Request for Proposals

for

Sanitary Sewer Master Plan

City of San Carlos
Department of Public Works
600 Elm Street
San Carlos, CA 94070

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REQUEST FOR PROPOSALS (RFP)
SANITARY SEWER MASTER PLAN

1. INTRODUCTION

The City of San Carlos Department of Public Works is seeking proposals for consulting services to prepare a Sanitary Sewer Master Plan. The Sanitary Sewer Master Plan will include flow monitoring, hydraulic modeling, identification of capacity constraints, analysis of system condition, prioritization of rehabilitation needs, and recommendation of a prioritized capital improvement program.

2. BACKGROUND

The San Carlos Public Works Department operates and maintains an aging gravity collection system which comprises of approximately one hundred six (106) miles of sewer main ranging from 5 inches to 36 inches in diameter in addition to six (6) pump stations. The oldest portions of the system date to the 1920s while a majority of the system was constructed in the 1950s. The primary sewer pipe material in the collection system is vitrified clay pipe, with plastic materials used for newer sewer construction and rehabilitation.

In 2013, the City prepared a Sewer Master Plan that prioritized reducing, preventing, and mitigating the impacts of sanitary sewer overflows (SSOs) that may occur in addition to providing adequate capacity within the City's service area, and outlining replacement or rehabilitation methods to extend the service life of the collection system.

The recent development growth, especially in the life sciences and biotechnology sectors, and major planning initiatives are the main drivers for this Sewer Master Plan update. Recent and ongoing planning projects include approval of the East Side Innovation District Vision Plan, approved by the City Council in October 2021, adoption of a new Housing Element in January 2023, and ongoing efforts to prepare two specific plans: one for downtown San Carlos (growth estimates not expected to change), and another in the City's northeast area and on the boundary with the City of Belmont (buildout is expected to increase as part of this plan). San Carlos is on a trajectory to exceed the level of buildout for commercial, office, and industrial uses seven years earlier than anticipated in its adopted 2030 General Plan and General Plan EIR. Therefore, the City is undergoing a General Plan Update. More information on these planning initiatives can be found on the City's website here.

3. PROJECT GOALS

The goals of the Sanitary Sewer Master Plan are to develop a new sewer model and analyze capacity constraints to accommodate significant developments planned in San Carlos in the coming years.

4. SCOPE OF SERVICES

The following Scope of Work outlines the tasks required under the contract resulting from this Request for Proposals (RFP) for the preparation of the Sanitary Sewer Master Plan. Consultant shall be responsible for all activities from approximately contract award through final submittal of the master plan. The scope of work shall include, but not limited to:

A. Review Existing Information and Flow Monitoring

Review all related documents, maps and files.

Flow Monitoring. Flow monitoring is needed on a system-wide basis and must be sufficient to calibrate and validate hydraulic modeling of the San Carlos collection system.

Rain Gauges. Establish at least two rain gauges during the period of flow monitoring. The first weather station shall be located in the upper elevations of San Carlos and the second shall be located in the flatland area.

B. Develop Land Use Planning Information and Parcel Loads

Review Planning Documents and Meet with Planning Staff. The Consultant will meet with City Planning Department staff to identify and obtain pertinent land use planning maps, data, and documents that provide information required for the Master Plan, and to discuss specific planning issues and potential growth or redevelopment areas in the City. The projected timing of new development will also be discussed with City planning staff to provide input for sewer improvement project phasing.

Develop Parcel Loads. The Consultant will review existing parcel, customer billing, and water use data to determine if it is feasible to use this data to define existing land uses (e.g., number of dwelling units for residential areas and floor area for commercial/industrial areas) and/or water usage on a parcel-by-parcel basis for purposes of developing wastewater flows for the hydraulic model. The exact methodology to be used to develop model loadings will depend on the format and completeness of the available parcel-based data. If sufficient data is not available to generate loadings on a parcel basis, then land use mapping will be used for this purpose.

