April 1, 2019

Ms. Kristy Morris
City of Hermosa Beach
1315 Valley Drive
Hermosa Beach, CA 90254

Re.: Additional Services for the Hermosa Beach Stormwater Infiltration Project

Dear Ms. Morris:

We appreciate the opportunity to submit this proposal to provide additional services for the Hermosa Beach Greenbelt Infiltration Project. This proposal is to investigate the feasibility and perform the design of a stormwater capture project under North Francisca Avenue as an alternate location for the Hermosa Beach Greenbelt Infiltration Project. This proposal is specifically for the new/additional work that needs to be performed for this alternate location as well as any revisions to the original scope of work. These tasks include a topographic survey of the site, a utility evaluation, a geotechnical investigation, a feasibility report, and the inclusion of a pump station as part of the stormwater capture system. In addition, the rates were increased by 5% to account for escalation since this contract was originally signed in 2017.

PROJECT STATUS

The original agreement for the Hermosa Beach Greenbelt Infiltration Project, dated September 12, 2017, established a total amount of $710,839 including the additional $10,075 tree assessment added to the original scope to be paid to Tetra Tech by the City of Hermosa Beach. To date, Tetra Tech has since billed approximately $232,299 for site investigations (survey, utility, and geotechnical), water quality analysis, and preliminary design of the project located within the Greenbelt. Because of these investigations and per the letter dated March 26, 2019, the City of Redondo Beach is proposing North Francisca Avenue as an alternate location for the project. Tetra Tech proposes a change order of $450,386 to complete the project at the alternate location. This results in a total of $928,926 for project design completion.

DESCRIPTION	AMOUNT
Original Contract	$ 700,764
Change Order 1 (Tree Assessment)	$10,075
Billed to Date	$ (232,299)
Change Order 2 (Move project to N. Francisca Ave.)	$ 450,386
Total for Design Completion	**$ 928,926**

SCOPE OF SERVICES

Task 1.1 – Survey, Utilities Evaluation, and Geotechnical Investigation

Survey

The topographic survey will include a ground survey and aerial photogrammetry of the alternate project location. The team will perform the following tasks:

- The ground survey will establish horizontal and vertical control for the alternate site and fill in any gaps in the aerial survey.
- An aerial survey will then be performed to obtain a 40 scale, one (1) foot contour interval of the alternate site.
- Prepare a Topographic Map at a scale of 1" = 40'. The topography will show one (1) foot contours of the alternate site.

All data and mapping will be completed utilizing California State Plane Coordinates (NAD 83) and County of Los Angeles Vertical Datum (NAVD 88) and will be prepared by a Licensed Land Surveyor in the State of California.

Utilities Evaluation

Tetra Tech will utilize USA Dig Alert's website to obtain a comprehensive list of utility purveyors for the alternate project location, which Tetra Tech will use to request utility atlas information. The received atlas information will be used to prepare a utility index map of existing utilities for the alternate project area.

Once the site investigations and review are complete, the Tetra Tech team will perform a site visit to verify the accuracy of data obtained and the locations of the utilities (underground and overhead) based on the utility atlases received. Tetra Tech will also verify the appropriate right-of-way, and incorporate the utility investigation into the AutoCAD base maps. This information will be used in verifying the preliminary design layout and minimizing utility conflicts.

Geotechnical Investigation

Our team will evaluate the geotechnical and geological conditions of the alternate project site and prepare reports to support the preparation of the Feasibility Report. The geotechnical team will obtain soil testing data from several locations from core drill samples. The samples will be tested in a laboratory per ASTM, City, and County standards and used to evaluate existing conditions and provide design recommendations. The geotechnical investigation will include the following:

- Review of readily available background materials, including published geologic maps and literature, in-house information, stereoscopic aerial photographs, seismic data, including fault hazard maps, seismic hazard maps, and other readily available data regarding geologic and seismic hazards within the alternate project area.
- Boring logs will be used to define the stratigraphy of the alternate project area to determine the feasibility of infiltration at the site and to obtain soil parameters for the design of the underground infiltration gallery, the diversion structure, and the pretreatment device.
- Boring logs will be used to provide soil parameters for the design of the shoring system.
- Groundwater depths will be measured.

- Soil sampling and analysis will only be performed at the proposed boring locations.
- Geotechnical laboratory testing will be performed of selected samples to evaluate in-situ moisture and density, gradation, and corrosivity.
- Prepare a preliminary geotechnical report presenting the results and findings.

The image below indicates approximate locations for the proposed borings. The borehole percolation tests will be performed adjacent to each boring.

