existing conditions model runs will be made for 25-year and 100-year flows events.
3. Extend the Sunset Acres InfoWorks model down to the outfall at the San Marcos River. The model extension will be applied to both existing and proposed design conditions.
4. Create InfoWorks ICM model for the proposed detention pond and storm drain system, utilizing the proposed improvements.
5. Update the InfoWorks ICM model to model inlet efficiency at capturing runoff from Phase 3 of Sunset Acres in combination with the surface runoff conditions (using 2D hydraulics).
6. Evaluate the Phase 3 storm drain design and provide recommended design changes to meet City drainage and storm drain design criteria.

### Deliverables:

1. Updated Phase 3 results and drainage calculations, to be included in drainage plan sheets.

## Task Order 13: Phase 3 Environmental Support Services

1. Assist City in obtaining assessments for the Project as described below:
  - a. USDOT Environmental Coordination as a result of Federal Highway Administration (FHWA) funding for the project. This consists of the development of National Environmental Policy Act (NEPA) documentation covering anticipated impacts from the project.
2. Cultural Resources Investigation
  - a. Archeological Studies:
    - i. Plummer shall prepare a desktop Archeological Background Study for review and comment by FHWA.
      1. The background study will involve review of existing files held by the Texas Archeological Research Laboratory (TARL) and the Texas Historical Commission (THC) Archeological Sites Atlas to determine if previously recorded sites or archeological surveys occur within or near the proposed project area. The location of previously recorded sites and surveys will be plotted onto USGS 7.5-minute topographic maps for use in the compliance coordination process.
      2. Archeologists will also consult the USDA-NRCS soil survey maps for the project location, relevant aerial photography, historical maps, land use maps, and the Geologic Atlas of Texas to assess the likelihood for unrecorded archeological resources and make recommendations regarding the need for further field surveys.
      3. Another resource that will be used is TxDOT's Potential Archeological Liability Map (PALM) for Austin District, Hays County, which is a predictive model used to aid in transportation planning and cultural resource compliance.

4. The results of this effort will be integrated into an archeological background study report that conforms to cultural resources compliance with Antiquities Code of Texas and Section 106.
- b. Historical Studies:
  - i. Plummer shall prepare a Coordination Letter for Historical Studies based on a desktop-level background information to determine the project's potential for impacting significant historical resources.
- c. The results of the archeological and historic studies will be compiled into coordination letters for review and comment by THC and FHWA and will request agency concurrence.
3. FHWA NEPA Coordination
  - a. Shall prepare documentation and perform coordination with the FHWA Environmental Staff for the NEPA review of the Project. Plummer to provide the following:
    - i. Public Involvement
      1. Plummer shall develop a draft and final public involvement plan for the Project. The public involvement plan will be drafted in coordination with the City and FHWA.
      2. The public involvement plan will include up to two (2) in-person and up to (2) two remote public meetings, an initial meeting to collect comments and feedback from project stakeholders, and a meeting to discuss the Draft NEPA documentation and the results. Plummer shall prepare the agendas, provide one (1) representative from the environmental review and design teams, record and transcribe the meeting, document meeting participants, and compile all written and verbal comments into a list. The City shall provide the location to be approved by FHWA.
      3. Plummer shall work with the City and FHWA to provide an acceptable response to comments documented within the NEPA document.
    - ii. Interagency Coordination
      1. Organize up to one (1) coordination meeting with FHWA and City to discuss the FHWA procedures, submittal requirements, potential issues, and review procedures. Prepare meeting agenda, meeting notes, and list of attendees for City review. Revise documentation after one (1) round of revisions and provide a copy to attendees.
      2. Manage the submittal and routing of information to FHWA. Plummer shall submit documentation to FHWA for their review and approval. Plummer shall follow up on each submittal and coordinate with City to address additional documentation needs.
    - iii. Environmental Review
      1. Perform an Environmental Review for the proposed project according to FHWA Environmental Review Toolkit in preparation of submittal to FHWA:

- a. Review background data for the task including U.S. Fish and Wildlife Service Information for Public Consultation (iPaC) reports, Texas Parks and Wildlife Department Hays County species list, current and historical aerial photographs, U.S. Department of Agriculture soil and land use maps, hazardous materials, air conformity, and noise analysis. Perform desktop analysis to review these data to identify areas that potentially contain social and environmental resources in preparation of field investigation.
  - b. Survey the Project site for environmental and biological resources including species habitat. This effort is in support of the NEPA documentation below as well as establishing the resource impacts requiring additional coordination.
- iv. NEPA Documentation
  - 1. Organize and submit NEPA documentation for review and approval of FHWA.
    - a. Plummer shall perform an analysis of the project for qualification as a Categorical Exclusion (CE) or Environmental Assessment (EA) level environmental document. Plummer shall submit project information to the City for review. Once approved, Plummer shall submit project information to FHWA for their determination and confirmation of the review process.
    - b. Based on the FHWA review requirements for a CE or EA document, Plummer shall prepare NEPA documentation providing an analysis of social and environmental impacts of the proposed Project. The draft NEPA document shall be provided to the City for review. Upon City approval, Plummer shall submit the NEPA documentation to FHWA. Plummer shall respond to FHWA requests for additional information in support of the NEPA document. The NEPA document will review the following:
      - i. Land Use and Ecosystems
      - ii. Environmental Justice
      - iii. 4(f) resources
      - iv. Aquatic Resources
      - v. Wildlife
      - vi. Threatened and Endangered Species
      - vii. Air Quality
      - viii. Noise
      - ix. Hazardous Waste
      - x. Cultural Resources
      - xi. Cumulative Impacts
    - c. Plummer shall maintain a list of commitments from interagency and public coordination that are agreed upon by the City and describe how the commitments are being met.

Deliverables:

1. Draft and final Archeological Coordination Letter
2. Draft and final Historic Coordination Letter
3. Draft and final agenda and notes for meetings with FHWA, public involvement, and interagency coordination.
4. Draft and final NEPA documentation and attachments.
5. Draft and final project commitments.

Task Order 14: Phase 3 60% Design

1. Phase 3 Design Survey:
  - a. Plummer will obtain additional field survey for the areas within the Phase 3 project boundaries that were not surveyed under Change in Service (CIS) #6 of City Contract #218-394, limited to the public right of way and existing utility easements.
  - b. Plummer will provide a topographic surface, with data to be collected via Mobile-based LiDAR.
  - c. Plummer will provide CAD linework for above-ground hard features visible on-site, within the apparent project area, limited to the following: above-ground utilities, culvert details, manhole details, junction boxes, mailboxes, sidewalk ramps, signs, fences, tree survey within the ROW, and topographic features.
2. Phase 3 Survey of SMEU Improvements:
  1. Plummer will provide post-construction GPS coordinates for utilities and assets installed by San Marcos Electrical Utility (SMEU) within the Phase 3 project boundaries.
  2. Phase 3 Survey of SMEU Improvements shall be completed as a separate effort from the rest of the Phase 3 survey because of the unknown timing of the completion of construction of the SMEU project.
3. Because the 30% submittal for the neighborhood improvements (comprising both Phase 3 and Phase 4 improvements) was completed prior to project phasing, Plummer will begin with a 60% submittal for Phase 3 design. The following scope revises the Neighborhood Improvements tasks defined in previous Changes in Service:
  1. Phase 3 60% Plans:
    - i. Prepare a plan set per the City's requirements for the improvements listed above.
    - ii. Phase 3 Plans shall consist of the following sheets (sheet quantities are anticipated):
      1. General Sheets (Approximately 15 Total):
      2. Erosion and Sedimentation Control Sheets (Approximately 56 Total)
        - a. Tree Mitigation shall be shown on Erosion and Sedimentation Control sheets, with one additional sheet included to show Existing Tree List and proposed mitigation/removal of trees.