Develop Large User Loads. The Consultant will identify significant point source dischargers such as large industries or major institutional users based on information on water and/or wastewater volume in the billing database and/or industrial monitoring data. Through discussions with the City, the Consultant shall identify possible changes in flows for large users or potential new large users (industries or institutions). The Consultant shall confirm that the developed model accurately represents these larger point loads.

Develop Loading Information for County SSMDs and City of Belmont Cross Flows. The Consultant will develop loading information for pertinent County Sewer System Maintenance Districts (SSMDs), including Emerald Lakes Heights, Harbor Industrial, Scenic Heights, and Devonshire located within the City's sewer service area and discharging into the City's collection system. There are locations where City of Belmont bypass flows into the City system. It is assumed that this information will be available from previous Master Plans for the SSMDs prepared by San Mateo County and City of Belmont's sewer master plan.

Prepare Technical Memorandum (TM). The Consultant will prepare a TM on the land use planning criteria. The TM shall include a digital land use map showing areas of potential new development, infill, and redevelopment that can be used to assign future land uses to specific parcels to develop wastewater flow projections for future scenarios.

Deliverables:

- TM on land use planning criteria
- GIS files of parcels and associated land uses

C. Develop Design Flow and Hydraulic Criteria

Develop Design Flow Criteria. The purpose of this task is to develop the design criteria to be used to compute wastewater flows and analyze system capacity. Design flow criteria include unit base wastewater flow factors applied to residential, commercial, industrial, and institutional land uses; diurnal based wastewater flow patterns; infiltration/inflow parameters; and design rainfall. These criteria will be developed based on the flow monitoring data from the City's sewer system, as well as from the Consultant's master planning experience in other Bay Area systems. The design flow criteria developed in this task will be verified and refined during the model calibration process.

The Consultant will also propose criteria for the design storm to be used for analyzing and determining the required capacity of sewer system facilities. The selection of design storm will take into consideration existing or potential future regulations or regulatory policy on sanitary sewer overflows (SSOs), precedent set by other Bay Area agencies, and published historical rainfall intensity-duration-frequency statistics.

Develop Hydraulic Criteria. The Consultant will identify appropriate hydraulic criteria to be used for assessing the capacity of the system. These criteria include Manning's 'n' factor, maximum d/D values and/or allowable surcharge, and minimum and maximum velocities. The criteria will be reviewed and discussed with City staff.

The Consultant will prepare a document that summarizes the discussion of the Consultant's and City's approach to developing the design flow, design storm and hydraulic criteria.

Deliverables:

- Documentation of the design flow, design storm and hydraulic criteria
- Meeting agenda and minutes
- Tech memo on recommendations of updates, revisions and additions to City standards

D. Develop Capacity Relief Projects

Develop and Evaluate Relief Project Alternatives. The Consultant will identify specific projects, with condition and criticality in mind, to relieve predicted capacity deficiencies or inefficiencies in the sewer system including pump stations. Potential alternative sewer alignments will also be evaluated in cases where existing alignments would be difficult to access or construct. Where existing sewers are identified as deficient, the Consultant will also review available CCTV records to develop viable construction alternatives that will include needed rehabilitation or repair. The Consultant will walk or drive the proposed major project alignments to field verify site conditions and identify potential design and construction issues. City staff will be invited to participate in the field visits.

The Consultant will identify and rank sewer basins with the highest inflow and infiltration rates or peaking factors. The Consultant will also recommend additional flow monitoring sites upstream of these basins to address and pinpoint the I/I issues.

Run Model to Confirm Projects. The Consultant will confirm the alternatives by adding the proposed facilities to the model to verify that the resulting system meets the system performance criteria.

Prepare Technical Memorandum. The Consultant will prepare a TM that summarizes the design flow and hydraulic criteria, model construction and calibration, capacity deficiencies and preliminary solutions, and proposed capacity relief projects.

