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**San Mateo County Flood & Sea Level Rise
Resiliency District
BOARD OF DIRECTORS**

County Supervisors:

District 3 Don Horsley
At-Large Dave Pine – **Chair**

City Representatives:

North Donna Colson
Central Diane Papan
South Lisa Gauthier
Coast Debbie Ruddock – **Vice Chair**
At-Large Marie Chuang

AGENDA

March 28, 2022

4:00 PM

1. Roll Call

2. Public Comment Persons wishing to address the Board on District-related matters not on this Agenda may speak for up to two minutes; comments on Agenda items shall be heard during that item for up to two minutes.

3. Action to Set the Agenda and Approve the Consent Agenda

- A. Adopt Resolution 2022-03-28 to continue conducting meetings of the Board of Directors remotely due to public health concerns caused by the COVID-19 pandemic
- B. Approve the Minutes of February 28, 2022 District Board meeting

4. Regular Business

- A. Authorize the Chief Executive Officer to execute a Master Service Agreement with Schaaf & Wheeler to complete data collection, 100% design, environmental compliance, and permitting for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project
- B. Authorize the Chief Executive Officer to execute Task Order Number 1 to the Master Service Agreement with Schaaf & Wheeler to complete data collection, 30% design, and a Draft Environmental Impact Report for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project

5. Chair's Report *

6. CEO's Report *

7. Board Member Reports and Items for a Future Agenda *

8. Adjournment

* There is no written staff report for this item

Meeting information, and public access and communications

- During the meeting, public comment can be submitted at the appropriate time via Zoom Chat or by raising your hand, speaking if joining by phone, or email to board@OneShoreline.org prior to 12:00 pm on the meeting day; please indicate the agenda item to which your comment applies and it will be read or summarized at the meeting by the Board Clerk.
- If you require assistance to participate in the meeting or wish to submit written communication to all Board Members regarding the meeting, please contact the Clerk of the Board by 9:00 am on the day of the meeting.
- Public records relating to an open session item on the agenda are available at least 72 hours prior to a Regular Board meeting or at least 24 hours prior to a Special Board meeting, when these records are distributed to Board members. Public records are available at the District office at 1700 South El Camino Real, Suite 502, San Mateo, CA 94402 and at OneShoreline.org. To receive these documents electronically, please email board@OneShoreline.org.

San Mateo County Flood and Sea Level Rise Resiliency District Agenda Report

Date: March 28, 2022
To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors
From: Len Materman, CEO
Subject: Continued remote meetings due to public health concerns caused by the COVID-19 pandemic

Recommendation

That the San Mateo County Flood and Sea Level Rise Resiliency District (“District”) Board of Directors (“Board”) adopt Resolution 2022-03-28 re-invoking the provisions of Assembly Bill 361 (“AB 361”), finding that the COVID-19 pandemic state of emergency continues to present imminent risks to the health or safety of attendees and continues to directly impact the ability of the Board to meet safely in person.

Background and Discussion

AB 361 sets forth remote meeting requirements and procedures for local legislative bodies during a proclaimed state of emergency. Specifically, AB 361 allows a local legislative body to continue holding remote meetings between October 1, 2021 and January 1, 2024 under the following circumstances:

- Automatically whenever the legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing; or
- When the legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees; or
- When the legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

Once the Board complies with AB 361, the following Brown Act rules for remote meetings are suspended: that the Board makes available a physical location to observe the meeting or to make a public comment, and each teleconference location has posted notices or agendas, is accessible to the public, and is identified by address on the agenda. In addition, the following procedures apply to the remote meetings:

- AB 361 forbids agencies from requiring public comment to be submitted in advance (for example via email) and requires an opportunity to address the public/Board in real-time.
- AB 361 regulates, for the first time, the rules and procedures for opening and closing a public comment period for agenda items. Specifically, a reasonable time for indicating a desire to comment (i.e., to use the “raise hand” feature in Zoom) must be provided.
- AB 361 prohibits agencies from taking action on agenda items when there is a disruption or technical failure on the agency’s end which prevents the public from making comments during the meeting until public access is restored, and creates a cause of action to challenge actions taken while access is unavailable.
- Notwithstanding Brown Act prohibitions on requiring attendees to register their names as a condition of meeting attendance, AB 361 expressly authorizes agencies to use third-party teleconference platforms that require registration (i.e., Zoom requiring an attendee to include their email).

At its meetings on October 25, 2021, November 15, 2021, December 13, 2021, January 24, 2022, and February 28, 2022, the Board adopted, by unanimous vote, resolutions finding that, as a result of the continuing COVID-19 state of emergency, meeting in person would present imminent risks to the health or safety of attendees.

