

The consultant shall convert all documents (text, AutoCAD, spreadsheets, photos, etc.) into searchable PDF files for submission to the City along with hard copies. The consultant shall submit copies of all project AutoCAD files and survey data to the City.

Task 1: Phase I – Preliminary Investigation

Schaaf & Wheeler shall:

- Attend one (1) meeting with City staff to review project requirements and existing information, including known site constraints and planned future improvements in the area. Requirements for maintenance and access are also anticipated to be discussed. Meeting agenda shall be prepared and meeting minutes will be distributed to the attendees within one week of the meeting.
- Prepare a project schedule. Schedule shall be submitted within five (5) days of award of contract. The schedule shall be updated and provided to the City periodically upon request.
- Visit the project sites and investigate existing site conditions to identify opportunities, constraints and to verify the presence of existing utilities and other conditions.
- Review project site conditions for ease of maintenance access (truck access, proximity to manholes, system depths, etc.).
- Review data pertinent to the project, include available right-of-way documents and improvement plans; historical geotechnical investigation reports; the hydrologic and hydraulic analyses of the existing drainage facility and proposed improvements; impacts of trash capture units to existing storm water system hydraulics; the City's Standard Provisions and Details; and codes, ordinances and policies pertaining to the proposed project designs.
- Prepare a topographic survey of the work areas sufficient to design the project. The survey shall locate existing features, including, but not limited to curbs and gutters, trees, utilities, fences, pavement, drainage structures and other features required to design the project. The survey shall be tied to a known benchmark on State Plan coordinates and the City datum or NAVD88. The City shall provide an electronic copy of existing City topographic base maps. The consultant shall submit to the City their final plans and cross sections of existing topography in PDF and CAD.
- Prepare and submit schematic plans with layouts, cross-sections and right-of-way requirements for the City to begin discussion with private property owners. Scope includes one meeting with the City to discuss schematic layouts and right-of-way considerations.
- Recommend up to 2 alternative locations for the device at each of the four project locations if constructability concerns such as right-of-way, easement acquisition, ease of maintenance, etc. are discovered. Scope includes one meeting with the City to discuss location alternatives.

Assumption: The City will provide Assessor Parcel Number (APN), Parcel, Record of Survey, and tract Maps upon request.

Task 1: Phase II – Design

Schaaf & Wheeler shall, for each of the four project sites:

1. 35% Design Documents
 - Perform underground exploratory/potholing necessary for the project design. It has been assumed that there will be two pothole locations at each device site. One soil boring extending a minimum of 10 feet below the anticipated excavation depth is included for each

- device site. A geotechnical investigation report will be prepared to classify soil and groundwater conditions at each site, as well as provide construction recommendations including shoring requirements and structure foundation recommendations. Utility conflicts and potential resolution alternatives will be provided for each site.
- Assist City with producing plats, legal descriptions, and other documents associated with acquisition of easements required for installation of trash capture devices.
 - Prepare and submit schematic 35% plans with layouts, profile, cross-sections and right-of-way requirements. Prepare preliminary construction cost estimate. Submit electronic copies of the 35% plans and cost estimate.
 - Meet with City staff to review comments on the 35% submittal. A minimum of 2-3 weeks review time for City shall be provided. Revise plans as necessary to reflect City comments and directions.
2. 75% Design Documents
- Prepare and submit 75% plans, technical specifications, engineer's estimate, and construction documents based on the City's 35% submittal review comments. Design development/construction documents shall include all elements of the project including, but not limited to, notes, details, civil, traffic control, property boundaries, and construction phasing.
 - Develop shoring plans and calculations for the 75% design.
 - One (1) reproducible copy of the 75% plans, technical specifications, and cost estimate shall be submitted.
 - Meet with City staff to review comments on the 75% submittal. A minimum of 2-3 weeks review time for City shall be provided. Revise plans and specifications as necessary to reflect City comments and directions.
3. 100% Design Documents
- Prepare and submit "Draft" 100 % plans, technical specifications, engineer's estimate based on the City's 75% submittal review comments. A minimum of 2-3 weeks review time for City shall be provided. Revise plans and specifications if necessary to reflect the City comments and directions.
 - The "Final" 100 percent set shall include one (1) wet-signed copy and one (1) digital file of each of the construction plans, specifications and construction cost estimate. The digital filed for the "Final" 100 percent construction plans, technical specifications and construction cost estimate shall be in AutoCAD 2000, Microsoft Word and Microsoft Excel, respectively.

Task 1: Phase III - Bidding

Schaaf & Wheeler shall:

- Assist the City as required in responding to bidder's inquiries, requests for clarifications, and addenda.
- Attend pre-bid meeting.

Task 1: Phase IV - Construction

Schaaf & Wheeler shall:

- Attend one (1) preconstruction conference conducted by the City.

- Provide construction staking for the project.
- Respond to RFIs, review submittals, and assist the City with design changes as needed during construction.

Task 1: Phase V – Post-Construction

Schaaf & Wheeler shall:

- Prepare record drawings. After construction, the City shall transmit contractor's red-lined as-built drawings of each project to Schaaf & Wheeler, and our engineers shall provide one (1) signed, stamped set of record drawings on Mylar, incorporating the changes during construction, and an AutoCAD file and PDF file of each set of the record drawings for the City.

Task 2: Trash Boom Feasibility

Evaluate the installation of a trash boom in the City's Coast Casey and/or Charleston Detention Basin.

Analyze the potential trash reduction that could be achieved with a trash boom at these locations.

