

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Sewer Main Rehabilitation
DATE: April 1, 2008

NEEDS: For the City Council to consider engaging Cannon Associates to provide engineering plans to upgrade and rehabilitate existing sewer mains.

FACTS: 1. The Wastewater Maintenance Plan identifies the need to upgrade and rehabilitate existing sewer mains at three locations.

a) First & Vine

The sewer flow from the area west of Vine Street currently drains via a pipe through private property. In the past, the sewer mains within these residential properties have required frequent maintenance. It is proposed that the sewer mains be re-routed to public right of way (Vine Street) and connect to the Lift Station at First and Vine. The Lift Station will accommodate this additional flow.

b) 26th & Spring

The sewer lateral has minimal slope, necessitating frequent cleaning and repair. It is proposed that the main be reconstructed to increase slope, reducing the potential frequent cleaning and repair.

c) Paso Robles & 13th Street

This sewer main is a 10-inch diameter cast iron pipe installed in 1956 (see attached exhibit). This pipe requires frequent maintenance and shows evidence it is deteriorating. It is proposed that the pipeline be abandoned and a new line installed, or as an alternative, the existing pipe be lined to improve flow.

2. Staff issued a Request for Proposals to solicit a scope of work and fee proposal to research and design the necessary upgrades as noted above.

3. Staff received six proposals as follows:

Cannon Associates	\$28,500
Penfield & Smith	35,000
RRM	35,155
Wallace Group	35,400
Boyle Engineering	41,297
Rick Engineering	94,741

4. Staff reviewed the proposals and determined that the submittal from Cannon Associates is complete and addresses the City's requirements.

**ANALYSIS &
CONCLUSION:**

As a requirement of the City's wastewater permit, the sewer staff tracks sewer mains that require frequent maintenance. A CIP budget has been adopted to allocate funds to address high maintenance sewer mains in compliance with the City's operating permit.

