

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Sewer Lift Station No. 4 Rehab
DATE: July 3, 2007

NEEDS: For the City Council to consider authorizing the City Manager to enter a contract with Boyle Engineering to prepare construction documents to upgrade Sewer Lift Station No. 4.

- FACTS:**
1. Lift Station No. 4 is located at 36th and Riverside. It serves an area extending from Vine east to Riverside and north to 38th Street (see attached location map). The lift station accounts for approximately 3% of the total flow into the Treatment Plant.
 2. The lift station was constructed in 1978.
 3. As a result of its age, staff has determined that deficiencies exist at the lift station.
 4. These deficiencies include an undersized wetwell and antiquated sewage pumps. Because the wetwell capacity is undersized for current demands, the pump cycles once every four minutes. (Note: Typical pump cycle should be ten minutes.)
 5. As a result of the increased cycle time, the pumps have become strained and are in need of replacement. Expansion of the wetwell will relieve the cycle strains on the new pumps by reducing the cycle time.
 6. Increasing the size of the wetwell capacity will extend the response time for emergency repairs (currently 15 minutes) should a pump fail or electrical service be lost. This in turn will reduce the potential of a spill and the associated fine.

ANALYSIS &

CONCLUSION: A Request for Proposal was issued to several consultants. The City received the following response:

Boyle Engineering	\$33,307
Penfield & Smith	\$38,000
Wallace Group	\$57,306
Cannon Associates	\$64,300

The project is fairly simple and all firms have are capable to perform the work.

POLICY

REFERENCE: Adopted CIP

FISCAL

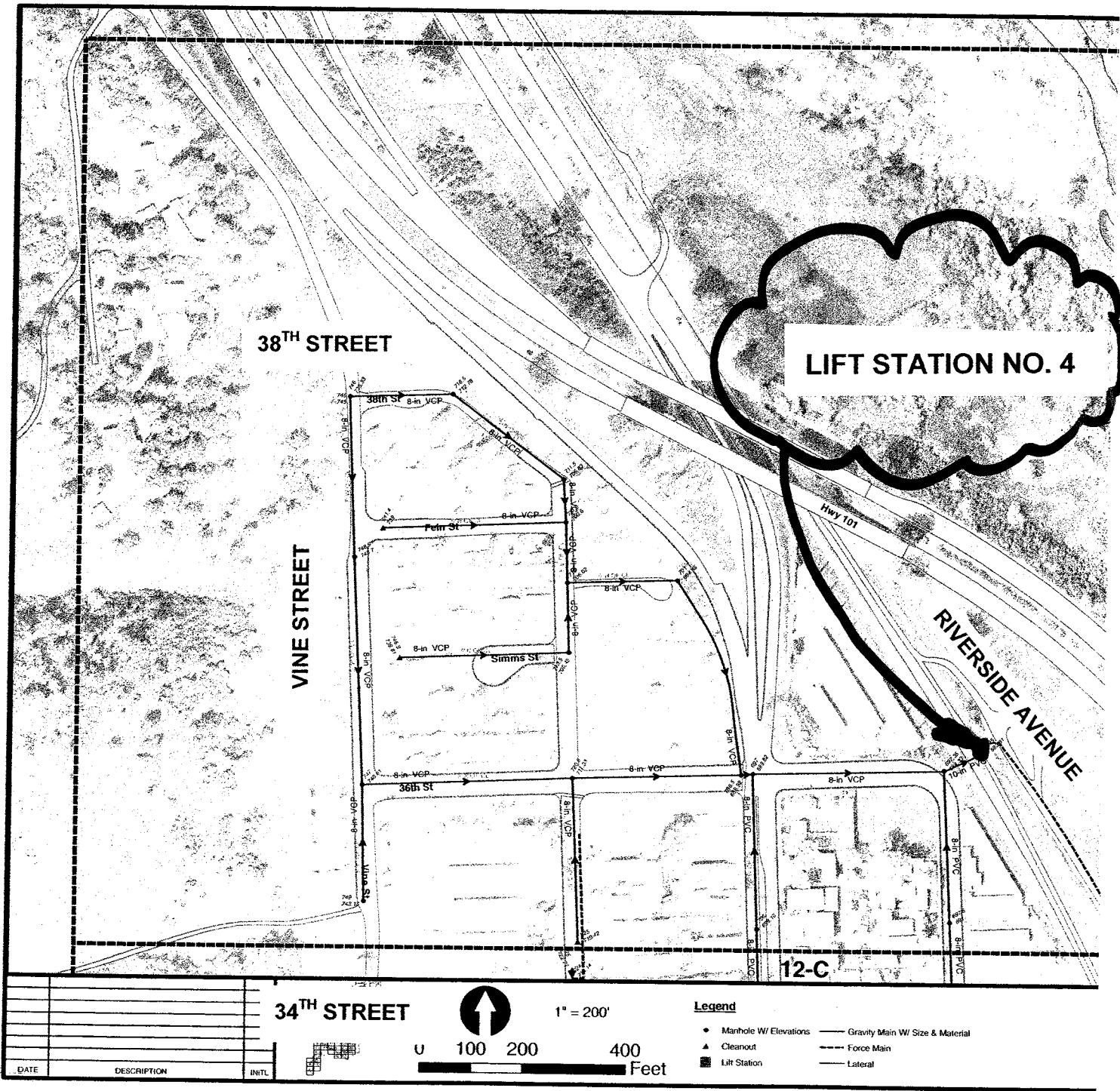
IMPACT: It was anticipated that Lift Station No. 4 would require upgrading. The current CIP identified this need and a budget of \$250,000 was appropriated under Budget No. 221.910.5452.577.

