



Council Agenda Report

From: Christopher Alakel, Water Resource Manager
Dick McKinley, Public Works Director

Subject: 21st Street Reservoir Replacement – Award for Design and Preparation of Bid Documents to Replace the 21st Street Reservoir

Date: June 6, 2017

Facts

1. The 21st Street Reservoir (Reservoir) provides potable water storage for all portions of the City west of the Salinas River. The Reservoir was constructed in 1925 and, after approximately 90 years of use, is beyond its service life. Over the years, there have been a number of major repairs to the Reservoir to address leaks, seismic damage, and overall structural degradation.
2. Due to its obsolete design and poor condition, the reservoir must be operated at a reduced capacity, has a low level of reliability, and presents significant water quality challenges.
3. Failure of the Reservoir would severely reduce the City's firefighting capability on the west side and would necessitate emergency water shortage conservation measures. Further, structural failure of the Reservoir could endanger downhill properties.
4. On November 15, 2011, the City Council prioritized construction of water system capital improvements and determined that replacement of the Reservoir should quickly follow construction of the Nacimiento Water Treatment plant.
5. The adopted budget for the Water Fund includes funding for design and replacement of the 21st Street Reservoir, beginning in fiscal year 2016-17.
6. The entire replacement project will include a demolition plan for the existing Reservoir, CEQA compliance documents, geotechnical evaluation, topographic survey, design of a new pre-stressed concrete reservoir, onsite piping improvements, as well as site access and drainage improvements. The total project costs for replacement are estimated to be \$8.4 to \$9 million (including design and construction administration/inspection).
7. In April 2017, a committee of City staff completed a qualifications-based selection process for the design of a replacement Reservoir. The process included solicitation and review of qualifications and proposals from professional engineering firms, and interviews with the most highly qualified firms. The selection committee determined that Water Systems Consulting (WSC) was the most qualified and best fit for the design project.
8. Staff negotiated a scope of work, fee, and schedule with WSC, which are attached. WSC's fee for this work is \$389,178, including a 10% design contingency.

Options

1. Take no action.

2. Award a contract for the design and preparation of bid documents for the 21st Street Reservoir Design Project to Water Systems Consulting.
3. Amend or modify the above options.

Analysis and Conclusions

WSC is a civil and environmental engineering firm based in San Luis Obispo that specializes in planning, design, and evaluation of municipal water systems. The selected design team has an exceptional understanding of City water infrastructure and pre-stressed concrete reservoir design. WSC's team has demonstrated understanding of the City's needs for the project and has proposed an efficient and cost-effective approach to completing the required work.

The price for this complicated and multi-faceted design project is consistent with rates charged by other firms for similar work. Four proposals were submitted; the majority were well clustered. WSC was neither the most expensive nor the least expensive of the firms that submitted proposals, but just slightly above the median priced proposal. WSC's proposal price is consistent with the scope and complexity of this project and is considered fair and competitive. Staff recommends adoption of the attached Resolution No. 17-XXX, to authorize the City Manager to enter into an agreement with WSC for an amount not to exceed \$389,178.

Option 1: Taking no action would defer replacement of the 21st Street Reservoir. Due to the antiquated design and poor overall condition, continued operation will reduce water quality and overall water system reliability. The City is benefitting from a relatively favorable bid climate; better proposals or lower costs would not be anticipated if the City were to go back out to bid later.

Option 2: Authorizing the City Manager to enter into an agreement for design would allow staff to proceed with the process of replacing the antiquated Reservoir. The new Reservoir would greatly reduce the probability of significant operational issues or failure of the Reservoir.

Fiscal Impact

This project was included in the fiscal analysis that supported the recent rate analysis. Funds required for the preparation of bid documents have been budgeted for the current fiscal year (FY 2016/17) from the Water Fund. The Water Fund capital budget includes \$1,392,800 for FY 2016/17 and \$7,802,100 for FY 2017/18 for the design and construction of the 21st Street Reservoir and related improvements.

Recommendation

1. Approve Resolution 17-XXX authorizing the City Manager to enter into an agreement with Water Systems Consulting for the design and preparation of bid documents for the 21st Street Reservoir Design project to Water Systems Consulting, in an amount not to exceed \$389,178, including a 10% contingency.
2. Authorize the City Manager and City Attorney to make minor adjustments to the agreement, if necessary, remaining fully consistent with the Council's intent.