POLICY

REFERENCE: Wastewater Operations Manual

FISCAL

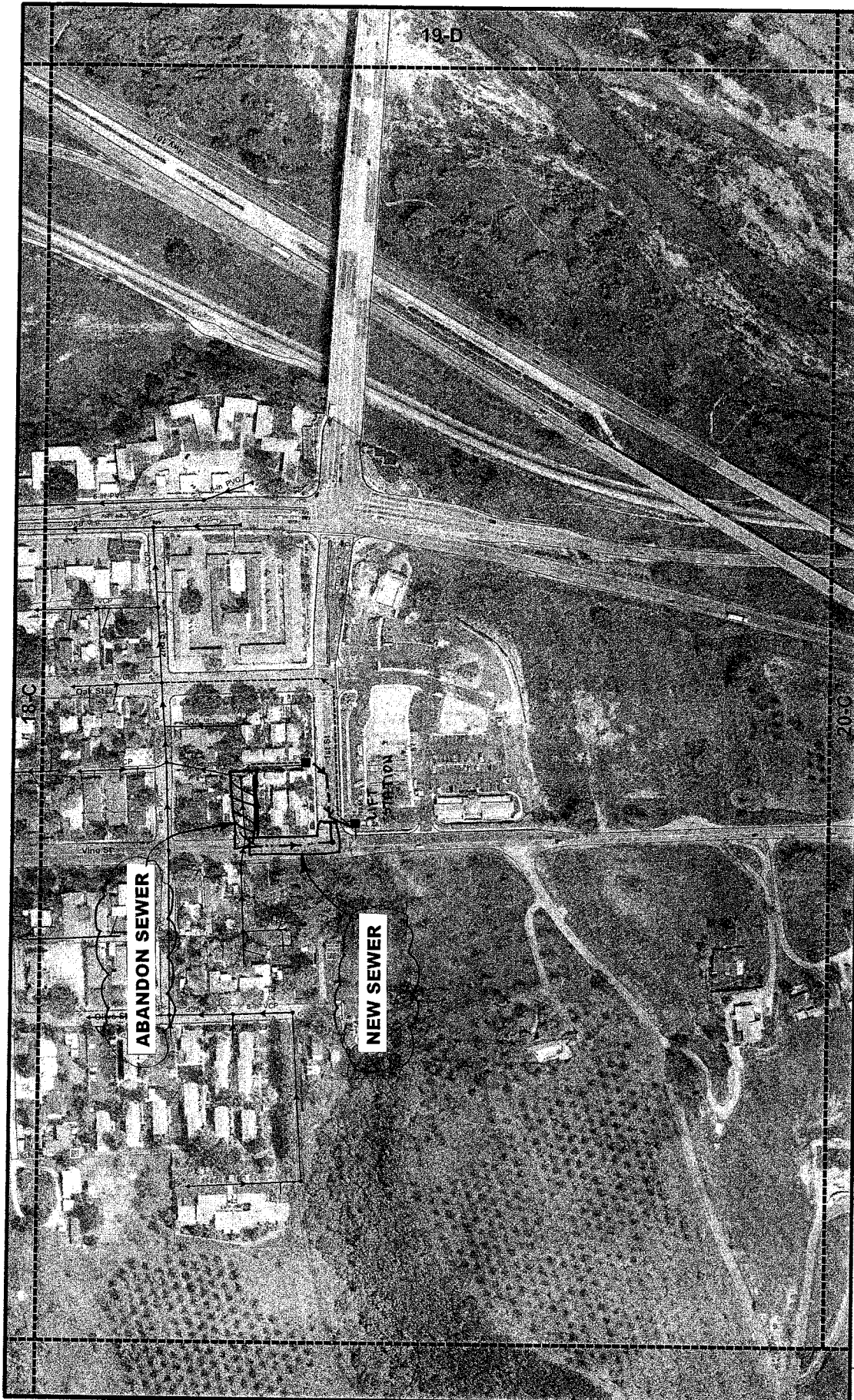
IMPACT: Funds in the amount of \$495,000 have been allocated to Budget No. 601.910.5452.365 to address/rehab high maintenance sewer mains.

- OPTIONS:**
- a.** Authorize the City Manager to enter into an Agreement with Cannon Associates to perform design services to upgrade/rehab City sewer mains for a not-to-exceed fee of \$28,500.
 - b.** Amend, modify, or reject the above option.

Prepared by:
Ditas Esperanza, P.E., Capital Projects Engineer

Attachments (2)

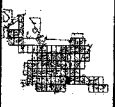
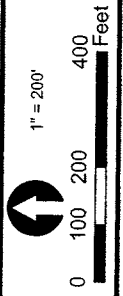
- 1) Location Maps (3)
- 2) Scope of Work