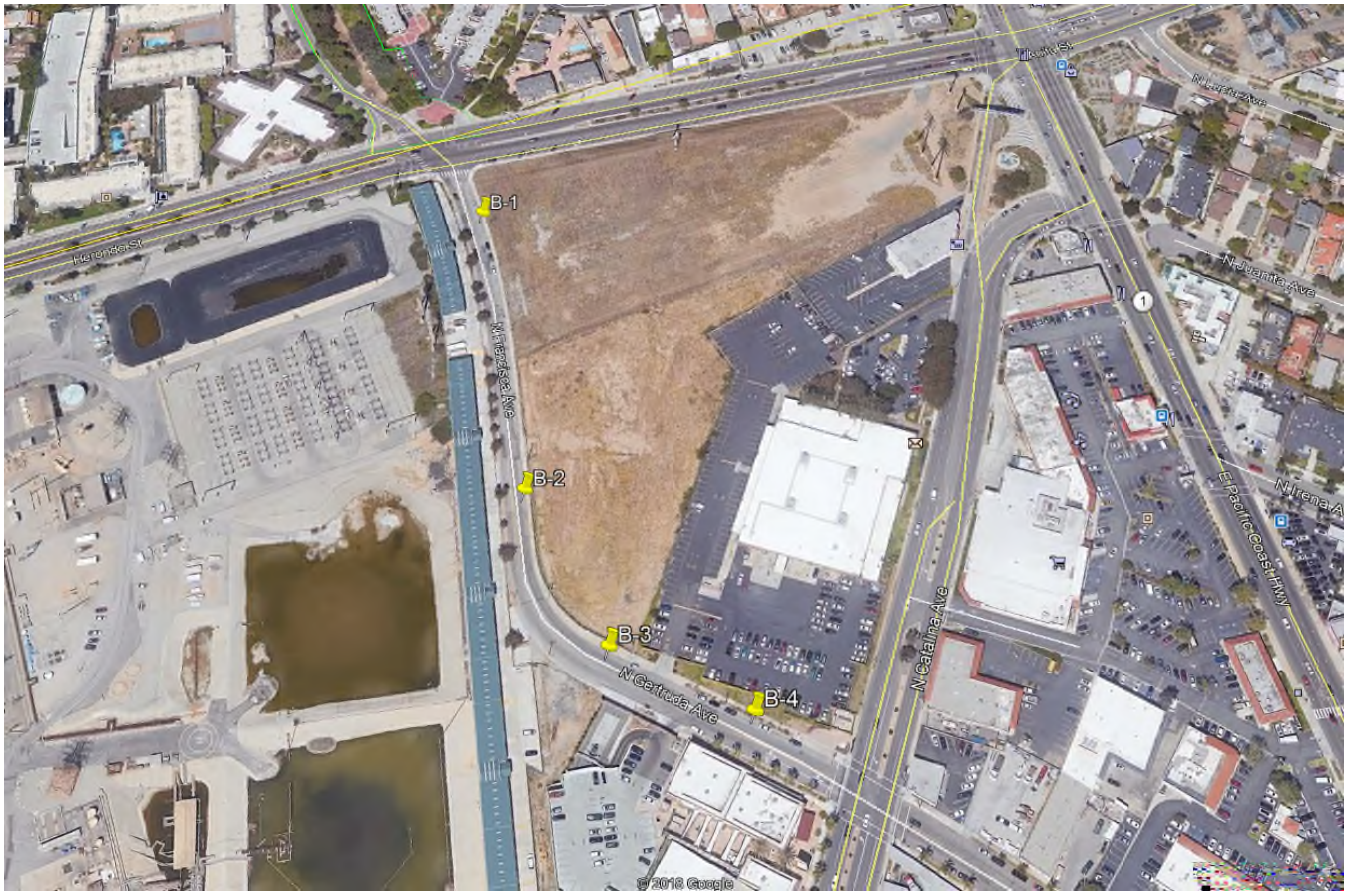


Figure 1. Boring Locations

Deliverables: Topographical map (prepared by a licensed land surveyor), AutoCAD file of the mapped utilities found through the utility requests, and Draft and Final Geotechnical Reports.

Task 1.2 – Feasibility Report

Using the information gathered or generated under Task 1 including: data and maps generated under surveying activities, utilities evaluation results, existing and additional geotechnical investigation, and additional knowledge of the City of Hermosa Beach's priorities and concerns gained during the project inception and Task 1 completion, our team will prepare a Feasibility Report to evaluate North Francisca Avenue as a potential location for the infiltration project.

The Feasibility Report developed under this task will specifically take into consideration approaches to maximize the amount of storm water captured by the project, and as a result, maximizing contribution of the project in achieving goals of the EWMP.

The Feasibility Report will define stormwater design issues, identify potential BMP options, analyze up to two project alternatives, and provide cost estimates of the presented alternatives.

Deliverables: Feasibility Report in electronic format.

Task 1.3 – CEQA Documentation

Below is a list of revisions/additions to the original scope based on current regulations. In addition, the fee was increased to account for increased rates.

- The City of Redondo Beach Energy Efficiency Climate Action Plan will be considered while analyzing the project's greenhouse gas emissions (GHGs).
- Noise monitoring will be performed at two (2) locations for 15 minutes.
- The Initial Study will comply with the revised 2019 State CEQA Guidelines.
- The Initial Study will address the following additional environmental issues: energy, transportation, tribal cultural resources, wildfire, and mandatory findings of significance.

Tasks 1.4 through 1.7 – Additional Design and Construction Support

A revised sheet index is shown below. There is a total of 60 sheets, resulting in an additional 28 sheets to the 32 sheets listed in the original scope of work. This increase is a result of the addition of a pump station and the alternate location being within a roadway requiring utility relocations, traffic control, and roadway design. Such revisions affect everything from design to construction support.

The addition of the pump station will require electrical, mechanical and structural design and construction support. Tetra Tech will prepare plans, specifications, estimate, and calculations to support the design of a pump station for the Project. The package will be incorporated into the civil, structural, and electrical engineering design package. All work will be overseen by a Structural Engineer (SE).

During a site visit performed on March 30, 3019, several utilities were found within the subject area. Such utilities include high-pressure gas, water, irrigation, storm drain, overhead power lines, and overhead transmission lines. Utilities are also present in Herondo Street. These utilities may require relocation where possible to accommodate the design. This proposal includes the design of up to four utility relocations.