Attachments

1. Resolution 17-XXX
2. Negotiated Scope of Work, Fee, and Project Schedule

RESOLUTION NO. 17-XXX

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EL PASO DE ROBLES
AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH WATER
SYSTEMS CONSULTING FOR THE DESIGN OF THE 21ST STREET RESERVOIR AND
AFFILIATED PIPING, ACCESS AND DRAINAGE IMPROVEMENTS

WHEREAS, the 21st Street Reservoir (Reservoir) provides potable water storage for all portions of the City west of the Salinas River. The Reservoir was constructed in 1925 and, after approximately 90 years of use, is beyond its service life. Over the years, there have been a number of major repairs to the Reservoir to address leaks, seismic damage, and overall structural degradation; and

WHEREAS, due to its obsolete design and poor condition, the reservoir must be operated at a reduced capacity, has a low level of reliability, and presents significant water quality challenges; and

WHEREAS, failure of the Reservoir would severely reduce the City's firefighting capability on the west side and would necessitate emergency water shortage conservation measures. Further, structural failure of the Reservoir could endanger some downhill properties; and

WHEREAS, on November 15, 2011, the City Council prioritized construction of water system capital improvements and determined that replacement of the Reservoir should quickly follow construction of the Nacimiento Water Treatment plant; and

WHEREAS, the adopted budget for the Water Fund includes funding for design and replacement of the 21st Street Reservoir, beginning in fiscal year 2016-17; and

WHEREAS, the entire replacement project will include a demolition plan for the existing Reservoir, CEQA compliance documents, geotechnical evaluation, topographic survey, design of a new pre-stressed concrete reservoir, onsite piping improvements, as well as site access and drainage improvements. The total project costs for replacement are estimated to be \$8.4 to \$9 million (including design and construction administration/inspection); and

WHEREAS, in April 2017, a committee of City staff completed a qualifications-based selection process for the design of a replacement Reservoir. The process included solicitation and review of qualifications and proposals from professional engineering firms, and interviews with the most highly qualified firms. The selection committee determined that Water Systems Consulting (WSC) was the most qualified and best fit for the design project; and

WHEREAS, staff negotiated a scope of work, fee, and schedule with WSC, which are attached. WSC's fee for this work is \$389,178 including a 10% design contingency.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF EL PASO DE ROBLES DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. All of the above recitals are true and correct and incorporated herein by reference.

Section 2. The City Council hereby approves the contract and authorizes the City Manager to execute the agreement with Water Systems Consulting for the design of the 21st Street Reservoir and affiliated piping, site access and drainage improvements.

Section 3. The City Council hereby authorizes the City Manager and City Attorney to make minor modifications to the agreement, as needed, fully consistent with overall Council direction.

Section 4. This Resolution shall take effect on the date it is approved by the City Council.

APPROVED this ____ day of _____, 20__, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

Steven W. Martin, Mayor

ATTEST:

Kristen L. Buxkemper, Deputy City Clerk

Scope of Work

TASK 0.0 PROJECT MANAGEMENT

0.1 Project Administration

- Setup and manage subconsultant agreements for survey, soils, structural engineering, landscape architecture/CEQA and electrical design.
- Prepare and review monthly invoices with project status updates describing the work performed during the previous month.
- Prepare and maintain an updated project schedule, with emphasis on upcoming critical path milestones and potential risks to the completion milestones.

0.2 Quality Assurance/Quality Control (QA/QC)

- Provide comprehensive quality control reviews of deliverables by WSC senior technical staff prior to submittal to the City for review. Anticipated deliverables are described in the corresponding tasks.

Task 0.0 Fee Assumptions

- Total project design duration of 9 months and a bid duration of up to 2 months, as presented in the proposed project schedule provided as an attachment to the scope of work.

TASK 1.0 MEETINGS AND COORDINATION

1.1 Routine Progress Meetings

- Organize and lead bi-weekly project progress conference calls with the City PM to track progress and action items.

1.2 Kick-off Meeting

- Organize and lead one project kick-off meeting workshop. The Kick-off meeting will focus on discussion of scope, roles, responsibilities and initial first steps in the project.

1.3 Preliminary Design Report Review Workshop

- The PDR Review workshop will follow completion of the PDR and will allow the City and WSC to discuss comments on the PDR, including options for addressing the comments.
- Discuss comments from the initial constructability assessment (focused on site access, drainage, and staging).

1.4 Draft Design Review Workshop (60%)

- The Draft Design Review workshop will occur following submittal and review by the City of the Draft Design submittal package.
- Discuss the comments from the Constructability Review.

1.5 Draft Final Design Review Workshop (90%)

- The Draft Final Design Review workshop will occur following submittal and review by the City of the Draft Final Design submittal package.

1.6 Presentations to Planning Commission and City Council

- Prepare presentation and attend Planning Commission and City Council meetings. This informative presentation will coincide with completion of the PDR, environmental documentation, and visual simulations.

Task 1.0 Fee Assumptions

- Workshops will be held at the City offices, and shall be two (2) hours in duration.
- Presentation to Planning Commission and City Council will be two separate meetings of three (3) hours duration.
- Non-workshop meetings will be conducted through conference calls.
- City will coordinate internal reviews and provide comments on design deliverables prior to meetings and/or workshops.