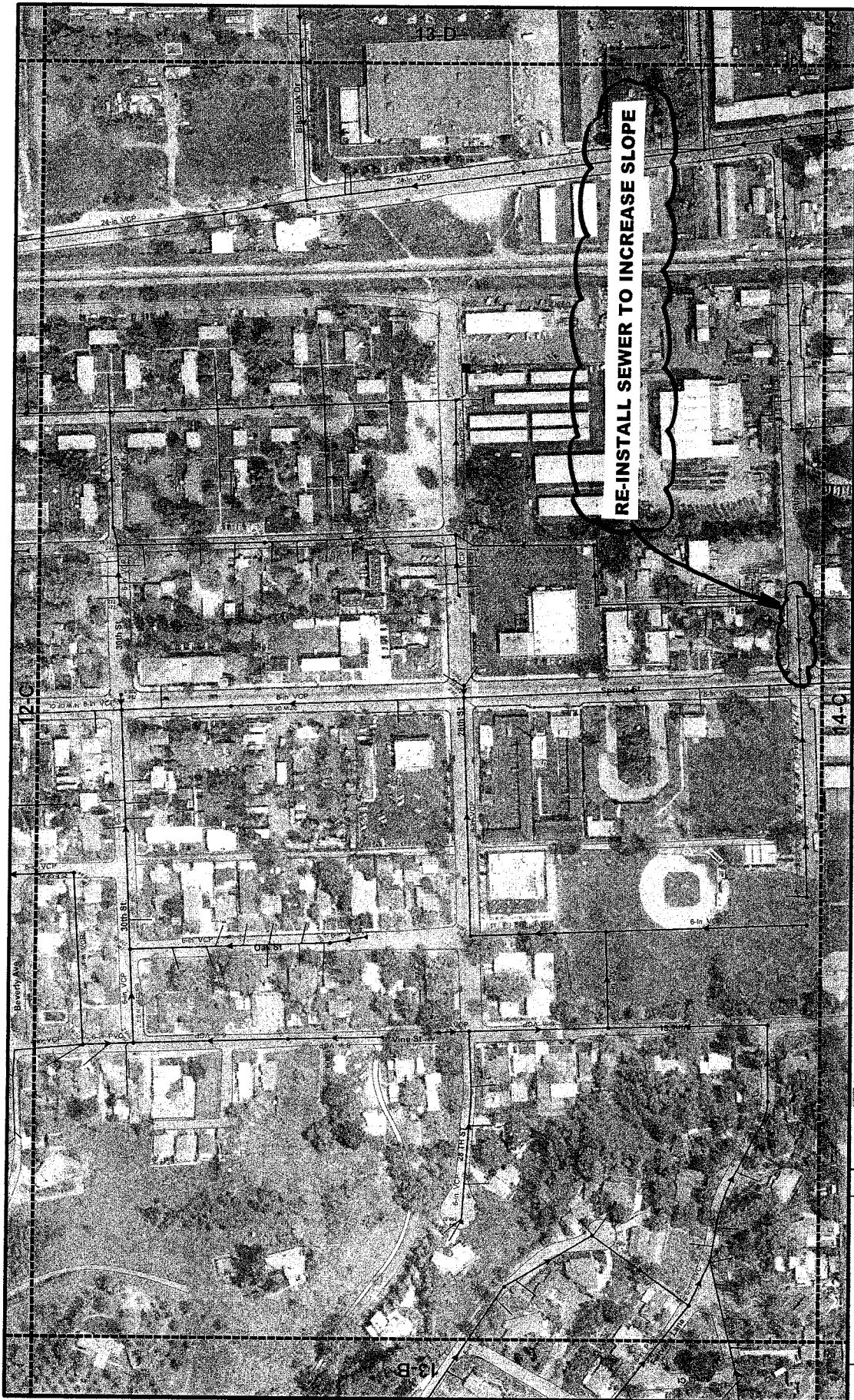
CITY OF EL PASO DE ROBLES
SEWER SYSTEM ATLAS
TILE 19-C
BCVLE ENGINEERING CORPORATION

LOCATION "A" - FIRST AND VINE

- Legend**
- Manhole W Elevations
 - ▲ Cleanout
 - ▣ Lift Station
 - Gravity Main W
 - - - Force Main
 - - - Lateral