3. Traffic Control Plan (Approximately 90 Total)
  - a. Traffic control plan shall be per City and TxDOT requirements, allowing for installation of Phase 3 infrastructure in up to four separate phases, including storm drain removal and installation, water line removal and installation, wastewater line removal and installation, and roadway/curb/gutter removal and installation.
4. Demolition Sheets (Approximately 55 Total)
5. Roadway Grading Plan Sheets (Approximately 55 Total)
6. Roadway Intersection Grading Plan Sheets (Approximately 12 Total)
7. Roadway Typical Section Sheets (Approximately 2 Total)
8. Driveway Tables (Approximately 15 Total)
  - a. Approximately 300 total driveways are anticipated to require removal and replacement. Plummer shall prepare tables detailing dimensions and slopes of driveway replacement based on the most recent edition of City standard details.
  - b. Driveway replacement shall be to edge of right of way.
  - c. Stationing for driveway sheets shall be the same as roadway sheets.
9. Drainage Area Maps (Approximately 10 Total)
10. Storm Drain Plan and Profile Sheets (Approximately 55 Total)
11. Lateral Profile Sheets (Approximately 60 Total)
  - a. Sheets will only show inlet/lateral profiles and will reference the sheet upon which plan view is shown.
12. Structural Plan Sheets (Approximately 8 Total)
  - a. Structural engineering services shall be provided for four junction boxes, with associated general notes and plan sheets included in the plan set.
13. Waterline Plan Sheets (Approximately 10 Total)
14. Wastewater Plan and Profile Sheets (Approximately 6 Total)
15. Final Pavement Marking Design (Approximately 18 Total)
  - a. Full street pavement marking shall only be required on Broadway Street
  - b. Pavement marking shall be required for stop signs at the approximately 22 intersections:
  - c. Remaining streets shall remain unmarked. Permanent pavement marking design of streets other than those listed above shall be considered an Additional Service.
16. Standard Detail Sheets (Approximately 20 Total)
2. Phase 3 60% Technical Specifications:
  1. Prepare technical specifications for the improvements listed above using the most recent published versions of the City of San Marcos standard specifications. The use of Plummer technical specifications shall be considered an Additional Service.

3. Phase 3 60% OPCC:
  2. Prepare a Class 3 engineer's opinion of probable construction cost (OPCC) for the improvements listed above, using a Bid Schedule and bid items provided by the City and listed in their standard specifications, respectively.
4. Site Visits: Plummer shall conduct up to ten (10) site visits for the purpose of becoming familiar with the project site and to aid in project design.

Deliverables:

1. Phase 3 Design Survey:
  - a. Separate CAD files containing topographic surface and hard surface features.
  - b. Certification letter signed and sealed by RPLS.
2. Phase 3 Survey of SMEU Improvements:
  - a. CAD file containing the SMEU improvements.
3. Phase 3 Design Documents:
  - a. 60% Plans
  - b. 60% Technical Specifications
  - c. 60% (Class 3) OPCC

Task Order 15: Phase 3 90% Design

1. Update plans, specifications, and OPCC from Task Order 12 to 90% design per City review comments.
2. In addition to addressing City's 60% plan comments, 90% plans shall include:
  - a. General Sheets:
    - i. Estimates and Quantities Sheets (Up to Fifteen Total)
  - b. Roadway Sheets:
    - i. Roadway Interval Sections (600± section cuts anticipated, One Hundred-Fifty (150) Sheets Total)
    - ii. Consists of sections every 50 LF and at driveways.
    - iii. Drainage Sheets:
      1. Hydrologic Calculations (Five Total)
        - a. Calculations were previously approved by City in the PER and thus shall not be included in plan set.
        - b. Rational Method and/or SCS Method calculations shall be included, showing drainage areas, values used for calculations, and results for each subbasin.
    - iv. Wastewater Bypass Pumping Sheets (Six Total)
    - v. Waterline Sheets:
      1. Pipeline profile
      2. Restrained pipe lengths
      3. Connection details
3. In addition to addressing City's 60% OPCC comments, the 90% OPCC shall be updated from Class 3 to Class 1.
4. Site Visits: Plummer shall conduct up to five (5) site visits to aid in project design.