- OPTIONS:**
- a. Authorize the City Manager to enter a not-to-exceed contract of \$33,307 with Boyle Engineering to prepare construction documents to upgrade Sewer Lift Station No. 4.
 - b. Amend, modify, or reject the above option.

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

Attachments (2)

- 1) Location Map
- 2) Scope of Work and Fee Proposal



LIFT STATION NO. 4

DATE	DESCRIPTION	INITIALS

34TH STREET

↑

1" = 200'

0 100 200 400 Feet

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

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Employee Owned

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City of El Paso de Robles
1000 Spring Street
Paso Robles, CA 93446

RECEIVED

MAY 24 2007

May 22, 2007

Public Works

Lift Station 4 Upgrade Proposal

Boyle is pleased to submit this proposal for design, bid-phase, and construction-phase engineering services associated with the upgrade of the City Lift Station #4. This project will be managed in our San Luis Obispo office by Christopher Alakel, PE.

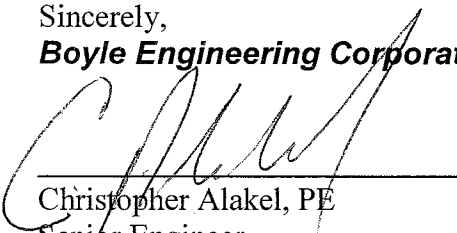
The Scope of Services attached as Exhibit A assumes replacing the existing lift station with a new lift station equipped with submersible pumps. The original facility will be retained and could be utilized in case of emergency or during maintenance of the new station.

Budget

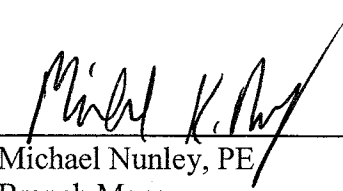
The attached Project Budget has been prepared based on Boyle's Standard Fees Schedule (Exhibit B) as attached. **We propose to perform the scope of work outlined above on a time-and-materials basis with a not-to-exceed budget of \$33,307.**

We hope this proposal meets your expectations. Please call if you have comments or questions.

Sincerely,
Boyle Engineering Corporation



Christopher Alakel, PE
Senior Engineer



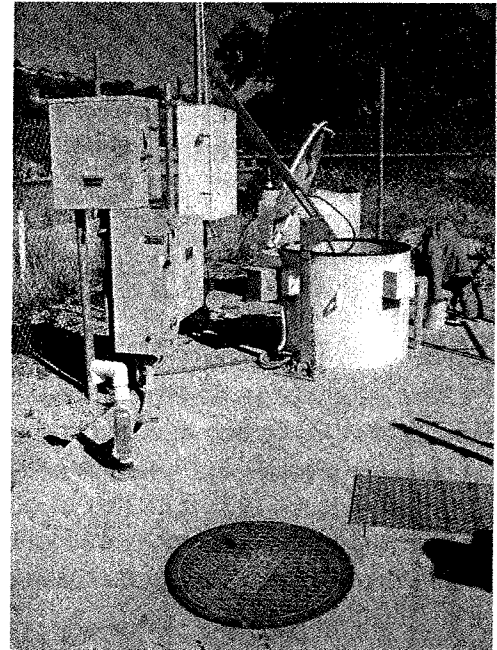
Michael Nunley, PE
Branch Manager

This proposal shall be valid for 90 days from date of submittal.

