

**Menlo Park SAFER Bay
Budget Narrative**

The project budget has been developed by an engineering consultant with experience of the type of project and activities to be performed. As requested in FEMA BRIC Application Final Steps guidance provided on November 29, 2020 the table below provides, for each cost item, the following:

- Methodology used to estimate each cost
- Brief description of any products / deliverables that will be developed as part of the budget line item
- Whether work will be performed in house or via 3rd party contractors
- Identify by title whom will be performing the work
- Personnel costs should provide detail on hourly wage for person performing the task (inclusive of fringe benefits)

Item Name	Cost Estimate Methodology	Products/ Deliverables	Responsible Entity	Title(s)	Hourly Rate(s) used for labor Costs
FEMA BRIC Application Subaward	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	FEMA BRIC Application materials including, but not limited to, scope of work, schedule cost estimates, design drawings, cost-effectiveness analysis, and narrative discussions	Engineering Consultant	Project Manager, Senior Engineer; Engineering Staff; Drafting Staff, Cost Estimator	\$280/hr - \$120/hr
Phase 1 - Environmental Permitting and 90% Design					
Task 1.1 - Procurement for Design and Environmental Services	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Scope of Services for Project environmental and engineering services; Solicitation documentation; Contract documentation	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Task 1.2 - Project Management including Kick-Off Meeting	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Kick off meeting materials and minutes; Monthly status reports; Project Guide including a Quality Control Plan; Coordination meeting materials and minutes	Engineering/ Environmental Consultant	Project Manager; Project Controller.	\$280/hr - \$130/hr
Task 1.3 – Public Outreach					
Public Outreach Plan	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Draft and annual updated outreach plans; Meeting notes from Advisory Board	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Public Meetings / Workshops	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Public workshop materials; Public comment summaries detailing and categorizing public interests/concerns	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Advisory Board/Stakeholder Meetings	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Meeting summaries documenting key issues and concerns	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Task 1.4 - Environmental Permits					
Project Description	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Project Description for CEQA review process	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr
Notice of Preparation, public scoping meeting	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Initial Study Checklist; Notice of Preparation; Public scoping meeting materials; Public scoping meeting minutes and summary report	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr
Draft EIR	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Draft SEIR	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr
Final EIR and Mitigation Monitoring Program	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Final SEIR including responses to comments and Mitigation Monitoring Program	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr
Findings of Fact, Statement of Overriding Consideration, Notice of Determination	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Draft Findings of Fact and Statement of Overriding Considerations (if required); Notice of Determination	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr

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Meetings and Coordination - Environmental Outreach	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	N/A	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr
Regulatory Permitting	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Permit applications	Engineering/ Environmental Consultant	Environmental Permitting Lead; Environmental Staff	\$280/hr - \$105/hr
Task 1.5 - Right-of-Way Acquisition Negotiations	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks. Includes allowance to establish permanent easements.	Acquisition document templates	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Task 1.6 – Engineering and Design					
Data Collection	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	N/A	Engineering Consultant	Project Manager; Engineering Staff	\$280/hr - \$120/hr
Ground Survey and Utility Location	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Survey Control Report; Utility & Encroachment Survey Report	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Aerial Base Mapping	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Topographic Survey, Base Maps, Orthophotos, and Digital Terrain Model	Engineering Consultant	Senior Engineer; Engineering Staff; Drafting Staff	\$240/hr - \$120/hr
Review of Geotechnical Information and Site Reconnaissance	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	N/A	Engineering Consultant	Senior Geotechnical Engineer; Geotechnical Engineering Staff	\$240/hr - \$120/hr
Field Investigation	Anticipated drilling and exploration costs based on similar, recent projects and adjusted for project scale.	Field Work Plan and Health and Safety Plan; Encroachment and drilling permits; Field and drilling logs	Engineering Consultant	Senior Geotechnical Engineer; Geotechnical Engineering Staff; Drilling Sub-consultant	\$240/hr - \$120/hr
Laboratory Testing	Anticipated laboratory costs based on similar, recent projects and adjusted for project scale.	Laboratory testing results	Engineering Consultant	Senior Geotechnical Engineer; Geotechnical Engineering Staff; Laboratory Vendor.	\$240/hr - \$120/hr
Geotechnical Engineering Analysis and Evaluation	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Draft and Final Geotechnical Report	Engineering Consultant	Senior Geotechnical Engineer; Geotechnical Engineering Staff	\$240/hr - \$120/hr
Engineering Support for Project Description	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Included with Project Description deliverable, Task 1.2	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Design Criteria Memorandum	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Draft and Final Design Criteria TM	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Coastal Hydraulics & Interior Drainage Analysis	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Draft and Final Coastal Hydraulics & Interior Drainage Summary Report	Engineering Consultant	Senior Hydraulics Engineer, Hydraulics Engineering Staff	\$240/hr - \$120/hr
30% Plans, Specifications, Estimates, and Construction Schedule	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	30% Plans (half-size drawings only), specifications, cost estimates, bid schedule, and construction schedule; Responses to review comments	Engineering Consultant	Senior Engineer; Engineering Staff; Drafting Staff, Cost Estimator	\$240/hr - \$120/hr
60% Plans, Specifications, Estimates, and Construction Schedule	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	60% Plans (half-size drawings only), specifications, cost estimates, bid schedule, and construction schedule; Responses to review comments	Engineering Consultant	Senior Engineer; Engineering Staff; Drafting Staff, Cost Estimator	\$240/hr - \$120/hr
90% Plans, Specifications, Estimates, and Construction Schedule	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	90% Plans (half-size drawings only), specifications, cost estimates, bid schedule, and construction schedule; Responses to review comments	Engineering Consultant	Senior Engineer; Engineering Staff; Drafting Staff, Cost Estimator	\$240/hr - \$120/hr