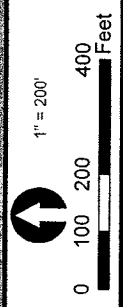
DATE	DESCRIPTION	INITIALS



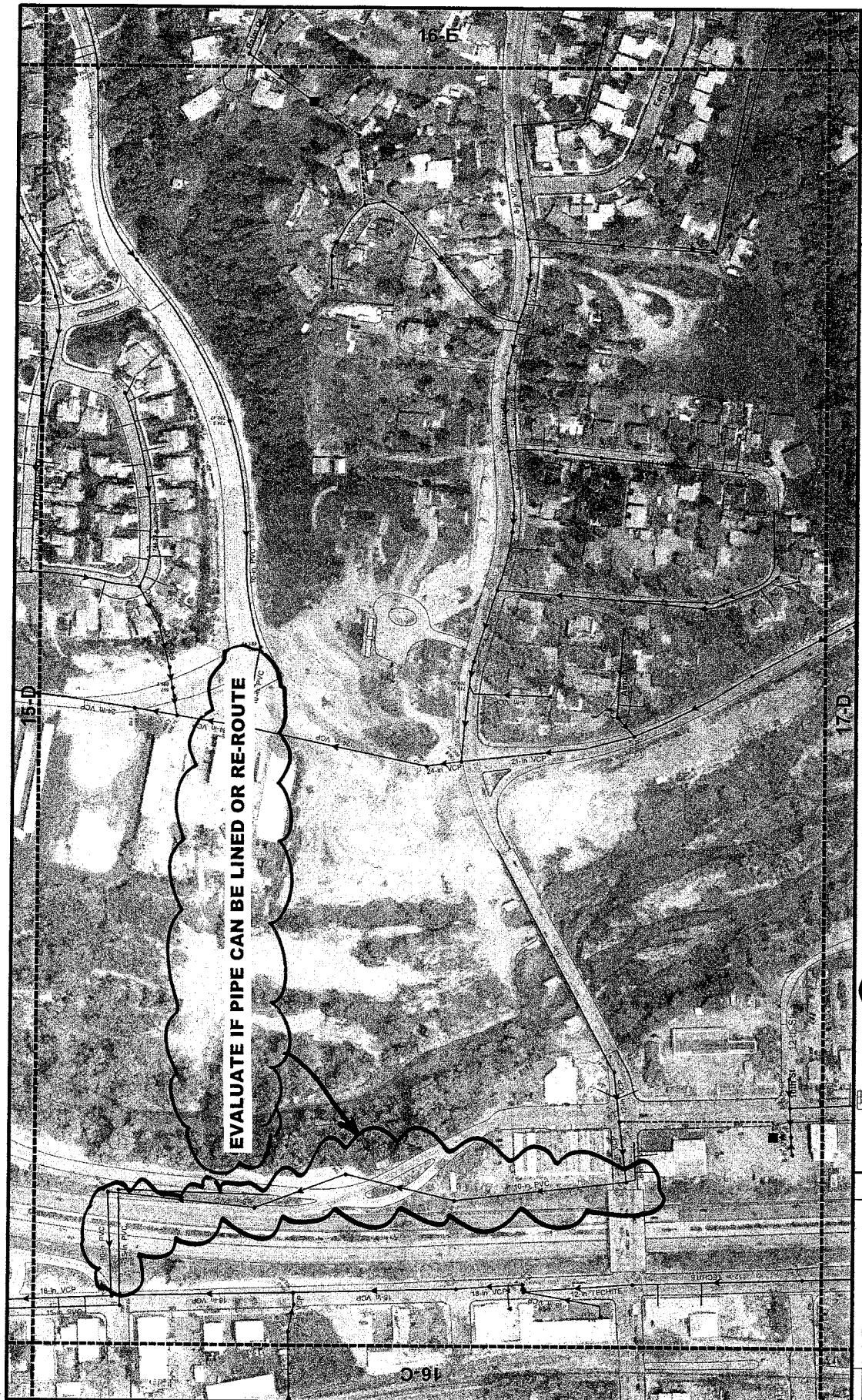
CITY OF EL PASO DE ROBLES
SEWER SYSTEM ATLAS
TILE 13-C
BOYLE ENGINEERING CORPORATION

LOCATION "B" - 26TH AND SPRING

- Legend**
- Manhole W/ Elevations
 - Gravity Main W/ Size & Slope
 - ▲ Checkout
 - Force Main
 - Lift Station
 - Lateral



DATE	DESCRIPTION	INIT.