Deliverables:

1. 90% Plans
2. 90% Technical Specifications
3. 90% (Class 1) OPCC
4. 90% decision log, detailing City review comments and Plummer design decisions.

**Task Order 16: Phase 3 Final Design**

1. Update plans, specifications, and OPCC from Task Order 13 to final design per City 90% review comments. Upon receipt of 99% design review comments from City, Plummer shall update and seal final deliverables.
2. Site Visits: Plummer shall conduct up to two (2) site visits to aid in project design.

Deliverables:

1. 99% and Sealed Plans. (PDF and CAD files per the City's GIS Submittal Checklist.)
2. 99% and Sealed Technical Specifications
3. 99% and Sealed (Class 1) OPCC
4. 99% and Sealed decision log, detailing City review comments and Plummer design decisions.

**Task Order 17: Phase 3 Advertisement/Bidding Phase Services**

1. Plummer shall assist the City in the advertisement and bidding of Phase 3. It is anticipated the City will advertise and distribute the plans and specifications to prospective bidders. Plummer will provide the following services during this phase.
  - a. Pre-Bid Conference:
    - i. Plummer shall virtually attend a pre-bid conference via Microsoft Teams hosted by the City. Plummer shall prepare and distribute meeting notes to attendees.
  - b. Addenda:
    - i. Plummer shall respond to questions from prospective bidders and prepare and issue up to three (3) addenda to clarify the plans and specifications. Preparation and issuance of additional addenda shall be considered an Additional Service.
  - c. Bid Review and Award Recommendation:
    - i. Plummer shall review the bids received for the project, including the following:
      1. Using a spreadsheet provided by the City, prepare a bid tabulation indicating the amounts of bids submitted and indicating the lowest three bidders.
      2. Call and document at least three references listed by the low-bid contractor to indicate the quality of work.
      3. Assess the contractor's abilities to perform work (based on information submitted in bid package) and ability to meet the contract schedule.
    - ii. Plummer shall make a written formal award recommendation to the City.

Deliverables:

1. Pre-Bid Conference Meeting notes.
2. Up to three (3) addenda.
3. Bid tabulation.
4. Written formal award recommendation.

**Task Order 18: Phase 3 Construction Phase Services**

1. Plummer will assist the City in the construction phase of Phase 3. It is anticipated that the City will be responsible for construction field observation and coordination, except as outlined below. Plummer shall provide the following services:
  - a. Pre-Construction Meeting: Attend project pre-construction meeting prior to the commencement of the Project Work.
  - b. Site Visits: Conduct up to twenty-eight (28) site visits to meet and review construction progress with City, Contractor, and inspectors, not including final project walkthrough with City and Contractor. Site visits shall be for the purpose of becoming familiar with the progress and quality of the work.
  - c. Submittals: Review up to ninety (100) submittals (samples, catalog data, shop drawings, laboratory, shop and mill test of material and equipment, and other data) and thirty (30) additional re-submittals submitted by the Contractor. Reviews shall be only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents Reviews; approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Review of excessive submittals and review of resubmittals beyond one resubmittal will be considered Additional Services and charged to the Contractor as part of the contract specifications.
  - d. RFIs: Interpret the intent of the plans and specifications for the City and Contractor, responding to up to twenty (20) Requests for Information.
  - e. Field and Change Orders: Review up to ten (10) total Field Orders and/or Change orders for use by the Contractor. Plummer shall review Proposed Contractor Field/Change Orders and City requested changes. Engineers shall prepare technical documents supporting Proposed Construction Modifications for City review and Construction Manager processing. Review of additional change orders shall be considered Additional Services and charged to the Contractor as part of the contract specifications.
  - f. Pay Estimates: Review and comment on up to thirty-six (36) monthly and final estimates for payment to Contractor. The City will confirm quantities and the Plummer will confirm the math and sign the estimate.