Deliverable: Meeting agendas will be submitted electronically (pdf) at least one day prior to the meeting. Meeting notes will be delivered electronically (pdf) within one week of the meeting.

TASK 2.0 PRELIMINARY ENGINEERING

2.1 Prepare Updated Geotechnical Report

- Initiate the Geotechnical Report update by consulting with the City to review the approach to providing geotechnical services, perform a site reconnaissance, and to collect baseline maps, previous reports and information that the City may have available for the site.
- Prepare a Geotechnical Report for the design of the tank project. The report will include previous information for the project including drawings showing the site location, boring locations, boring logs, laboratory test results and one interpreted profile summarizing the subsurface conditions with respect to the proposed tank. The report will provide opinions and recommendations regarding the following:
 - (1) Geologic setting;
 - (2) Soil and groundwater conditions encountered;
 - (3) Seismic data for use with an AWWA code-based design;
 - (4) Site preparation, grading, and drainage considerations;
 - (5) Suitability of excavated materials for use as fill or backfill material;
 - (6) Compaction requirements for excavated on-site and imported fill materials; Foundation design for new tank foundation, including allowable bearing pressures, minimum foundation widths and depths, estimated total and differential settlement considering static and seismic loads, and lateral earth pressures;
 - (7) Passive resistance and friction coefficient for resistance to lateral loads of foundations for the tank;

- (8) Trench detail, and placement of bedding, pipe zone material, and trench backfill for the pipeline for use with standard plans and specifications;
 - (9) Soil corrosion test data;
 - (10) Guidelines for estimating allowable temporary slope inclinations and shoring requirements on the basis of criteria provided by Occupational Safety and Health Administration (OSHA); and
 - (11) Construction considerations including excavation characteristics of the materials encountered.
 - (12) Evaluation of the fill placed on the northerly slope of the tank site to determine if the fill is suitable as is, or if additional compaction, excavation, or re-work is required by the Contractor. Recommendations for mitigation (if required) will be included in the project plans and specifications.
 - (a) Photos of damaged area, documentation of work performed, interviews with City Staff present during performance of the work, evaluation of aerial photos, and hand augered samples from the in situ fill will be used to determine if the fill is suitable for the intended use. Intended use of the area will be coordinated with the overall design.
- A Draft Geotechnical Report will be submitted for review by the City.
 - The City's comments will be incorporated into the draft report and a Final Geotechnical Report will be issued.

Deliverable: Draft and Final Geotechnical Reports will be electronic (pdf).

2.2 Update Base Mapping and Utility Research

- Upon notice to proceed from the City, WSC will initiate a utility locate within the project area. In addition to the utility locate, WSC will directly contact utility owners identified as having facilities within the project area to obtain available record drawings.
- WSC's surveying subconsultant, MBS Land Surveys, will perform topographical survey of the project area. The project area will include survey of the subject parcels and the adjacent street frontage (area to survey includes the project site plus portions of 19th Street and 21st Street from the site to Olive Street). This task will include aerial photography over the site, the aerial control survey and compiling the topographic map. MBS Land Surveys will provide survey control and the map will be compiled by an aerial sub-consultant.

- Some areas which are obstructed by tree cover may not show complete contour information (unless the contour information is required for the design, it will be inferred and shown as inferred). In addition to topography, the map will show planimetric features including: roads, buildings, fences, power poles, trees, brush, and other features according to standard practice. Accuracy will equal or exceed National Map Accuracy Standards for topographic maps compiled by photogrammetric methods.
- Supplemental topographic survey will be performed to include ground features not visible from the aerial survey, and topography needed to support design.
- A preliminary boundary survey will be prepared which will include locating property monuments in the vicinity of the project and drawing a record boundary onto the AutoCAD base map. Missing property corners will not be set in the field. If any property corners are found to be missing, MBS can provide a separate task for that work.
- A design-level base map will be created for the survey area with 1-foot topographical contours for use in developing design plans.

Deliverable: Base map in electronic format (Autocad dwg and pdf).

2.3 Prepare Drainage Analysis

- Perform and document calculations to size drainage infrastructure to convey peak stormwater runoff and emergency overflow from the tank. Stormwater runoff from the project site is expected to decrease given that impervious surfaces will be reduced in the post-project condition.
- Evaluate alternative alignments for the drainage conveyance system, including a route partially adjacent to the access road from 21st Street and a route south to Locust / 19th Street. The alternatives analysis and the recommended alignment will be summarized and presented to the City for review.
- Assess the opportunity to incorporate a retention basin or LID feature(s) at the outfall of the project drainage conveyance system to reduce and/or attenuate runoff in the event of an emergency overflow from the tank. This assessment will include use of a portion of the existing reservoir excavation for management of overflow and/or drainage. This analysis will focus solely on attenuation of the runoff contribution from the project site and overflow from the tank, and will not include assessment of runoff from any contributing watershed that may converge at the outfall of the project storm drain system.
- The drainage analysis results will be included as a memorandum, submitted to the City prior to the Preliminary Design Report, and as a section of the Preliminary Design Report.