Deliverables:

- TM summarizing results from this task
- Draft model files for solutions

F. Develop Sewer System Capital Improvement Program

Develop Cost Criteria. The Consultant will develop criteria for estimating probable construction and capital costs based on the Consultant's database of sewer construction costs from projects throughout the Bay Area, as well as input from City staff on costs of local construction projections. Unit construction costs will be developed to the detail normally used in master planning. Cost allowances (percentages of estimated construction cost) for construction contingencies and for design engineering, construction administration and inspection, and legal costs will also be included.

Prepare Cost Estimates. Based on the capacity relief projects developed, the Consultant will prepare cost estimates based on project-specific site conditions as known at the planning stage. The estimates will be based on the most viable construction method for each specific project.

Develop Project Rankings. In conjunction with City staff, the Consultant will provide rankings of the recommended improvements projects including pump stations. Ranking criteria will include the severity of existing capacity deficiencies (as indicated by the extent of surcharge or potential overflows predicted by the model), the relative impact of the predicted surcharge or potential overflows, the timing of proposed development or redevelopment, maintenance history and/or sewer condition information provided by City staff, and coordination with other projects such as sewer rehabilitation, project sequencing, other utility construction, pavement overlays, or other street improvements.

Develop Capital Improvement Program (CIP). After working with City staff to develop project ranking, the Consultant will develop an overall, separate and phased capital improvement program (CIP) for the recommended sewer improvements with different funding levels and includes, but not limited to addressing capacity issues, system's deficiencies and inefficiencies, implementation plan to reduce I/I, pump station upgrades, CCTV monitoring program, etc.

Deliverables:

- Project cost estimates
- Phase CIPs, including maps and descriptions of recommended projects
- Meeting agenda and minutes

G. Prepare Master Plan Report

Prepare Draft Report. The Consultant will incorporate the findings and recommendations of the project into a Sewer System Master Plan report. The report will document study assumptions and methodology, recommended design and performance criteria, model results, approach for capacity enhancement and I&I control, and the recommended CIP. The appendices to the report will include the TMs prepared during the course of the study and other pertinent backup data (e.g., model results) that support the plan.

Deliverables:

- Draft report
- Final report

- Electronic copy of final master plan report, final hydraulic model files delivered in appropriately sized external hard drive
- Meeting agenda and minutes

5. SCHEDULE AND SUBMITTALS

The City's target dates are as follows:

Release of RFP	Tuesday, June 20, 2023
Proposals due	Friday, July 21, 2023
Possible interview with top firm(s)	July 31 – August 4, 2023
Contract Award	August 28, 2023

6. PROPOSAL FORMAT AND CONTENT

The proposals shall be brief, precise, and devoid of unnecessary promotional material. The proposal shall not exceed 15 single sided pages (excluding resumes). The proposals should contain the following elements in the exact order and segmentation listed below:

1. *Cover Letter*. Describe your firm or team's interest and commitment in providing Consultant Services to the City. The letter shall be signed by a person authorized to negotiate a contract with the City.

2. *Staffing, Team Experience and Understanding of Project & Objectives*. Describe the qualifications and experience of the team members expected to be assigned to this project. The description shall include previous experience with similar projects. Include an organization chart and provide a matrix including which projects team members have worked on together. A discussion demonstrating the proposer's understanding of the project, the goals, the services to be provided, and their significance to the overall City goals.

3. *Work Plan Approach and Schedule*. Discuss your firm's understanding of the scope of work to be performed and level of effort expected to be performed by each resource. Include an itemized table of estimated person hours by professional classification (or team member) to quantify the level of effort. Describe the method that will be used for scheduling, coordination, management of overall project costs, quality assurance/quality control, and list key or potential issues/risk you may deem critical to this project.

4. *Resumes*. Include single page resumes of the engineers, technicians, key personnel, and sub-consultants (if any) to be assigned to the project. It is expected that designated key staff will remain for the duration of the project. Key staff substitution will be allowed only after an interview and concurrence with the City.