EVALUATE IF PIPE CAN BE LINED OR RE-ROUTE

CITY OF EL PASO DE ROBLES
SEWER SYSTEM ATLAS
TILE 16-D
ROYAL ENGINEERING CORPORATION

LOCATION "C" - PASO ROBLES AND 13TH STREET

Legend

- Manhole In
- Manhole Out
- ▲ Cleanout
- Lift Station
- Lateral

1" = 200'

0 100 200 400 Feet

DATE	DESCRIPTION	INTL

January 25, 2008

Ditas Esperanza, P.E.
Capital Projects Engineer
City of Paso Robles
1000 Spring Street
Paso Robles, CA 93446

PROJECT: SEWER MAIN UPGRADES AT VARIOUS LOCATIONS

Dear Ditas:

Thank you for the opportunity to provide engineering and survey services for the sewer main upgrade project. Our understanding of the project is based on the RFP and subsequent discussions with you. These sewer line upgrades are intended to help serve new areas, redistribute flows to less impacted sewer lines, and improve operations and maintenance of the system overall.

As detailed in the RFP, the project consists of three distinct locations for sewer upgrades. Location 'A', First and Vine, consists of abandoning approximately 150 lf of 6-inch sewer and designing a new sewer along Vine Street to connect to the existing sewer in First Street. Location 'B', 26th and Spring, consists of abandoning approximately 200 lf of 8-inch sewer in 26th and designing a new sewer to allow flow to be conveyed to the east. Location 'C', Paso Robles On-Ramp and 13th Street, consists of evaluating the feasibility of re-routing flow from the existing sewer along the on-ramp through the overpass and into the sewer main at Riverside and 13th.

PROJECT APPROACH

Our approach to successful completion of this project consists of providing services in four progressive phases: Preliminary Engineering, Construction Documents, Bid Support, and Construction Engineering Support. The phases have been carefully sequenced to provide an efficient schedule while still remaining realistic and achievable. We are open to revising this schedule depending on the City's goals and objectives for this project. As a starting point for discussion, we enclosed a preliminary Project Schedule which shows the entire Work Program taking approximately 6 months to complete.

Phase I, Preliminary Engineering, includes fundamental project research and data collection necessary to assist in determining the horizontal and vertical alignments for each of the three sewer locations. This phase also includes topographic surveying, utility research, and preliminary engineering. Phase I culminates with the submittal of a Preliminary Design Report

to the City of Paso Robles. As shown on the enclosed Project Schedule, the tasks in this phase will take approximately 6 weeks to complete.

Phase II, Construction Documents, includes the preparation and submittal of a "Review Submittal" of the Construction Documents, a Review progress meeting, and preparation of "Final" construction plans, specifications, and cost estimates. This phase results in the submittal of a "Review" set of plans and culminates with the delivery of a finalized Construction Documents package to the City for construction purposes. As shown on the enclosed Project Schedule, the tasks in this phase will take approximately 6 weeks to complete.

Phase III, Bid Support, includes providing assistance to the City during the bidding phase in the way of responding to requests for information and preparing and distributing addenda. This phase occurs after the project is advertised and before award of the construction contract. As shown on the enclosed Project Schedule, we have assumed the bidding phase will take approximately 4 weeks to complete – a typical duration for a public works project of this nature – and another 4 weeks for selecting, awarding, and issuing a notice to proceed on the contract.

Phase IV, Construction Engineering Support, includes a pre-construction job walk, construction staking, review of contract submittals, responding to RFIs and requests for changes, reviewing progress and change order payment requests, attending project meetings, construction observation and record drawings. This phase culminates with the delivery of finalized Record Drawings on permanent reproducible drawing medium (Mylar film). As shown on the enclosed Project Schedule, the tasks in this phase will take approximately 9 weeks to complete – including approximately 4 weeks of construction time.

SCOPE OF WORK

Descriptions of our proposed involvement, specifically included and excluded services, and proposed deliverables are summarized below within each corresponding project task.

PHASE I – PRELIMINARY ENGINEERING

Task 1 - Project Kickoff Meeting

We will orchestrate and attend a Project Kickoff Meeting with appropriate personnel from the City. This meeting agenda will focus on project understanding, team involvement, project constraints, and the anticipation of design development impediments. This meeting will also include a project introduction, review of background information and project scope, and defining the project schedule. This meeting represents a key opportunity for representatives from the City to steer the consultant team and further clarify critical elements of the project scope.