To locate the proposed stormwater capture system under North Francisca Avenue, the asphalt pavement and potentially the concrete sidewalk along the road must be removed. Street improvement plans will need to be created for the replacement of the road. This was not included in the original scope of work when the project was proposed in the Greenbelt.

Sheet Index

Sheet No.	Dwg. No.	Sheet Title
1	G-1	Title Sheet
2	G-2	Sheet Index, Legend, and Abbreviations
3	G-3	Notice to Contractors
4	G-4	Notice to Contractors
5	G-5	Boring Logs
6	G-6	Boring Logs
7	G-7	Overall Construction Sequence Plan
8	G-8	Erosion Control Plan
9	C-1	Demolition Plan
10	C-2	Demolition Plan
11	C-3	Horizontal Control Plan
12	C-4	Horizontal Control Plan
13	C-5	Street Improvement Plan and Profile
14	C-6	Street Improvement Plan and Profile
15	C-7	Street Improvement Plan and Profile
16	C-8	Storm Drain Plan and Profile
17	C-9	Utility Relocation Plan and Profile
18	C-10	Utility Relocation Plan and Profile
19	C-11	Utility Relocation Plan and Profile
20	C-12	Utility Relocation Plan and Profile
21	C-13	Schematic Diagram
22	C-14	Details
23	C-15	Details
24	C-16	Details
25	C-17	Details
26	C-18	Details
27	C-19	Details
28	D-1	Pump Station Plan
29	D-2	Pump Station Sections
30	D-3	Pump Station Details
31	S-1	Structural Notes
32	S-2	Structural Notes
33	S-3	Structural Observation Requirements
34	S-4	Herondo Drain Demolition
35	S-5	Diversion Structure Foundation and Roof Plan
36	S-6	Diversion Structure Section
37	S-7	Diversion Structure Section

Sheet No.	Dwg. No.	Sheet Title
38	S-8	Pump Station Foundation and Roof Plan
39	S-9	Pump Station Section
40	S-10	Pump Station Section
41	S-11	Structural Details
42	S-12	Structural Details
43	S-13	Structural Details
44	S-14	Structural Details
45	S-15	Structural Details
46	E-1	Electrical Notes and Legend
47	E-2	Electrical Plan
48	E-3	Pump Station Electrical Plan
49	E-4	Single Line Diagram
50	E-5	Pump Control Schematic
51	E-6	Conduit and Panel Schedule
52	E-7	Electrical Details
53	E-8	Electrical Details
54	EI-1	Instrumentation Notes and Legend
55	EI-2	P&ID
56	EI-3	Control Panel Layout
57	T-1	Traffic Control Notes
58	T-2	Traffic Control Detour Plan
59	T-3	Traffic Control Plan
60	T-4	Traffic Control Plan

Project Schedule

A revised schedule for the project is provided as an attachment to this revised scope.

PRELIMINARY INVESTIGATIONS AND DESIGN/CONSTRUCTION CONSTRAINTS

Site and Utilities

Utilizing Google Earth, North Francisca Avenue is approximately 30 feet from curb to curb. To attain a 7.5-acre-foot storage capacity, the infiltration gallery will need to occupy the full width of North Francisca Avenue from Herondo Street to North Catalina Avenue, assuming a 10-foot deep infiltration gallery and a groundwater elevation deeper than that found at the Greenbelt. This also assumes that existing utilities within North Francisca Avenue can be relocated.

The east end of North Francisca Avenue is approximately 10 feet to 15 feet higher than the west end of North Francisca Avenue. The significant grade differential that exists between the east end of North Francisca Avenue and the west end of North Francisca Avenue will create significant amounts of earth work if the entirety of North Francisca Avenue is used.

During a site visit performed on March 30, 3019, several utilities were found within the subject area. Such utilities include high-pressure gas, water, irrigation, storm drain, overhead power lines, and overhead transmission lines. No sewer lines were observed within North Francisca Avenue. One sewer manhole was observed in Herondo Street.

Figure 2. Water Utility Appurtenances

Figure 3. Transmission and Gas Lines

Geotechnical

Based on a cursory review of available information, it appears that the groundwater is shallower along North Francisca Avenue than at the Greenbelt location. The will likely dictate the infiltration gallery be designed shallower, which will reduce the volume. Since space is also an issue along North Francisca Avenue, this will make achieving the same storage volume as the Greenbelt difficult.

Other Design/Construction Constraints

Numerous facilities and businesses are located along North Francisca Avenue. Such businesses include a US Post Office, an existing storage facility, a car wash, gym, nail salon, and restaurants. The public parking driveway for the US Post Office is located on North Catalina Avenue. However, the employee parking driveway is located on North Francisca Avenue. Three driveways and entrance gates to the storage facility are located on North Francisca Avenue. Another driveway to the storage facility is located along North Catalina Avenue. The car wash ingress and egress driveways as well as the sole parking lot driveway for the gym, nail salon, and restaurants are all located on North Francisca Avenue. Access to these facilities and businesses will need to be coordinated during construction.

Figure 4. Employee Access to US Post Office

Figure 5. Storage Facility Driveway

Figure 6. Car Wash Driveway

Figure 7. Public Parking Driveway

As previously stated, overhead utilities were observed and may present a challenge for construction vehicles (i.e., cranes). Cranes are used during the installation of precast concrete modular units for the infiltration gallery. Existing overhead power and high-voltage transmission lines cross approximately 25 feet and 50 to 100 feet over North Francisca Avenue, respectively.