Deliverable: Drainage improvements memorandum in electronic format (pdf).

2.4 Preliminary Design Report

- WSC will prepare a streamlined Preliminary Design Report (PDR) for the project presenting the 4.0 MG prestressed concrete tank design, on-site and off-site piping, storm drain improvements (Task 2.3), cost opinions, and proposed temporary construction site access from 19th / Locus Street. The PDR is intended to provide an adequate project description for completion of CEQA work (IS/MND), convey the conceptual design intent to gain concurrence of the project team, and allow for initial constructability review per Task 5.1.
- Preliminary Drawings will be included in the PDR, and will be equivalent to a 30% submittal.
- Results and recommendations from the drainage analysis will be included in the PDR.
- A summary of environmental documentation and visual simulations (Task Group 3) will be included in an amended PDR.
- Preliminary Opinion of Probable Construction Cost will be included, equivalent to AACE Class 3.

Deliverable: Draft PDR will be electronic (pdf); Final PDR will include two (2) hard copies and an electronic version (pdf).

Task 2.0 Fee Assumptions

- Potholing of existing utilities will not be required during the design phase.
- City will provide any permitting required for topographic survey.
- New soils borings will only be required to assess the condition of the repair fill on the north side of the project site.
- Analysis of new tank alternatives, beyond those already considered by WSC will not be required.

TASK 3.0 CEQA COMPLIANCE

3.1 Initial Study

- WSC's subconsultant, FIRMA, will prepare an Initial Study to determine the potential for significant impacts. It is anticipated that an archaeological surface survey and a biological survey will be required. The visual simulations described below will be used in the Initial Study for determination of the visual impacts of the project.

3.2 Mitigated Negative Declaration

- Based on knowledge of the site and environs it is anticipated that a Mitigated Negative Declaration will be the appropriate CEQA document.
- WSC and FIRMA will prepare the MND, noticing and mailing to responsible and interested agencies and persons.
- Prepare response to comments and Memo to Planning staff summarizing comments and responses.
- Attend the Planning Commission hearing adopting the MND.

- Prepare the Notice of Determination for City filing.

3.3 Visual Simulations

- WSC and FIRMA will prepare two visual simulations of the proposed tank configuration, one looking north from Terrace Hill Drive and one looking south from Villa Street. Each simulation shall show before and after views with proposed screening landscape.
- Based on the visual simulations, prepare Schematic Design drawings that conceptually illustrate the type, scale and scope of the Project landscape components.

Deliverable: Draft and Final Initial Study in electronic format (pdf). Draft and Final Visual Simulations in electronic format (pdf).

Task 3.0 Fee Assumptions

- The IS will result in the need to prepare an MND.

TASK 4.0 PREPARE CONSTRUCTION DOCUMENTS

Plan sets will be prepared on 22" x 34" paper, and the presentation and layout of the plans will consider the functionality of half-size (11" x 17") plans. Pipelines will be prepared at 40 scale. All plans prepared by WSC and subconsultants will be fully integrated into the project plan set.

4.1 Plans

- WSC will prepare plans for the 4.0 MG concrete reservoir site and offsite pipeline improvements. The plans will include a site layout, fencing, site grading and drainage, site paving (permeable and impermeable), reservoir dimensions and details, site piping, site and overflow drainage, and off-site piping.
- WSC's subconsultant, Kleinfelder, will provide full structural design and drafting of the circular partially buried prestressed tank based on AWWA Standard D110, Type I design standards.
- WSC's subconsultant J. Calton Engineering, will prepare SCADA, telemetry and instrumentation plans. Site lighting is not expected to be extensive.
- WSC will prepare off-site drainage improvements to convey the storm water and tank overflow water captured by the on-site drainage system. The off-site system will consist of a pipeline parallel to the tank fill line leading to 19th Street and terminating in a small retention system/bioswale to slow down tank overflow and decrease impact on the surface drainage system that serves the western portion of Paso Robles. A portion of the existing tank may be converted to provide hydraulic modification of tank overflows thereby lessening overflow impact on downstream facilities.

4.2 Specifications

- WSC will rely on the City's Front End Documents and General Conditions. WSC will prepare Technical Specifications for the project. WSC's scope is based on technical specifications being prepared in 50 Division CSI format.

4.3 Opinion of Probable Cost

- WSC will prepare and submit an opinion of probable construction cost with the Draft, Draft Final and Final Design submittals. Accuracy of the cost opinion will vary with submittal as indicated in the following tasks.