Evaluate, with the installation of these booms, if installing an in-line trash capture device at Location 1C would still be economical and help the City in reaching the 100% trash capture requirement. Analysis conclusions, recommendations, assumptions and calculations shall be provided in a memo to the City.

Task 3: Trash Boom Design

Schaaf & Wheeler shall provide services for Phases I through V as described in Task 1 for the design of one (1) trash boom analyzed in Task 2. The following tasks are removed from Phases I through V of the Task 3 design: potholing (not needed for boom design), subsurface underwater survey, easement development, shoring plans and calculations, 75% design. We propose to complete 35% and 100% design only for the trash boom project due to the reduced complexity of construction.

Items excluded from this scope of work:

- Environmental Permitting. It is assumed that all project locations will be eligible for Categorical Exemption under CEQA and the City shall prepare all necessary documentation. It is assumed no additional environmental permits will be required.
- Construction Permitting. It is assumed that the City shall obtain all construction and right-of-way permitting.
- Property acquisition. It is assumed that all work shall be completed on property owned by the City or within a City easement. No property acquisition costs have been included.

Schaaf & Wheeler will provide these services on a time and materials basis for a not-to-exceed amount of \$249,430; attached is a detailed fee schedule for proposed tasks. Schaaf & Wheeler's hourly charge rates that will apply to this project are attached.

City of Mountain View
 Trash Capture Design
Schaaf & Wheeler
 Fee Proposal, February 18, 2016

Task		Schedule of Hours and Rates by Task						Kier & Wright (Surveyors)	Cornerstone Earth Group (Geotechnical Engineers)	Biggs Cardosa & Assoc (Structural Engineers)	Bess Testlab (Pothing Contractor)	Subsulant Markup (10%)	Total
		Schaaf & Wheeler				Schaaf & Wheeler Subtotal							
		Leif Coponen, PE	Caitlin Gilmore, PE	Assistant Engineer	CAD Technician								
Hourly Rate		\$225	\$200	\$155	\$135								
TASK 1	Full Capture Design	60	138	216	144	\$ 94,020	\$ 44,000	\$ 27,000	\$ 10,500	\$ 16,000	\$ 9,750	\$ 201,270	
1.1	Preliminary Investigation	16	30	32	16	\$ 16,720	\$ 24,000	\$ 3,000			\$ 2,700	\$ 46,420	
1.2.1	35% Design Documents	12	24	40	40	\$ 19,100		\$ 24,000		\$ 16,000	\$ 4,000	\$ 63,100	
1.2.2	75% Design Documents	12	32	56	40	\$ 23,180	\$ 10,000		\$ 6,000		\$ 1,600	\$ 40,780	
1.2.3	100% Design Documents	12	16	32	24	\$ 14,100			\$ 3,000		\$ 300	\$ 17,400	
1.3	Bidding	4	8	8		\$ 3,740					\$ -	\$ 3,740	
1.4	Construction	4	24	40		\$ 11,900	\$ 10,000		\$ 1,500		\$ 1,150	\$ 24,550	
1.5	Post-Construction		4	8	24	\$ 5,280					\$ -	\$ 5,280	
TASK 2	Trash Boom Feasibility	4	16	24	8	\$ 8,900	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,900	
2	Trash Boom Feasibility	4	16	24	8	\$ 8,900					\$ -	\$ 8,900	
TASK 3	Trash Boom Design	12	36	80	36	\$ 27,160	\$ 11,000	\$ -	\$ -	\$ -	\$ 1,100	\$ 39,260	
3.1	Preliminary Investigation		8	16	8	\$ 5,160	\$ 6,000				\$ 600	\$ 11,760	
3.2.1	35% Design Documents	4	8	20	12	\$ 7,220					\$ -	\$ 7,220	
3.2.2	100% Design Documents	4	8	16	8	\$ 6,060	\$ 2,500				\$ 250	\$ 8,810	
3.3	Bidding		4	8		\$ 2,040					\$ -	\$ 2,040	
3.4	Construction	4	8	16		\$ 4,980	\$ 2,500				\$ 250	\$ 7,730	
3.5	Post-Construction			4	8	\$ 1,700					\$ -	\$ 1,700	
	TOTAL	76	190	320	188	\$130,080	\$55,000	\$27,000	\$10,500	\$16,000	\$10,850	\$ 249,430	

Schaaf & Wheeler

CONSULTING CIVIL ENGINEERS

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Hourly Charge Rate Schedule

Personnel Charges

Charges for personnel engaged in professional and/or technical work are based on the actual hours directly chargeable to the project.

Current rates by classification are listed below:

Classification	Rate/Hr	Classification	Rate/Hr
Project Manager	\$225	Construction Manager	\$215
Project Engineer	\$215	Senior Resident Engineer	\$185
Senior Engineer	\$200	Resident Engineer	\$165
Associate Engineer	\$180	Assistant Resident Engineer	\$145
Assistant Engineer	\$155	Construction Inspector	\$135
Junior Engineer	\$145		
Designer	\$140		
Technician	\$135		
Engineering Trainee	\$105		

Principal time is \$315 per hour and is charged only for work done in preparation for litigation and other very high level-of-expertise assignments. Court or deposition time as an expert witness is charged at \$420 per hour with a minimum of four hours per day.

Materials and Services

Subcontractors, special equipment, outside reproduction, data processing, computer services, etc., will be charged at 1.10 times cost.

These rates are subject to revision annually.

Effective 1/1/16