The federal Centers for Disease Control and Prevention (“CDC”) advises that the Omicron variant, which was classified as a Variant of Concern in November 2021, spreads more easily than the original virus that causes COVID-19 and Delta variant. The CDC expects that anyone with Omicron can spread the virus to others, even if they are vaccinated or do not have symptoms. The presence and severity of symptoms can be affected by COVID-19 vaccination status, the presence of other health conditions, age, and history of prior infection.

While preliminary data suggest that Omicron may cause more mild disease than previous variants, some people may still have severe disease, need hospitalization, and could die from the infection. The CDC has warned that, even if only a small percentage of people with Omicron infection need hospitalization, the large volume of cases could overwhelm local healthcare systems. In addition, while masks are no longer required in most indoor settings, masking is still recommended, especially for gatherings that include the elderly, immunocompromised individuals, or people who are not vaccinated.

In summary, despite sustained efforts to impede its transmission, COVID-19 remains a significant public health hazard among both vaccinated and unvaccinated individuals and continues to spread. Thus, reducing the circumstances under which individuals come into close contact with each other indoors remains a vital component of the strategy to reduce the spread of COVID-19.

The Board found last month, and it continues to be the case, that indoor public meetings of the Board and its committees (collectively, “Legislative Bodies”) pose particularly high risks for transmission of COVID-19, as such meetings would bring together residents from across the county and the open nature of public meetings makes it difficult to enforce compliance with vaccination, physical distancing, masking, and other safety measures essential to enabling that all residents — including those who are unvaccinated or with compromised immune systems — can safely participate.

Therefore, it is recommended that the Board adopt a resolution reinvoking the provisions of AB 361 with findings to confirm that the Board has reconsidered the circumstances of the state of emergency caused by the spread of COVID-19; that the state of emergency caused by the spread of COVID-19 continues to directly impact the ability of the Legislative Bodies to meet safely in person; and that conducting in-person meetings at the present time would present an imminent risk to the health and safety of attendees. A resolution to that effect, which also directs staff to return within 30 days to afford the Board the opportunity to reconsider such findings, is included with this Report.

Impact on District Resources: There is no impact on District resources associated with this item.

Attachment: Draft Resolution 2022-03-28

DRAFT RESOLUTION NO. 2022-03-28

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE
SAN MATEO COUNTY FLOOD AND SEA LEVEL RISE RESILIENCY DISTRICT
REINVOKING THE PROVISIONS OF ASSEMBLY BILL 361, FINDING THAT THE COVID-19
PANDEMIC STATE OF EMERGENCY CONTINUES TO PRESENT IMMINENT RISKS
TO THE HEALTH OR SAFETY OF ATTENDEES AND CONTINUES TO DIRECTLY IMPACT
THE ABILITY OF THE BOARD OF DIRECTORS TO MEET SAFELY IN PERSON**

RESOLVED by the Board of Directors (“Board”) of the San Mateo County Flood and Sea Level Rise Resiliency District (“District”) that:

WHEREAS, on March 4, 2020, pursuant to Government Code Section 8550, *et seq.*, Governor Newsom proclaimed a state of emergency related to the COVID-19 novel coronavirus (“COVID-19”) and, subsequently, the San Mateo County Board of Supervisors declared a local emergency related to COVID-19, and the proclamation by the Governor and declaration by the Board of Supervisors remain in effect; and

WHEREAS, on March 17, 2020, Governor Newsom issued Executive Order N-29-20, which suspended certain provisions in the California Open Meeting Law, codified at Government Code Section 54950, *et seq.* (the “Brown Act”), related to teleconferencing by local agency legislative bodies, provided that certain requirements were met and followed; and

WHEREAS, on June 11, 2021, the Governor issued Executive Order N-08-21, which extended certain provisions of Executive Order N-29-20 that waive otherwise applicable Brown Act requirements related to remote/teleconference meetings by local agency legislative bodies through September 30, 2021; and

WHEREAS, on September 16, 2021, Governor Newsom signed into law Assembly Bill 361 (“AB 361”) which provides that a local agency legislative body may continue to meet remotely without complying with otherwise applicable requirements in the Brown Act related to remote/teleconference meetings, provided that a state of emergency has been proclaimed and the legislative body determines that meeting in person would present imminent risks to the health or safety of attendees; and

WHEREAS, on November 30, 2021, the Omicron variant of COVID-19 was classified as a Variant of Concern in the United States; and

WHEREAS, the Centers for Disease Control and Prevention (“CDC”) advises that the Omicron variant spreads more easily than the original virus that causes COVID-19 and Delta variant, and expects that anyone with Omicron can spread the virus to others, even if they are vaccinated or do not have symptoms; and