During the site visit, traffic was observed on North Francisca Avenue to range from moderate to heavy. Street closure during construction may cause traffic impacts.

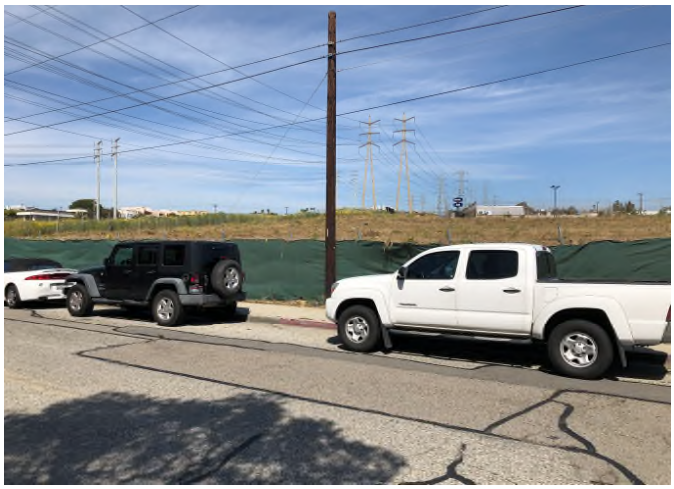


Figure 8. Overhead Utilities

Figure 9. Observed Traffic

LABOR AND FEE ESTIMATE

Our detailed fee summary is attached as the Price Proposal. We are prepared to complete the work on a **Time and Materials (T&M)** basis, as summarized below. The fees presented are to provide additional services described above for the Hermosa Beach Greenbelt Infiltration Project and are in addition to the fees associated with the original agreement and the tree assessment add service, which totaled $710,839.

TASK	DESCRIPTION	AMOUNT
1.1	Survey, Utilities Evaluation, and Geotechnical Investigation	$98,698
1.2	Feasibility Report	$59,021
1.3	CEQA Documentation	$831
1.4	Final Design (28 sheets)	$203,007
1.5	Detail PS&E	$27,416
1.6	Construction Bidding Phase	$8,925
1.7	Construction Support Phase (As Needed)	$52,490
Total		**$450,386**

NOTICE TO PROCEED

Our team is ready to begin work on this immediately. Please feel free to contact me if you have any questions regarding our scope of services or the proposed fee. If the City agrees with the above services and fee, please return a signed copy of this proposal.

We wish to thank you for the opportunity of submitting this proposal and we look forward to continuing our work with the City of Hermosa Beach.

Sincerely,

Mauricio Argente, RLA
Vice President

Attachment(s): Price Proposal
Project Schedule

APPROVED FOR:	City of Hermosa Beach
PROJECT:	Hermosa Greenbelt Infiltration Project
BY:	
TITLE:	
DATE:	

Price Proposal

Revision Date: Mar 29, 2019

NORTH FRANCISCA AVENUE INFILTRATION

(Additional Design Support, Geotechnical Investigation, Survey, and CEQA - EIR Support to

Submitted to: City of Hermosa Beach (Attn: Kristy Morris, PhD)

Contract Type: T&M

Labor Plan

28 Resource

Project Phases / Tasks	Schedule From	Schedule Thru	Schedule Months	Work Days Off	Work Days	Total Labor Hrs
Bill Rate >						
Proj Area >						
						2,604
1.1 Survey, Utilities Evaluation, and Additional Geotechnical Investigation						**336**
1.1 Research						104
1.2 Site Visit						20
1.3 Survey						58
1.4 Geotech Coordination and New Geotech Study						14
1.5 Preliminary Plan and Utilities Notices/Questionnaires						116
1.6 Meetings and Progress Reports (Up to 4)						24
1.2 Preliminary Design, Planning activities						**382**
1.2.1 Update Hydrologic and Hydraulic Model						106
1.2.2 Conceptual Design Alternatives Development (Up to 2)						82
1.2.3 Line Item Cost Estimate for Alternatives						32
1.2.4 Feasibility Report Preparation (Draft and Final Submissions)						134
1.2.5 Meetings and Progress Reports (Draft Review Meeting)						28
1.3 CEQA Documentation, Permits						-
1.3.1 CEQA Documentation, Permits						-
1.4 Final Design						**1,332**
1.4.1 60% PS&E (60 Sheets)						823
1.4.2 100% PS&E for Review						485
1.4.3 Meetings and Progress Reports (60% and 100% Design Review)						24
1.5 Detail PS&E						**188**
1.5.1 Detail PS&E Development						180
1.5.2 Meetings and Progress Reports						8
1.6 Construction Bidding Phase						**48**
1.6.1 Attend Pre-bid Meeting/Job Walk						-
1.6.2 Response to Bidder Inquiries						16
1.6.3 Assist the City with Bid Evaluation						-
1.6.4 Prepare "As-Bid" Documents						32
1.7 Construction Support Phase (As Needed)						**318**
1.7.1 Pre-Con Meeting						8
1.7.2 Submittals and Shop Drawings Review (15 Submit @ 2 hrs each, 10 Re-submit @ 1 hc						90
1.7.3 Assist with RFIs (15 RFIs @ 2 hrs each)						44
1.7.4 Construction Site Visits and Quality Control (6 Inspections @ 4 hrs each)						12
1.7.5 O&M Documentation						28
1.7.6 Final Record Drawings Plans Preparation (30 sheets @ 2 hr/sheet)						88
1.7.7 Meetings, Management and Progress Reports (2 hr/wk, 1 yr)						-
1.7.8 Structural Observations (6 @ 4 hours each)						48
Totals						**2,604**