Task 2 - Topographic Survey, Record Data Boundary, and Utility Research

There are three locations requiring topographic surveying. The total length of the proposed new sewer lines to be surveyed is approximately 1,800 feet. The Project Areas are defined as Location "A", "B" and "C" per the RFP.

To facilitate the vertical and horizontal layout of the new sewer lines, we will conduct topographic surveys of the alignment in sufficient detail to prepare the plans. We will prepare topographic surveys as noted below:

Locations "A" and "B":

- Elevations and coordinates will be based on City of Paso Robles published GPS station coordinates and published vertical benchmark datum.
- Show Right-of-Way information based on record data.
- Spot elevations at approximate 50 foot intervals on centerline and gutter lip of flow line.
- Contours represented with 5 foot index and 1 foot intermediate.
- Location and rim elevations of all water valves, meter boxes, and fire hydrants.
- Location and rim elevations of all sewer manholes and cleanouts.
- Location and flow line elevations of all storm drain manholes and inlets.
- Location of all miscellaneous utilities marked by above ground structures or USA markings.

Location "C":

- We will provide shots along the proposed alignment including any necessary topographic detail of the 13th St. bridge and the potential connection point at 13th and Riverside. We will verify pipe size at this location as well.

Project Area limits as noted on Exhibits provided by City. Final deliverables will include scaled plot and electronic file in AutoCAD 2008.

We will coordinate with the public and private utility providers with existing facilities within the proposed alignment and obtain record drawings and as-built information. Potential utility conflicts and/or relocation requirements will be identified and evaluated as needed to minimize unexpected design modifications or construction delays. We will compile and review the documents for inclusion into the preliminary design and design tasks defined below.

Task 3 - Geotechnical Evaluation

We will retain the services of a geotechnical engineer to prepare a soils evaluation report for the project. The report will include recommendations for pipe bedding and backfill requirements, suitability of existing soils for use in subsequent trench backfill, and design data needed for shoring and bracing. Other important information gathered will be depth to groundwater (if applicable) and thickness of the existing pavement section. This evaluation will provide valuable information for prospective contractors bidding the construction phase of the project.

Task 4 - Preliminary Design Report

With the topographic survey, record data boundary information, and geotechnical evaluation from the previous tasks, we will prepare a preliminary design report evaluating the alternatives for each of the three sewer locations. We will verify the recommended pipe size and alignment as presented in the RFP Exhibits, discuss the basis for our recommendation, and provide a recommended alternative. We will submit a draft of the Preliminary Design Report and will attend one meeting with the City to review and discuss the results. We will then incorporate the City's comments and finalize the report prior to proceeding with subsequent tasks.

PHASE II – CONSTRUCTION DOCUMENTS

Task 5 - 90% Construction Plans

Based on the findings and results of the previous tasks, we will prepare a Design Plans Package for submittal. This submittal package will contain the necessary plan and profile drawings and details to connect the proposed sewers at Locations 'A' and 'B' into the existing sewers. We will submit a "Review Submittal" Design Plans Package at a design and detail level approximately equal to 90 percent of the anticipated final construction documents for your review and comment. The Design Plans Package will consist of four drawing sheets (24" x 36"), including: a Title Sheet with Notes and Legend, two Plan and Profile sheets (one for each of the design locations), and a Detail Sheet.

Technical Specifications and a Preliminary Cost Estimate based on the 90 percent Design Plans will be included in the package. We will attend one meeting with the City staff to review and discuss the design submittal.

Task 6 - Final Construction Documents

Based on the finalized project design issues resolved during the preceding tasks, we will prepare and submit a Final Construction Documents Bid package. This submittal package will contain complete Construction Plans on permanent drawing medium (Mylar film) and an Opinion of Probable Construction Costs. The plans will incorporate review comments of the 90 percent Design Plans package, and provide construction level designs and technical specifications sufficient for final project approvals. Bid documents will be prepared in the City's standard format, including contract documents and technical specifications. Electronic copies of all drawing files of the Final Construction Documents will be submitted to the City.