4.4 Draft Design Submittal (60%)

- WSC will submit a Draft design submittal consisting of preliminary specifications, the sheets listed in the following sheet list and an opinion of probable construction cost for City review. The opinion of cost will be equivalent to AACE Class 2. It is anticipated that the City will review the submittal within the time frame shown in the schedule and WSC will receive one hardcopy consolidated set of comments. Design drawings and specifications will be revised according to the comments received. A preliminary sheet list is provided below.

4.5 Draft Final Design Submittal (90%)

- WSC will submit a Draft Final design submittal consisting of preliminary specifications, the sheets listed in the following sheet list and an opinion of probable construction cost for City review. The opinion of cost will be equivalent to AACE Class 2. It is anticipated that the City will review the submittal within the time frame shown in the schedule and WSC will receive one hardcopy consolidated set of comments. Design drawings and specifications will be revised according to the comments received. A preliminary sheet list is provided below. WSC will provide the project geotechnical report and other design documentation (e.g. structural calculations) required for the City's submittal to the building department for building permit. This documentation is anticipated to be provided with the 90-percent design submittal.

4.6 Final Design Submittal

- Five (5) hardcopies and a digital copy (PDF via email) of the Final Design submittal (drawings, specifications and opinion of probable cost) labeled "Bid Set - Not for Construction" will be provided for distribution by the City during the Bid Phase. The digital copy will be suitable for reproduction by a local printer for distribution to prospective bidders. A Final conformed plan set will be provided as part of the bid phase services. The opinion of cost will be equivalent to AACE Class 1.

Task 4.0 Fee Assumptions

- A total of 39 drawings are anticipated for the plans, including civil, structural, electrical and landscape architecture disciplines. A preliminary drawing list is provided.
- Specifications will be prepared using 50 Division CSI format.
- City will provide their standard front-end documents covering bidding procedures and requirements, and general and supplemental conditions of the contract.
- City will advertise project for bidding and provide contract documents for bidder purchase, or will use the electronic plan room at ASAP (or equal).

- City will prepare an application for a City Building Permit for the project. WSC will provide necessary design documentation to support the City's application. City will incorporate any comments received from the building department into deliverable comments.
- As part of the base scope of work the access road will be shown generally, and will include performance specifications for construction and restoration of the site by the Contractor. The Contractor will be required to submit more detailed design and alignment information if the Contractor chooses to construct a road from 19th Street. WSC is available to provide design of the access road as Optional Task 7.
- A new electrical service is not required.
- SCADA integration will be performed by others.

TASK 5.0 CONSTRUCTABILITY REVIEW AND VALUE ENGINEERING

5.1 Constructability Review and Value Engineering

- WSC's will perform a constructability review focused on identifying unclear items, inconsistencies, conflicts and cost saving design changes. The individual performing the review will not have been involved in the design of the project. A prestressed concrete tank manufacturer will be consulted for tank details.
- Constructability review will occur in two phases, the first review will occur after the Draft PDR and will focus on site access needs, general project viability, and contractor work areas (laydown, spoils, storage, etc.) Comments from the first review will be delivered to the City for discussion at the PDR workshop.
- The second constructability review focused on identifying unclear items, inconsistencies, conflicts and cost saving design changes, will occur after the Draft Design submittal (Task 4.4). Comments from the review will be delivered to the City for discussion at the Draft Design Workshop. Changes to the plans resulting from the Draft Design Workshop will be checked by the constructability reviewer after the Draft Final Design Submittal.

TASK 6.0 BID PHASE SERVICES

6.1 Services During Bidding

- WSC PM will lead a pre-bid meeting at the City to review project details and answer bidder questions.
- Receive questions from bidders and prepare responses in the form of addenda to the contract documents.
- Conformed documents will be issued to consolidate changes to the construction contract that were made through addenda issued during the bid period.

Task 6.0 Fee Assumptions

- Pre-bid meeting will be one (1) hour in duration, held at the City offices, and will be organized by City staff.

- One addenda will be required to clarify questions received during the bid period.
- Conformed documents will be issued electronically, with Contractor responsible for any printing costs incurred.
- Site visits during construction, inspection, and materials testing are not included.
- Power system studies (i.e. arc flash labeling) and PLC/SCADA programming will be performed by others

TASK 7.0 OPTIONAL TASK - DESIGN OF ACCESS ROAD FROM 19TH STREET

7.1 Temporary Site Access Road Design

- At the City's direction WSC can prepare a plan and profile design for the temporary access road to coincide with the proposed pipeline alignment. The temporary access road will be restored by the contractor when the work is complete, but will be adequate for the City to access the site from 19th Street. It will not be an all-weather access road. The design will take two plan and profile sheets.

Preliminary Sheet List

The following page includes the Preliminary Sheet List for the City's West Main Tank.