WHEREAS, the presence and severity of symptoms can be affected by COVID-19 vaccination status, the presence of other health conditions, age, and history of prior infection; and

WHEREAS, while preliminary data suggest that Omicron may cause more mild disease than previous variants, some people may still have severe disease, need hospitalization, and could die from the infection, and the CDC has warned that, even if only a small percentage of people with Omicron infection need hospitalization, the large volume of cases could overwhelm local healthcare systems; and

WHEREAS, while masks are no longer required in most indoor settings, masking is still recommended, especially for gatherings that include the elderly, immunocompromised individuals, or people who are not vaccinated. and

WHEREAS, the District Board has an important interest in protecting the health and safety of those who participate in its meetings; and

WHEREAS, the COVID-19 pandemic has informed legislative bodies about the unique advantages of remote public meetings, as well as the unique challenges, which are frequently surmountable; and

WHEREAS, at its meetings on October 25, 2021, November 15, 2021, December 13, 2021, January 24, 2022, and February 28, 2022, the Board adopted, by unanimous vote, resolutions finding that, as a result of the continuing COVID-19 state of emergency, meeting in person would present imminent risks to the health or safety of attendees; and

WHEREAS, this Board has reconsidered the circumstances of the state of emergency and finds that the state of emergency continues to impact the ability of the Board to conduct its meetings in person because there is a continuing threat of COVID-19 to the community and that in-person meetings of the Board and its committees (collectively, "Legislative Bodies") pose risks to the health or safety of participants through person-to-person contact and make it difficult for those who are immuno-compromised or unvaccinated to be able to safely participate, and it is challenging to ascertain and ensure compliance with vaccination and other safety recommendations at such meetings; and

WHEREAS, in the interest of public health and safety, as affected by the state of emergency caused by the spread of COVID-19, the Board finds that this state of emergency continues to directly impact the ability of the Legislative Bodies to meet safely in person and that meeting in person would present imminent risks to the health or safety of attendees, and the Board will therefore reinvoke the provisions of AB 361 related to teleconferencing for meetings of the Legislative Bodies.

NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED that:

1. The above recitals are true and correct.
2. The Board has reconsidered the circumstances of the state of emergency caused by the spread of COVID-19.
3. The Board reinvoles the provisions of AB 361 and finds that the state of emergency caused by the spread of COVID-19 continues to directly impact the ability of the Legislative Bodies to meet safely in person.
4. The Board further finds that meeting in person would continue to present imminent risks to the health or safety of meeting attendees and directs staff to continue to agendize public meetings of the Legislative Bodies only as online teleconference/remote meetings.
5. Staff is directed to return to the Board in a public meeting no later than 30 days after the date of adoption of this resolution with an item for the Board to reconsider whether to make the findings required by AB 361 to continue meeting remotely under its provisions.

PASSED AND ADOPTED this 28th day of March 2022, by the following vote:

AYES:

NOES:

ABSENT:

ATTEST:

APPROVED:

Clerk of the Board of Directors

Chair of the Board of Directors

SAN MATEO COUNTY
FLOOD AND SEA LEVEL RISE RESILIENCY DISTRICT
Board of Directors meeting held remotely via Zoom
February 28, 2022
DRAFT - MINUTES

AGENDA ITEM 3B

1. Roll Call

Chair Dave Pine called the meeting to order at 4:01 p.m. via Zoom video conference software. Interim Clerk of the Board Sukhmani Purewal took the roll call.

Directors Present:

Marie Chuang, Representing At Large
Donna Colson, Representing Northern San Mateo County cities
Lisa Gauthier, Representing Southern San Mateo County cities
Don Horsley, Representing Board of Supervisors, District 3
Debbie Ruddock, Representing Pacific Coastside San Mateo County Cities (Vice Chair)
Dave Pine, Representing Board of Supervisors, At Large (Chair)

Director(s) Absent: Diane Papan, Representing Central San Mateo County cities

Staff Present:

Len Materman, Chief Executive Officer
Brian Kulich, Esq., Legal Counsel
Colin Martorana, Project Manager
Lucy Dong, Finance Manager
Makena Wong, Associate Project Manager
Sukhmani Purewal, Interim Clerk of the Board

2. Public Comment

None

3. Action to Set the Agenda and Approval the Consent Agenda

- A. Adopt Resolution 2022-02-28 to continue conducting meetings of the Board of Directors remotely due to public health concerns caused by the COVID-19 pandemic.
- B. Approve the Minutes of December 13, 2021 and January 24, 2022 District Board meetings.
- C. Approve the appointment of members to the Colma Creek Citizens Advisory Committee.