Bill Rate >	Principal (Mauricio Argente, RLA, ENV SP) 315.00	QA/QC Manager (Mark Bush, PE) 262.50	Project Manager (Jason Fassel, PE, PLS, ENV SP, LEED AP) 231.00	Deputy Project Manager (Nate Schreiner, PE) 210.00	Stormwater Quality Manager (Chad Haines, PE) 241.50	Sr. Water Resources Engineer (Oliver Gailing, PE, ENV SP) 225.75	Mid Water Resources Engineer (Brad Wardynski, PE, Merrill Taylor, PE) 162.75	Jr Water Resources Engineer 120.75	Sr. Civil Engineer (Aaron Yonker, PE) 183.75	Mid Civil Engineer (Elva Panglinan, PE, ENV SP) 136.50	Jr. Civil Engineer (Chris Jansen, EIT) 115.50	Landscape Architect (Heath Pray) 131.25	Sr Structural Engineer (Mike Olsen, PE) 231.00	Mid Structural Engineer (Megan Hanrahan) 162.75	Land Surveyor (Dan Helt, PE, PLS) 168.00	Surveyor Technician (Manuel Leon) 94.50	Two Man Survey Crew (Tetra Tech) 220.50	CAD Designer 99.75	Sr. Mechanical Engineer (Tim Joyce, PE) 246.75	Mid Mechanical Engineer (Kyle Bohn, PE) 162.75	Jr. Mechanical Engineer (Jamie McEvoy) 115.50	Sr. Electrical Engineer (Mazen Kassir, PE) 246.75	Junior Electrical Engineer (Kyle Wedeman) 120.75	Principal Engineer/Geologist (Peter Skopek, PE) 241.50	Project Engineer (Fernando Cuenca, PE) 152.25	Field Geologist (Andrew McGarty) 152.25	Drafting Geotechnical Support 126.00	Office Geotechnical Support 89.25
Proj Area >																											
	8	6	56	114	12	20	32	40	40	114	240	26	148	462	4	8	20	410	76	142	180	132	314	-	-	-	-
1.1 Survey, Utilities Evaluation, and Additional Geotechnical Investigation	-	-	**24**	**52**	-	-	-	-	**16**	**36**	**44**	**16**	**4**	**4**	**4**	**8**	**20**	**100**	**4**	-	-	**4**	-	-	-	-	-
1.1 Research			4	8					8	16	20	8						40						-	-	-	-
1.2 Site Visit				4							4		4						4			4		-	-	-	-
1.3 Survey			2	4											4	8	20	20						-	-	-	-
1.4 Geotech Coordination and New Geotech Study			2	4						4				4										-	-	-	-
1.5 Preliminary Plan and Utilities Notices/Questionnaires			8	16					8	16	20	8						40						-	-	-	-
1.6 Meetings and Progress Reports (Up to 4)			8	16																				-	-	-	-
1.2 Preliminary Design, Planning activities	**6**	**2**	**12**	**28**	**12**	**20**	**32**	**40**	**8**	**38**	**76**	**10**	**4**	**4**	-	-	-	**30**	**6**	**8**	**30**	**8**	**8**	-	-	-	-
1.2.1 Update Hydrologic and Hydraulic Model			2	8	8	16	32	40																-	-	-	-
1.2.2 Conceptual Design Alternatives Development (Up to 2)	2		2	4					4	10	20	10						30						-	-	-	-
1.2.3 Line Item Cost Estimate for Alternatives	2		2	4						8	16													-	-	-	-
1.2.4 Feasibility Report Preparation (Draft and Final Submissions)	2	2	2	8					4	20	40			4					2	8	30	4	8	-	-	-	-
1.2.5 Meetings and Progress Reports (Draft Review Meeting)			4	4	4	4							4						4			4		-	-	-	-
1.3 CEQA Documentation, Permits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3.1 CEQA Documentation, Permits																								-	-	-	-
1.4 Final Design	**2**	**4**	**16**	**22**	-	-	-	-	**12**	**32**	**100**	-	**104**	**324**	-	-	-	**180**	**38**	**90**	**128**	**60**	**220**	-	-	-	-
1.4.1 60% PS&E (60 Sheets)	1	2	8	12					8	20	60		60	200				120	20	60	80	32	140	-	-	-	-
1.4.2 100% PS&E for Review	1	2	8	10					4	12	40		40	120				60	10	30	48	20	80	-	-	-	-
1.4.3 Meetings and Progress Reports (60% and 100% Design Review)													4	4					8			8		-	-	-	-
1.5 Detail PS&E	-	-	**4**	**8**	-	-	-	-	**4**	**8**	**20**	-	**4**	**10**	-	-	-	**40**	**8**	**8**	**18**	**16**	**40**	-	-	-	-
1.5.1 Detail PS&E Development			4	8					4	8	20		4	10				40	4	8	18	12	40	-	-	-	-
1.5.2 Meetings and Progress Reports																			4			4		-	-	-	-
1.6 Construction Bidding Phase	-	-	-	-	-	-	-	-	-	-	-	-	**4**	**4**	-	-	-	-	**8**	**12**	-	**8**	**12**	-	-	-	-
1.6.1 Attend Pre-bid Meeting/Job Walk																								-	-	-	-
1.6.2 Response to Bidder Inquiries																			4	4		4	4	-	-	-	-
1.6.3 Assist the City with Bid Evaluation																								-	-	-	-
1.6.4 Prepare "As-Bid" Documents													4	4					4	8		4	8	-	-	-	-
1.7 Construction Support Phase (As Needed)	-	-	-	**4**	-	-	-	-	-	-	-	-	**28**	**116**	-	-	-	**60**	**12**	**24**	**4**	**36**	**34**	-	-	-	-
1.7.1 Pre-Con Meeting																						8		-	-	-	-
1.7.2 Submittals and Shop Drawings Review (15 Submit @ 2 hrs each, 10 Re-submit @ 1 hc													12	48					4	8		8	10	-	-	-	-
1.7.3 Assist with RFIs (15 RFIs @ 2 hrs each)													4	16					4	8		4	8	-	-	-	-
1.7.4 Construction Site Visits and Quality Control (6 Inspections @ 4 hrs each)														4								8		-	-	-	-
1.7.5 O&M Documentation																			4	8		8	8	-	-	-	-
1.7.6 Final Record Drawings Plans Preparation (30 sheets @ 2 hr/sheet)				4									4	8				60			4		8	-	-	-	-
1.7.7 Meetings, Management and Progress Reports (2 hr/wk, 1 yr)																								-	-	-	-
1.7.8 Structural Observations (6 @ 4 hours each)													8	40										-	-	-	-
Totals	**8**	**6**	**56**	**114**	**12**	**20**	**32**	**40**	**40**	**114**	**240**	**26**	**148**	**462**	**4**	**8**	**20**	**410**	**76**	**142**	**180**	**132**	**314**	-	-	-	-