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Design Documentation Report	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Design Documentation Report	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Phase 2 - Final Design and Construction					
Task 2.1 - Project Management	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Kick off meeting materials and minutes; Monthly status reports; Project Guide including a Quality Control Plan; Coordination meeting materials and minutes	Engineering/ Environmental Consultant	Project Manager; Project Controller.	\$280/hr - \$130/hr
Task 2.2 – Public Outreach					
Public Meetings / Workshops	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Public workshop materials; Public comment summaries detailing and categorizing public interests/concerns	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Advisory Board/Stakeholder Meetings	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Meeting summaries documenting key issues and concerns	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Task 2.3 - Final Design					
Final Plans, Specifications, Estimates, and Construction Schedule	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Final stamped design plans, specifications, cost estimates, bid schedule, and construction schedule	Engineering Consultant	Senior Engineer; Engineering Staff; Drafting Staff, Cost Estimator	\$240/hr - \$120/hr
Design Documentation Report	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Design Documentation Report	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Stormwater Pollution Prevention Plan	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	PRDs including Risk Assessment, Site Map, and SWPPP	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Task 2.4 - Procurement for Construction management Services	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Scope of Services for Project environmental and engineering services; Solicitation documentation; Contract documentation	Sub-applicant	Senior Engineer	\$100/hr - \$70/hr
Task 2.5 - Construction Bidding	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Minutes from pre-bid conference; Addendum to bid documents; Clarifications to bid documents; Bid evaluation summary; Negotiated/awarded contract; One addendum to bid documents for each bid package; Meeting notes	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Task 2.6 - Engineering During Construction					
Meetings and Site Visits	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction.	N/A	Engineering Consultant	Project manager; Senior Engineer	\$280/hr - \$240/hr
Support for Requests for Information (RFI) Review	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks and expected number of submittals and RFIs	Responses to RFIs, as needed; Design changes, as needed	Engineering Consultant	Senior Engineer; Engineering Staff	\$240/hr - \$120/hr
Permit Compliance Agency Coordination	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction.	N/A	Engineering Consultant	Environmental Lead, Environmental Staff	\$280/hr - \$105/hr
Support for Change Management	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and anticipated number of change orders based on project complexity.	N/A	Engineering Consultant	Project manager; Senior Engineer; Cost Estimator	\$280/hr - \$200/hr