**City of El Paso de Robles
Lift Station 4 Replacement
Design and Construction Phase Services**

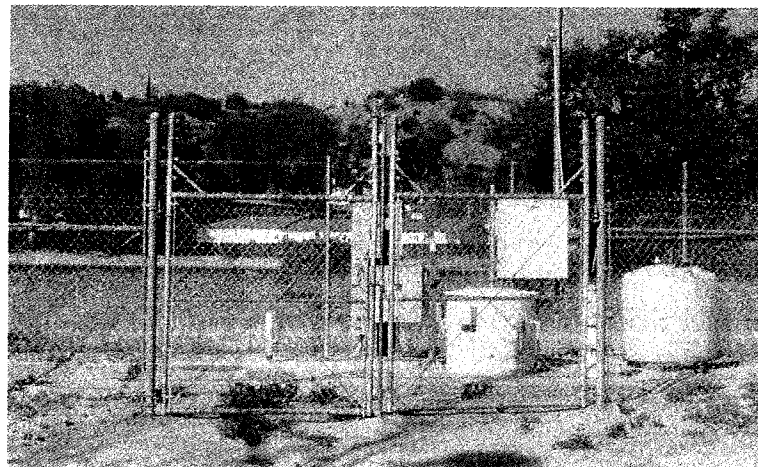
Project Understanding

The City of Paso Robles is seeking to upgrade the existing Lift Station #4 in order to remedy several deficiencies. According to City staff, the major deficiencies include outdated pumps, and insufficient wetwell volume. During high flow events, the pumps have been known to cycle every three minutes (two to four times the typical cycle frequency). Furthermore, City staff has approximately 12 minutes to respond to a power failure at the station before backups occur. Staff has also indicated that the existing pump station is difficult to operate due to confined space entry requirements necessary to access the dry pit arrangement of the existing lift station.



Through discussions with City staff and analysis of the existing lift station, Boyle recommends replacing the existing lift station with a new factory built lift station equipped with submersible pumps. Valving will be included in the design to allow operators to utilize the original facility in case of emergency or during maintenance of the new station.

Since the lift station has recently undergone an electrical upgrade, we plan to utilize the existing SCADA and motor control system. New motor starters for the submersible wetwell pumps will be wired to the existing Tesco control panel. A selector switch will be added to the front of the control panel to select between the new and old pump stations. Feed/fail signals will be rewired to report data from the new pump station only. The old station will report basic information such as run status. The new wetwell will feature new bubbler piping utilizing the existing bubbler pump. Solenoid valves activated by the pump station selector switch will select the bubbler in the active wetwell.



Work Plan (cont'd)

Scope of Services

Task Group 1 Preliminary Engineering

1.1 Kick-off Meeting

Boyle will plan and attend a kickoff meeting with the City's project manager to discuss project approach and schedule.

1.2 Information Review

Existing information relevant to the planned improvements will be reviewed. Existing information includes record drawings, aerial photography, topographic survey, and utility research of existing underground utilities.

1.3 Survey and Utility Research

Field survey will be conducted along the pipeline alignment after the City has marked the location of the existing water and sewer lines.

The survey will utilize existing 2-foot contour aerial photogrammetry. The existing mapping will be densified with utility, manhole and valve locations, and will be prepared in AutoCAD format. Utility Research will be conducted (based on available information) to identify existing utilities in the vicinity of the lift station. Letters requesting utility location data will be sent to the applicable agencies and utilities. Utilities may include water, sewer, gas, telephone, electrical, storm drain, and cable television. The locations of known utilities will be shown on the plans. Depths will be shown where possible.

1.4 Geotechnical Evaluation

A geotechnical evaluation will be performed by GSI Soils to identify site specific conditions, and to make recommendations on excavation, backfill, and compaction. Our experience in this area of the City is that high ground water may be encountered 6-8 feet below grade.

1.5 Preliminary Design Memorandum

Boyle will prepare three (3) copies of a technical memorandum summarizing this work for submittal to the City.

Task Group 2 Construction Documents

Two copies of the 50 percent plans and specifications will be provided. Progress submittals will be on 11" x 17" sheets. Final plans will be 1 in.= 20 ft. scale on 24" x 36" sheets. A total of two final copies will be provided, including one camera-ready set of plans and specifications.

Work Plan (cont'd)

2.1 Construction Plans and Technical Specifications

The final construction documents are anticipated to include the following sheets in one complete bid package:

- G1 – Title & Notes
- C1 – Piping and Site Plan
- C2 - Elevation View
- D1 – Valve Vaults, Fencing, and Details
- E1-E2 – Electrical Plans and Details

It is assumed that the City will coordinate any relocations with utility companies. It is also assumed that the City will pay any utility service or relocation fees and will fill out any service contracts.

2.2 Opinion of Probable Construction Cost

Boyle will prepare and submit a final opinion of construction cost following the acceptance of final project plans and specifications.

Task Group 3 Construction Phase Services

3.1 Pre-Construction Meeting

Boyle will attend a construction job walk with the selected contractor.

3.2 Respond to RFIs

Boyle will log, manage, and respond to up to four (4) Requests for Information from the Contractor.

3.3 Final Inspection and Recommendations

Boyle will observe the completed construction and prepare a punch-list of items recommended for completion.

3.4 Prepare Record Drawings

Boyle will prepare record drawings based on the Contractor's markups of the construction plans.