Price Summary / Totals

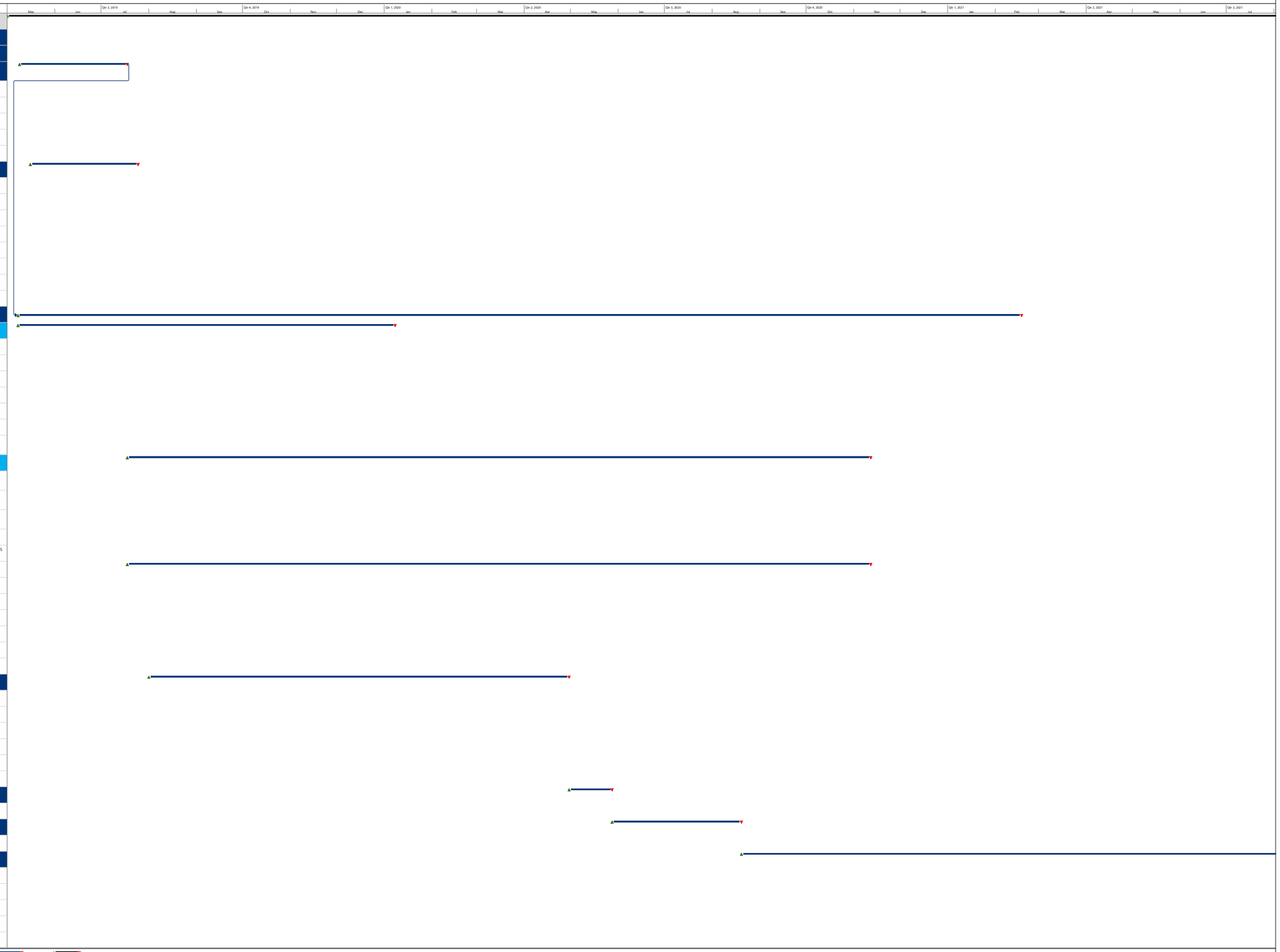
Task Pricing Totals	450,386
Specify Add'l Fees on Setup	0
Technology Use Fee	
Total Price	**450,386**