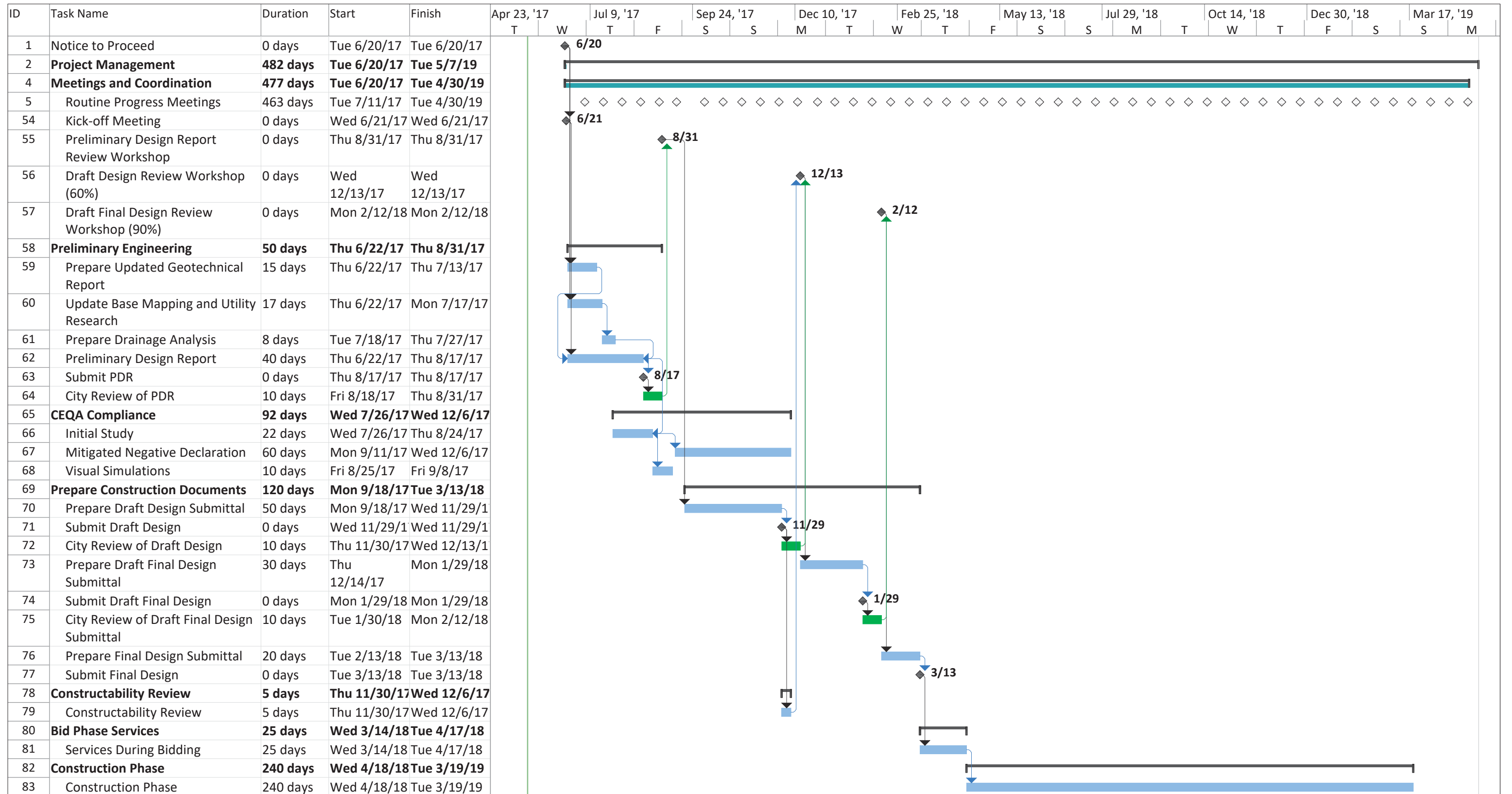
Sheet Count	#	Name	PDR (30%)	Draft (60%)	Draft Final (90%)	Final (100%)
1	T-1	Title and Sheet Index		Prelim	Complete	Final
2	G-1	Notes, Legends, and Abbreviations		Prelim	Complete	Final
3	G-2	Project Site Layout	Prelim	Updated	Complete	Final
4	C-1	Demolition Plan	Prelim	Updated	Complete	Final
5	C-2	Demolition Cross Section	Prelim	Prelim	Complete	Final
6	C-3	Demolition Section Measurements		Prelim	Complete	Final
7	C-4	Reservoir Outlet and Inlet Pipe Profile	Prelim	Prelim	Complete	Final
8	C-5	Reservoir Site Plan	Prelim	Updated	Complete	Final
9	C-6	Reservoir Site Grading and Drainage Plan	Prelim	Updated	Complete	Final
10	C-7	Reservoir Site Section	Prelim	Updated	Complete	Final
11	C-8	Field Drain Lateral Profiles		Prelim	Complete	Final
12	C-9	Tank Inlet Manifold		Prelim	Complete	Final
13	C-10	Drain Valve Vault Plan	Prelim	Prelim	Complete	Final
14	C-11	Check Valve Vault Plan	Prelim	Prelim	Complete	Final
15	W-1	Tank to Locust Street Water P&P 1+00 to 5+00	Prelim	Updated	Complete	Final
16	W-2	Tank to Locust Street Water P&P 5+00 to 7+00	Prelim	Updated	Complete	Final
17	W-3	Locust Street Water P&P 1+00 to 4+00	Prelim	Updated	Complete	Final
18	W-4	19th Street Water P&P 1+00 to 6+00	Prelim	Updated	Complete	Final