- g. Substantial and Final Completion Review:
  - i. Participate in a substantial completion review for conformance with the design concept of the project and general compliance with the contract documents and work with the Construction manager to provide a list of deficiencies to the Contractor.
  - ii. Participate, with the Construction Manager and City's representative, in a final review of the project. Plummer shall work with the Construction Manager to verify that items identified on the deficiency list from the substantial completion review have been completed and make recommendation for final payment to the contractor.
- h. Record Drawings: Revise the construction record drawings in accordance with the information (including redlined construction documents and construction notes) furnished by Contractor reflecting changes in the Project made during construction.
- i. Phase 3 As-Built GPS Data:
  - i. Plummer will provide GPS coordinates for utilities and assets installed for Phase 3, including directional changes, storm drain and wastewater flowlines, valves, fittings and appurtenances, storm drain inlets, manholes, and junction structures.

**Deliverables:**

- 1. Draft and final meeting notes from bi-weekly progress meetings.
- 2. Official written responses to each submittal and re-submittal.
- 3. Official responses to each RFI.
- 4. Official responses to each field and/or Change order.
- 5. Signed pay estimates.
- 6. One set of reproducible prints of "Record Drawings" and PDF files shall be provided to the City. Plummer shall provide Record Drawings to the City within 60 days of receipt of the Contractor's redline drawings.
- 7. Phase 3 As-Built GPS Data: GPS coordinates in a comma-delimited .txt format.

**Task Order 19: Additional Services**

- 1. If authorized in writing by City, Plummer shall furnish or obtain from others Additional Services of the types listed below:
  - a. Phase 2 Design Phase (Task Orders 4 – 6):
    - i. Change in SMCISD site plan for Mendez Elementary School site, such that pond it will affect capacity or footprint of final pond design.
    - ii. Relocation of wastewater line servicing 800 Leah Ave.
    - iii. General:
      - 1. The use of Plummer standard details on project plans.
      - 2. The use of Plummer technical specifications.
      - 3. Creation of demolition sheets detailing individual structures
      - 4. Drafting and/or acquisition of easements.
  - b. Phase 2 Bid Phase (Task Order 7):
    - i. Issuance of additional addenda during bid phase beyond those listed.

- c. Phase 2 Construction Phase (Task Order 8):
  - i. Attendance at bi-weekly meetings.
  - ii. Review of submittals and review of resubmittals beyond those listed.
  - iii. Review of Field Orders and/or Change orders beyond those listed.
- d. Phase 3 Environmental Support Services (Task Order 13):
  - i. Performance of tree permitting.
  - ii. Development of additional permits for the project (including but not limited to):
    - 1. Tree permits
    - 2. Endangered species survey permitting
    - 3. Floodplain development permits
    - 4. Texas Antiquities Permit
    - 5. Section 404 permits for impacts to Waters of the U.S.
  - iii. Development of a mitigation plan for unavoidable impacts.
  - iv. Providing a public hearing in support of NEPA documentation of the project.
- e. Phase 3 Design Phase (Task Orders 14 – 16):
  - i. Roadway Design:
    - 1. Permanent pavement marking design of streets other than those listed above.
  - ii. Wastewater:
    - 1. Evaluation of alignment change for wastewater lines and revision to plan sheets to match reflect revised alignment.
  - iii. General:
    - 1. The use of Plummer standard details on project plans.
    - 2. The use of Plummer technical specifications.
    - 3. Creation of demolition sheets detailing individual structures
    - 4. Drafting and/or acquisition of easements.
- f. Phase 3 Bid Phase (Task Order 17):
  - i. Issuance of additional addenda during bid phase beyond those listed.
- g. Phase 3 Construction Phase (Task Order 18):
  - i. Attendance at bi-weekly meetings.
  - ii. Review of submittals and review of resubmittals beyond those listed.
  - iii. Review of Field Orders and/or Change orders beyond those listed.

Scope and fees for Additional Services shall be on a Lump Sum basis and shall be determined at the time at which they are requested by City.