PHASE III – BID SUPPORT

Task 7 - Bid Phase Support Services

We will respond to up to four requests for information and prepare and distribute up to two addenda. We will examine bids at the request of the City and make a recommendation regarding award of the contract.

PHASE IV – CONSTRUCTION ENGINEERING SUPPORT

Task 8 - Construction Engineering

We will provide construction engineering support services as defined below.

- Attend pre-construction job walk at the project site (1 included);
- Provide Construction Staking for the installation of the sewer lines. We will set line and grade stakes at 25 foot intervals along the sewer main and at all manholes, cleanouts, angle points and points of connection;
- Review Contract Submittals (4 included);
- Respond to RFI's (1 included);
- Respond to Requests for Change (1 included);
- Review Progress Pays and Change Orders (2 included);
- Attend Project Progress Meetings (2 included); and
- Prepare Record Drawings.

Task 9 - Construction Observation Services

We will provide construction observation services specific to the construction of the sewer main improvements. We estimate the major portion of construction to take approximately 2 weeks to complete. It is our understanding that we will have the following responsibilities:

- Provide an observer at the project site primarily during critical work items to act as an on-site representative of the City to ensure that the project work is in general compliance with the project plans and specifications. (3 hours per day for two weeks including travel time)
- Implement observation guidelines for monitoring the quality of the Contractor's work, conduct field observation, and prepare documentation of construction tasks.
- Obtain delivery slips and tickets for materials delivered to the jobsite to use when checking payment requests.

The construction observer will not be responsible for site safety, including but not limited to OSHA and traffic control requirements as well as safety inspection, evaluation or supervision. Project work direction and acceptance will be the responsibility of the City.

We will provide the City a summary report of the work activities on a weekly basis. The summary report will be based upon the daily work activity logs prepared by the designated construction observer and will contain color-prints of photos taken during the period.

ASSUMPTIONS & EXCLUSIONS

The City will provide copies of applicable documents related to existing utilities along the pipeline alignment, including record drawings from previous projects in the area, and water, sewer, and storm drain atlases.

Services that may accompany a project of this type are excluded from this Scope of Work at this time; these services include the following and may be added to our Scope of Work on a time and materials basis:

- Underground utility relocation designs and utility potholing;

- Project meetings (other than those described in the Scope of Work), local agency liaison, application and permit processing and tracking, and permit fees;
- Archeological, botanical, biological, and landscaping services;
- Traffic control for Geotechnical Investigation (if necessary); estimated costs of \$1,265/day;
- Traffic control plans (these shall be the responsibility of the City's contractor);
- Geotechnical/Soils testing and backfill observation during construction; and
- Implementation of the project SWPPP during construction (this shall be the responsibility of the City's contractor.)

Additional work will be billed on a time and materials basis or as an addendum to this proposal with prior written authorization from the City.

FEES

Fees are based on hourly rates and do not include agency checking and recording fees, or title company fees, or permit fees. All project meetings other than the meetings stated above will be billed on a time and materials basis.

Phase I: Preliminary Engineering	\$10,300
Phase II: Construction Documents	\$8,000
Phase III: Bid Support	\$700
Phase IV: Construction Engineering Support	<u>\$9,500</u>
FIXED FEE:	\$28,500

ACCEPTANCE AND TERMS:

Appendix A details the terms for work; however, we are familiar with the standard City contract, and will work with you to resolve any comments we may have in a separate document to form the agreement. Cannon Associates bills monthly for work in progress and payment is due within 10 calendar days of receipt of the bill. Overdue amounts will be surcharged at 18 percent per annum or 1.5 percent monthly.

If this meets with your approval, please return the signed Acceptance of Proposal. This will serve as our notice to proceed. The fees quoted in this proposal are valid for 60 days from this date. If you have any questions, please give me a call.

Sincerely,



Larry P. Kraemer, PE
Senior Civil Engineer
C 44813