19	W-5	19th Street Water P&P 6+00 to 7+50	Prelim	Updated	Complete	Final
20	SD-1	Storm Drain P&P 1+00 to 4+00	Prelim	Updated	Complete	Final
21	SD-2	Storm Drain P&P 4+00 to 6+50	Prelim	Updated	Complete	Final
22	D-1	Details - 1		Prelim	Complete	Final
23	D-2	Details - 2		Prelim	Complete	Final
24	D-3	Standard Details - 1		Prelim	Complete	Final
25	D-4	Standard Details - 2		Prelim	Complete	Final
26	S-1	Structural Foundation Plan	Prelim	Updated	Complete	Final
27	S-2	Structural Roof Plan	Prelim	Updated	Complete	Final
28	S-3	Reservoir Section and Details	Prelim	Updated	Complete	Final
29	S-4	Reservoir Details - 1		Prelim	Complete	Final
30	S-5	Reservoir Details - 2		Prelim	Complete	Final
31	S-6	Reservoir Details - 3		Prelim	Complete	Final
32	S-7	Reservoir Details - 4		Prelim	Complete	Final
33	S-8	Reservoir Details - 5		Prelim	Complete	Final
34	S-9	Reservoir Details - 6		Prelim	Complete	Final
35	S-10	Reservoir Reinforcing Details	Prelim	Updated	Complete	Final
36	S-12	Reservoir Underdrain Plans	Prelim	Updated	Complete	Final
37	E-1	Electrical Site Plan	Prelim	Updated	Complete	Final
38	E-2	Telemetry Plan		Prelim	Complete	Final
39	L-3	Planting and Irrigation Plan	Prelim	Updated	Complete	Final