5. *Rate Schedule.* Consultants shall provide the most current rate schedule that includes the rates of all applicable staff that may be assigned to this project.

6. *References*. Provide at least three references (name, agency, title, address, and telephone number) for recent similar or related work.

7. *Other Relevant Information & Exceptions*. Provide additional relevant information that may be helpful in the selection process including any exceptions taken to the City's standard agreement.

8. *Cost*. The awarded firm shall be compensated based on all elements encompassed within RFP and, if applicable, associated Addendum. Price Sheet presented by the Proposer shall include price detail breakdown of all elements and tasks imperative to accomplish the services outlined in the Scope of Work. An itemized table of estimated person hours by professional classification (or team member) shall be identified; including, if applicable, subcontracted personnel.

7. SUBMITTAL GUIDELINES

Firms shall submit an electronic pdf file of the qualifications and shall name the electronic file in the following format:

"Consultant Name - RFP Sanitary Sewer Master Plan"

The qualifications shall be uploaded to the following link:

https://cityofsancarlos2.app.box.com/f/6187e68237ff424bb5cece7a9b975900

The proposals must be uploaded no later than 5:00 p.m. on Friday, July 21, 2023. No e-mail submissions will be accepted.

Any changes made by the City to the requirements in this RFP will be made by written addenda. Any written addenda issued to this RFP shall be incorporated into the terms and conditions of any resulting Agreement. The City will not be bound by any modifications to or deviations from the requirements set forth in this RFP as the result of oral instructions. The City reserves the right to revise or withdraw this RFP at any time and for any reason.

All inquiries regarding the proposal should be directed to Evan Cai, Associate Engineer, at ecai@cityofsancarlos.org.

- **Additional Submittal Information**

The City assumes no responsibility for electronic delivery delays.

All costs incurred during proposal preparation or in any way associated with the consultant's preparations, submission, presentation, or oral interview, if held, shall be the sole responsibility of the consultant.

If awarded a contract, the consultant shall maintain insurance coverage, including errors and omissions and worker's compensation, reflecting the minimum amounts and conditions specified by the City. Consultants are liable for all errors or omissions contained in their proposals.

By submitting proposals, Proposer represents that: (1) Proposer has thoroughly examined and become familiar with the Work required under this RFP, (2) Proposer comprehends all conditions that may impact the Proposal, (3) Proposer has reviewed of all addenda, and (4) Proposer is capable of providing the equipment, goods and services necessary to perform the Work and/or meet the specifications outlined in this RFP, in a manner that meets the City's objectives. Failure to examine the documents and inform itself shall be at the Proposers' own risk. A Proposer shall have no claim against the City based upon ignorance of or misunderstanding of the RFP documents. Once the award has been made, failure of a Proposer to have read all of the conditions, instructions and the Agreement shall not be cause to alter any term of the Agreement nor shall

such failure provide valid grounds for a Proposer to withdraw its proposal or to seek additional compensation.

All proposals and prices set forth therein shall be deemed to include applicable taxes. The Proposer shall be appropriately licensed in accordance with the laws of the State of California for the work to be performed. The cost for any required licenses or permits shall be the responsibility of the successful Proposer. The successful Proposer is liable for any and all taxes due as a result of the contract.

- **Non-Obligation**

The City retains sole discretion to evaluate proposals and may make an award to the consultant the City deems to have the most responsive proposals. Receipt of proposals in response to this RFP does not obligate the City in any way to engage any Consultant and the City reserves the right to reject any or all proposals, wholly or in part, at any time, without penalty. The City shall retain the right to abandon the proposal process at any time prior to the actual execution of an Agreement with a Consultant(s), and the City shall bear no financial or other responsibility in the event of such abandonment. The City reserves the right to negotiate all final terms and conditions of any Agreements entered into.