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Project Record Drawings	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and expected number of drawings.	Review of Contractor's as-built drawings; Signed and Stamped Final set of reproducible Record Drawings	Engineering Consultant	Senior Engineer; Engineering Staff; Drafting Staff	\$240/hr - \$120/hr
Task 2.7 - Construction Management					
Construction Manager	Appropriate hourly rate, applied to a full-time position for the expected duration of construction.	N/A	Engineering/ CM Consultant	Construction Manager	\$260/hr
Construction Coordination Meetings	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction	Meetings materials and minutes for weekly meetings	Engineering/ CM Consultant	QA Manager; Contract Administrator; Field Engineer	\$240/hr - \$120/hr
Construction Management Facilities and Equipment	Typical costs for purchase and/or rental of vehicles, PPE, field monitoring and testing equipment etc., applied to regularity of equipment replacement or renewal, and expected construction duration.	N/A	Engineering/ CM Consultant	N/A	
Reporting	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction.	Monthly Construction Management report	Engineering/ CM Consultant	QA Manager; Contract Administrator; Field Engineer	\$240/hr - \$120/hr
Risk Management	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction.	Master Risk Register, as part of Monthly CM Report	Engineering/ CM Consultant	QA Manager; Contract Administrator	\$240/hr - \$180/hr
Schedule Review and Analysis	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction.	Contractor's schedule update with review comments, as part of Monthly CM Report	Engineering/ CM Consultant	Contract Administrator	\$240/hr - \$180/hr
Payment Application Review	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction.	Contractor's payment application with review comments and recommendation for payment, non-payment or partial payment, as part of CM Monthly Report	Engineering/ CM Consultant	Contract Administrator	\$240/hr - \$180/hr
Contractor Submittal and RFI Review	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks and expected number of submittals and RFIs.	Records of submitted, open and closed-out submittals and RFIs; Tracking sheet for Submittals and RFIs, as part of Monthly CM Report	Engineering/ CM Consultant	QA Manager; Field Engineer	\$240/hr - \$120/hr
Change Management	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and anticipated number of change orders based on project complexity.	Written analysis, opinion and recommendation for Contractor CORs; Tracking sheet for contract changes, as part of Monthly CM report	Engineering/ CM Consultant	Contract Administrator	\$240/hr - \$180/hr
Quality Assurance	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction. Includes estimated costs for lab testing.	Written, project-specific QA Plan; Documentation and records of QA implementation, as part of Monthly CM Report	Engineering/ CM Consultant	QA Manager; Field Engineer	\$240/hr - \$120/hr
Wildlife Monitoring and Revegetation Monitoring	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks, and planned regularity of tasks through the expected duration of construction	Field monitoring reports, as part of Monthly CM Report	Engineering/ CM Consultant	Environmental Monitor	\$180/hr - \$140/hr
Construction Documentation Report and Biological As-Built Report	Appropriate staff classifications and hourly rates, applied to estimated hours required to perform tasks.	Construction Documentation Report; Biological As-Built Report	Engineering/ CM Consultant	QA Manager; Field Engineer	\$240/hr - \$120/hr
Task 2.8 - Construction Activities					
Mobilization/Demobilization	Percentage of total Construction costs excluding Mob/Demob.	N/A	Construction Contractor	N/A	N/A
Traffic Control	Percentage of total Construction costs excluding mob/demob; traffic control; access and maintenance; erosion control.	N/A	Construction Contractor	N/A	N/A

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Access and Maintenance	Percentage of total Construction costs excluding mob/demob; traffic control; access and maintenance; erosion control.	N/A	Construction Contractor	N/A	N/A
Erosion Control	Percentage of total Construction costs excluding mob/demob; traffic control; access and maintenance; erosion control.	N/A	Construction Contractor	N/A	N/A
Tree Removal	Unit-price per tree, applied to known number of trees to be removed.	N/A	Construction Contractor	N/A	N/A
Foundation Dewatering	Hourly rate for dewatering pump, with assumptions on number of pumps and duration of dewatering required.	N/A	Construction Contractor	N/A	N/A
Clearing and Grubbing	Unit-price per acre, applied to calculated area required.	N/A	Construction Contractor	N/A	N/A
Stripping	Unit price per cubic yard inclusive of haulage and disposal, applied to calculated volume required.	N/A	Construction Contractor	N/A	N/A
Excavation removed from site	Unit price per cubic yard inclusive of haulage and disposal, applied to calculated volume required.	N/A	Construction Contractor	N/A	N/A
Excavation re-used for T-zone	Unit price per cubic yard inclusive of stockpiling, applied to calculated volume required.	N/A	Construction Contractor	N/A	N/A
Levee Embankment Fill	Unit price per cubic yard inclusive of purchase and haulage, applied to calculated volume required.	N/A	Construction Contractor	N/A	N/A
Transition Zone Fill	Unit price per cubic yard for placement only (sourced on-site), applied to calculated volume required.	N/A	Construction Contractor	N/A	N/A
Geogrid Reinforcement	Unit-price per square yard inclusive of purchase, delivery and placement, applied to calculated area required.	N/A	Construction Contractor	N/A	N/A
Water Control Structure	Unit price per structure inclusive of materials, delivery and construction, applied to number of structures required.	N/A	Construction Contractor	N/A	N/A
Demolition - Asphalt Bike Path	Unit-price per square yard inclusive of haulage and disposal, applied to calculated area required.	N/A	Construction Contractor	N/A	N/A
Asphalt Concrete Pavement	Unit-price per square yard inclusive of purchase, haulage and placement, applied to calculated area required.	N/A	Construction Contractor	N/A	N/A
Aggregate Surface	Unit price per cubic yard inclusive of purchase, haulage and placement, applied to calculated volume required.	N/A	Construction Contractor	N/A	N/A
Floodwall	Unit price per square foot inclusive of materials, delivery and installation, applied to calculated area required.	N/A	Construction Contractor	N/A	N/A
Flood Gates	Unit price per floodgate inclusive of purchase, delivery and installation, applied to number of floodgates required.	N/A	Construction Contractor	N/A	N/A

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Hydroseeding	Unit price per acre inclusive of purchase, delivery and application, applied to calculated are required.	N/A	Construction Contractor	N/A	N/A
Transition-Zone Re-Vegetation	Unit price per acre inclusive of purchase, delivery and installation, applied to calculated are required.	N/A	Construction Contractor	N/A	N/A
Oyster Shell Placement in Pond R3	Unit price per acre inclusive of purchase, delivery and placement, applied to calculated are required.	N/A	Construction Contractor	N/A	N/A