Pricing by Resource

	Fleet Vehicles $0.00 / mile	Labor Rate Esc.	Labor	Subs	Travel	Mat'ls & Equip	ODCs	Task Pricing Totals
	M&E 2,000	0.00%	401,720	48,667	-	-	-	**450,386**
1.1 Survey, Utilities Evaluation, and Additional Geotechnical Investigation	560		**50,862**	**47,836**	-	-	-	**98,698**
1.1 Research			13,608					13,608
1.2 Site Visit	80		4,200					4,200
1.3 Survey	80		9,135	2,200				11,335
1.4 Geotech Coordination and New Geotech Study	80		2,499	45,636				48,135
1.5 Preliminary Plan and Utilities Notices/Questionnaires			16,212					16,212
1.6 Meetings and Progress Reports (Up to 4)	320		5,208					5,208
1.2 Preliminary Design, Planning activities	80		**59,021**	-	-	-	-	**59,021**
1.2.1 Update Hydrologic and Hydraulic Model			17,724					17,724
1.2.2 Conceptual Design Alternatives Development (Up to 2)			10,647					10,647
1.2.3 Line Item Cost Estimate for Alternatives			4,872					4,872
1.2.4 Feasibility Report Preparation (Draft and Final Submissions)			19,247					19,247
1.2.5 Meetings and Progress Reports (Draft Review Meeting)	80		6,531					6,531
1.3 CEQA Documentation, Permits	-		-	**831**	-	-	-	**831**
1.3.1 CEQA Documentation, Permits				831				831
1.4 Final Design	160		**203,007**	-	-	-	-	**203,007**
1.4.1 60% PS&E (60 Sheets)			123,459					123,459
1.4.2 100% PS&E for Review			74,025					74,025
1.4.3 Meetings and Progress Reports (60% and 100% Design Review)	160		5,523					5,523
1.5 Detail PS&E	80		**27,416**	-	-	-	-	**27,416**
1.5.1 Detail PS&E Development			25,442					25,442
1.5.2 Meetings and Progress Reports	80		1,974					1,974
1.6 Construction Bidding Phase	80		**8,925**	-	-	-	-	**8,925**
1.6.1 Attend Pre-bid Meeting/Job Walk	80		-					-
1.6.2 Response to Bidder Inquiries			3,108					3,108
1.6.3 Assist the City with Bid Evaluation			-					-
1.6.4 Prepare "As-Bid" Documents			5,817					5,817
1.7 Construction Support Phase (As Needed)	1,040		**52,490**	-	-	-	-	**52,490**
1.7.1 Pre-Con Meeting	80		1,974					1,974
1.7.2 Submittals and Shop Drawings Review (15 Submit @ 2 hrs each, 10 Re-submit @ 1 hc			16,055					16,055
1.7.3 Assist with RFIs (15 RFIs @ 2 hrs each)			7,770					7,770
1.7.4 Construction Site Visits and Quality Control (6 Inspections @ 4 hrs each)	480		2,625					2,625
1.7.5 O&M Documentation			5,229					5,229
1.7.6 Final Record Drawings Plans Preparation (30 sheets @ 2 hr/sheet)			10,479					10,479
1.7.7 Meetings, Management and Progress Reports (2 hr/wk, 1 yr)			-					-
1.7.8 Structural Observations (6 @ 4 hours each)	480		8,358					8,358
Totals	2,000	0.00%	401,720	48,667	-	-	-	**450,386**

Note: The fees presented are to provide additional services for the project and are in addition to the fees associated with the original agreement and the tree assessment add service, which totaled $710,839.