Task No.	Task Description	WSC												Kleinfelder	Yeh and Associates	Firma	J Calton Engineering	MBS Land Surveys	ALL FIRMS	
		PM (Senior Eng. IV)	QA/QC (Senior Eng. III)	Lead Engineer (Assoc. III)	Associate II	Staff Engineer II	Staff Engineer I	Constructability (PW-CI)	Drafting (CAD Designer)	Clerical/Admin	Total Labor Hours	Total Labor	Expenses	Fee	Fee	Fee	Fee	Fee	Total Fee	
0	Project Management	16	32	8	0	16	0	0	0	24	96	\$ 17,560	\$ 700	\$ 18,260	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,260
0.1	Project Administration	16		8		16				24	64	\$ 9,880	\$ 400	\$ 10,280	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,280
0.2	Quality Assurance/Quality Control (QA/QC)		32								32	\$ 7,680	\$ 300	\$ 7,980	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,980
1	Meetings and Coordination	36	0	18	0	32	0	0	0	0	86	\$ 16,770	\$ 800	\$ 17,570	\$ 8,625	\$ -	\$ -	\$ 759	\$ -	\$ 26,954
1.1	Routine Progress Meetings	16		4		4					24	\$ 5,180	\$ 200	\$ 5,380	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,380
1.2	Kick-off Meeting	2		2		4					8	\$ 1,450	\$ 100	\$ 1,550	\$ 2,156	\$ -	\$ -	\$ -	\$ -	\$ 3,706
1.3	Preliminary Design Report Review Workshop	2		4		4					10	\$ 1,820	\$ 100	\$ 1,920	\$ 2,156	\$ -	\$ -	\$ -	\$ -	\$ 4,076
1.4	Draft Design Review Workshop (60%)	2		4		4					10	\$ 1,820	\$ 100	\$ 1,920	\$ 2,156	\$ -	\$ -	\$ 759	\$ -	\$ 4,835
1.5	Draft Final Design Review Workshop (90%)	2		4		4					10	\$ 1,820	\$ 100	\$ 1,920	\$ 2,156	\$ -	\$ -	\$ -	\$ -	\$ 4,076
1.6	Presentation to Council and Planning Commission	12				12					24	\$ 4,680	\$ 200	\$ 4,880	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,880
2	Preliminary Engineering	6	0	20	0	78	8	0	45	0	157	\$ 22,886	\$ 900	\$ 23,786	\$ 12,650	\$ 19,872	\$ 863	\$ -	\$ 14,628	\$ 71,799
2.1	Prepare Updated Geotechnical Report					4					4	\$ 600	\$ -	\$ 600	\$ -	\$ 19,872	\$ -	\$ -	\$ -	\$ 20,472
2.2	Update Base Mapping and Utility Research	1		2		12	4				19	\$ 2,958	\$ 100	\$ 3,058	\$ -	\$ -	\$ -	\$ -	\$ 14,628	\$ 17,686
2.3	Prepare Drainage Analysis	1		2		32					35	\$ 5,410	\$ 200	\$ 5,610	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,610
2.4	Preliminary Design Report	4		16		30	4		45		99	\$ 13,918	\$ 600	\$ 14,518	\$ 12,650	\$ -	\$ 863	\$ -	\$ -	\$ 28,031
3	CEQA Compliance	4	0	3	0	10	0	0	0	0	17	\$ 3,015	\$ -	\$ 3,015	\$ 920	\$ -	\$ 21,333	\$ -	\$ -	\$ 25,268
3.1	Initial Study	1		1		4					6	\$ 1,025	\$ -	\$ 1,025	\$ -	\$ -	\$ 11,558	\$ -	\$ -	\$ 12,583
3.2	Mitigated Negative Declaration	2				2					4	\$ 780	\$ -	\$ 780	\$ -	\$ -	\$ 3,450	\$ -	\$ -	\$ 4,230
3.3	Visual Simulations	1		2		4					7	\$ 1,210	\$ -	\$ 1,210	\$ 920	\$ -	\$ 6,325	\$ -	\$ -	\$ 8,455
4	Prepare Construction Documents	34	0	120	44	158	88	0	208	6	658	\$ 97,236	\$ 4,800	\$ 102,036	\$ 50,830	\$ -	\$ 6,670	\$ 13,852	\$ -	\$ 173,388
4.1	Plans	16		80		120	40		180		436	\$ 61,920	\$ 2,500	\$ 64,420	\$ 34,500	\$ -	\$ 6,670	\$ 9,677	\$ -	\$ 115,267
4.2	Specifications	8		32	32	12	24				108	\$ 18,528	\$ 700	\$ 19,228	\$ 15,180	\$ -	\$ -	\$ 4,175	\$ -	\$ 38,583
4.3	Opinion of Probable Cost	4		2	12	2	24				44	\$ 7,018	\$ 300	\$ 7,318	\$ 1,150	\$ -	\$ -	\$ -	\$ -	\$ 8,468
4.4	Draft Design Submittal	2		2		6			8	2	20	\$ 2,810	\$ 400	\$ 3,210	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,210
4.5	Draft Final Design Submittal	2		2		6			8	2	20	\$ 2,810	\$ 400	\$ 3,210	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,210
4.6	Final Design Submittal	2		2		12			12	2	30	\$ 4,150	\$ 500	\$ 4,650	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,650
5	Constructability Review and Value Engineering	4	0	2	0	0	0	42	0	2	50	\$ 7,978	\$ 300	\$ 8,278	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,278
5.1	Constructability Review and Value Engineering	4		2				42		2	50	\$ 7,978	\$ 300	\$ 8,278	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,278
6	Bid Phase Services	12	0	32	6	24	6	0	32	0	112	\$ 17,792	\$ 700	\$ 18,492	\$ 1,150	\$ -	\$ 920	\$ -	\$ -	\$ 20,562
6.1	Services During Bidding	12		32	6	24	6		32		112	\$ 17,792	\$ 700	\$ 18,492	\$ 1,150	\$ -	\$ 920	\$ -	\$ -	\$ 20,562
Column Totals		112	32	203	50	318	102	42	285	32	1176	\$ 183,237	\$ 8,200	\$ 191,437	\$ 74,175	\$ 19,872	\$ 29,785	\$ 14,611	\$ 14,628	\$ 344,508

Optional Task

7	Design of Access Road From 19th Street	4	0	10	0	20	0	0	28	0	62	\$ 8,890	\$ 400	\$ 9,290	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,290
7.1	Design of Access Road From 19th Street	4		10		20			28		62	\$ 8,890	\$ 400	\$ 9,290	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,290
Column Totals with Optional Task		116	32	213	50	338	102	42	313	32	1238	\$ 192,127	\$ 8,600	\$ 200,727	\$ 74,175	\$ 19,872	\$ 29,785	\$ 14,611	\$ 14,628	\$ 353,798



Project: Main West Tank Project S Date: Tue 5/23/17	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
	Summary		Inactive Task		Duration-only		Finish-only			