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Hermosa Beach Greenbelt Infiltration Project**	**653 days**	**Wed 5/1/19**	**Fri 10/29/21**	
2	**Notice to Proceed**	**0 days**	**Wed 5/1/19**	**Wed 5/1/19**	
3	**Kick-off Meeting**	**1 day**	**Wed 5/1/19**	**Wed 5/1/19**	2
4	**Task 1. Survey, Utilities Evaluation, and Geotechnical Investigation**	**50 days**	**Thu 5/9/19**	**Wed 7/17/19**	
5	1.1 Research	10 days	Thu 5/16/19	Wed 5/29/19	3FS+10 days
6	1.2 Site Visit	1 day	Thu 5/9/19	Thu 5/9/19	3FS+1 wk
7	1.3 Survey	15 days	Thu 5/9/19	Wed 5/29/19	3FS+1 wk
8	1.4 Geotech Study	30 days	Thu 6/6/19	Wed 7/17/19	3FS+5 wks
9	1.5 Utilities Reserach	10 days	Thu 5/30/19	Wed 6/12/19	7
10	**Task 2. Feasibility Report**	**50 days**	**Thu 5/16/19**	**Wed 7/24/19**	
11	2.1 Refined Hydrologic and Hydraulic Model	10 days	Thu 7/4/19	Wed 7/17/19	8FS-2 wks
12	2.2 Conceptual Design Alternatives Development	5 days	Thu 5/30/19	Wed 6/5/19	7
13	2.3 Line Item Cost Estimate for Alternatives	1 day	Thu 6/6/19	Thu 6/6/19	12
14	2.4 Draft Feasibility Report Preparation	20 days	Thu 5/16/19	Wed 6/12/19	3FS+2 wks
15	2.5 Draft Feasibility Report Submittal	0 days	Wed 6/12/19	Wed 6/12/19	14
16	2.6 Beach Cities and the City's Review of Feasibility Report	20 days	Thu 6/13/19	Wed 7/10/19	15
17	2.7 Final Feasibility Report Preparation	10 days	Thu 7/11/19	Wed 7/24/19	16
18	2.8 Final Feasibility Report Submittal	0 days	Wed 7/24/19	Wed 7/24/19	17
19	**Task 3. CEQA Documentation, Permits**	**466 days**	**Wed 5/8/19**	**Wed 2/17/21**	**4**
20	3.1 CEQA Documentation	175 days	Wed 5/8/19	Tue 1/7/20	
21	3.1.1 Update Ph.1 ESA Request Report	20 days	Wed 5/8/19	Tue 6/4/19	
22	3.1.2 Prepare CEQA Determination Documents	75 days	Wed 5/8/19	Tue 8/20/19	
23	3.1.3 Submit Draft CEQA Documentation	0 days	Tue 8/20/19	Tue 8/20/19	22
24	3.1.4 City's Review of Draft CEQA Documenation	30 days	Wed 8/21/19	Tue 10/1/19	23
25	3.1.5 Prepare Final CEQA Documentation	25 days	Wed 10/2/19	Tue 11/5/19	24
26	3.1.6 Submit Final CEQA Documentation	0 days	Tue 11/5/19	Tue 11/5/19	25
27	3.1.7 Public CEQA Documentation Review and Responses	45 days	Wed 11/6/19	Tue 1/7/20	26
28	3.2 Prepare Documentations for Other Permits	345 days	Thu 7/18/19	Wed 11/11/20	
29	3.2.1 City of Hermosa Beach, Building Division Documents Preparation	20 days	Thu 7/25/19	Wed 8/21/19	18
30	3.2.2 City of Hermosa Beach Public Works Documents Preparation	20 days	Thu 7/25/19	Wed 8/21/19	18
31	3.2.3 West Basin Municipal Water District (reclaimed water line) Coordination Documents Preparation	20 days	Thu 7/25/19	Wed 8/21/19	18
32	3.2.4 Coastal Commission Permit Documents Preparation	50 days	Thu 7/25/19	Wed 10/2/19	18
33	3.2.5 Los Angeles Regional Water Quality Control Board NPDES Construction General Permit	30 days	Thu 11/14/19	Wed 12/25/19	32FS+30 days
34	3.2.6 LACFCD Permit	345 days	Thu 7/18/19	Wed 11/11/20	
35	Submit LACFCD Permit Application Preparation	10 days	Thu 7/18/19	Wed 7/31/19	4
36	Review 60% Plans	30 days	Thu 12/5/19	Wed 1/15/20	43
37	Review 100% Plans	30 days	Thu 4/2/20	Wed 5/13/20	45
38	Draft MOU	50 days	Thu 5/14/20	Wed 7/22/20	37
39	MOU Board Letter	80 days	Thu 7/23/20	Wed 11/11/20	38
40	LACFCD Permit Issued	0 days	Wed 11/11/20	Wed 11/11/20	39
41	**Task 4. Final Design**	**195 days**	**Thu 8/1/19**	**Wed 4/29/20**	
42	4.1 60% PS&E	90 days	Thu 8/1/19	Wed 12/4/19	18FS+1 wk
43	4.2 60% PS&E Plans Submittal	0 days	Wed 12/4/19	Wed 12/4/19	42
44	4.3 City's Review of 60% PS&E Plans	20 days	Thu 12/5/19	Wed 1/1/20	43
45	4.4 100% PS&E for Review	65 days	Thu 1/2/20	Wed 4/1/20	44
46	4.5 100% PS&E Plans for Review Submittal	0 days	Wed 4/1/20	Wed 4/1/20	45
47	4.6 City's Review of 100% PS&E Plans	20 days	Thu 4/2/20	Wed 4/29/20	46
48	**Task 5. Detail PS&E**	**20 days**	**Thu 4/30/20**	**Wed 5/27/20**	
49	5.1 Detail PS&E Development	20 days	Thu 4/30/20	Wed 5/27/20	47
50	**Task 6. Construction Bidding Phase**	**60 days**	**Thu 5/28/20**	**Wed 8/19/20**	
51	6.1 Construction Bidding Phase Support	60 days	Thu 5/28/20	Wed 8/19/20	49
52	**Task 7. Construction Support Phase (As Needed)**	**312 days**	**Thu 8/20/20**	**Fri 10/29/21**	
53	7.1 Pre-Con Meeting	1 day	Thu 8/20/20	Thu 8/20/20	51
54	7.2 Submittals and Shop Drawings Review	262 days	Thu 8/20/20	Fri 8/20/21	51
55	7.3 Construction Site Visits and Quality Control	262 days	Thu 8/20/20	Fri 8/20/21	51
56	7.4 O&M Documentation	50 days	Mon 8/23/21	Fri 10/29/21	55
57	7.5 Final Record Drawings Plans Preparation	22 days	Mon 8/23/21	Tue 9/21/21	55



Hermosa Beach Greenbelt Infiltration Project
Date: 4/27/2017

Summary | Task | Milestone | Summary | Project Summary