Motion made by Director Ruddock and seconded by Director Gauthier to set the agenda and approve consent agenda:

Ayes: Chuang, Colson, Gauthier, Horsley, Ruddock, and Pine

Noes: None

Absent: Papan

Vote: 6-0-1

4. Regular Business

- A. Discuss and take action to elect Board officers; confirm, establish, and appoint members to Board committees; and appoint Board members to outside agencies.

Motion made by Director Colson and seconded by Director Chuang to reappoint Director Dave Pine as Chair and Director Debbie Ruddock as Vice Chair:

Ayes: Chuang, Colson, Gauthier, Horsley, Ruddock, and Pine

Noes: None

Absent: Papan

Vote: 6-0-1

Motion made by Director Colson and seconded by Director Chuang to approve the following appointments and reappointments on various Board committees:

Finance (*standing*) – Donna Colson, Lisa Gauthier, and Marie Chuang

Strategic Planning (*ad hoc*) – Dave Pine, Don Horsley, and Diane Papan

Personnel (*ad hoc*) – Dave Pine, Donna Colson, and Marie Chuang

Government Affairs (*ad hoc*) – Debbie Ruddock, Don Horsley, and Lisa Gauthier

Ayes: Chuang, Colson, Gauthier, Horsley, Ruddock, and Pine

Noes: None

Absent: Papan

Vote: 6-0-1

Motion made by Director Pine and seconded by Director Horsley to reappoint Director Lisa Gauthier to serve as a director of the ACWA JPIA and District Finance Manager Lucy Dong to serve as alternate ACWA JPIA director:

Ayes: Chuang, Colson, Gauthier, Horsley, Ruddock, and Pine

Noes: None

Absent: Papan

Vote: 6-0-1

Public Speaker(s): None

- B. Approve an amendment to the Fiscal Year 2021-22 Flood Zones Budget to fund the construction of the San Bruno Creek Emergency Tide Gate Repair Project

Director Diane Papan joined the virtual meeting at 4:18 p.m.

Len Materman mentioned that in October 2021, County staff observed that two of the four flap gates that reduce the flow of Bay water into San Bruno Creek had detached from the tide gate and in November 2021, it was observed a third flap gate detached.

With the support from the County, the District filed a CEQA Notice of Exemption and received all necessary emergency permits from regulatory agencies.

Damage observed in the fall of 2021 to the tide gate at the mouth of San Bruno Creek necessitates a time-sensitive \$825,000 repair and amendment to the FY2021-22 Budget for that Creek's Flood Zone.

A portion of the repair costs would be covered by the Agreement's allowance of \$500,000 for one-time emergency response; the remaining approximately \$325,000 cost would fall under the annual \$2.2 million authorized for County work in the Flood Zones this fiscal year.

Other speakers on this item: Chair Pine, Director Horsley, Director Ruddock, Associate Project Manager Makena Wong

Public Speaker(s): Michael Barber

Motion made by Director Horsley and seconded by Director Ruddock to approve the amendment:

Ayes: Chuang, Colson, Gauthier, Horsley, Ruddock, Papan, and Pine

Noes: None

Absent: None

Vote: 7-0-0

5. **Chair's Report**

None

Public Speaker(s): None

6. **CEO's Report**

Mr. Len Materman provided a report on the following:

- Bayfront Canal and Atherton Channel Project, including approved construction change orders (CO):
 - Since the Jan 24 Board meeting, three change orders were approved: West Bay Sanitary District pipeline protection for \$37,061.11; Emergency access route stabilization to RWC's tide gates (preceding the Oct 24 storm) for \$2,163.75, and repairs to the Bedwell Bayfront Park temporary entrance gate for \$913.50. As of February 28, 2022, the remaining contingency for Bayfront Canal and Atherton Channel Project is \$125,269.
- OneShoreline is currently conducting interview for 3 opportunities: Associate/Project Manager; Consultant team for design and CEQA of the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project; and Stanford graduate student fellowship(s) titled "Advancing Policy Frameworks and Technical Analysis".

Other speakers on this item: Director Papan

Public Speaker(s): None

7. **Board Members Reports and Items for a Future Agenda***

None

8. **Adjournment**

The meeting adjourned at 4:36 p.m.

San Mateo County Flood and Sea Level Rise Resiliency District
Agenda Report

Date: March 28, 2022
To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors
From: Len Materman, Chief Executive Officer (CEO)
Subject: Authorize the CEO to execute a Master Service Agreement with Schaaf & Wheeler to complete data collection, 100% design, environmental compliance, and permitting for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project

Recommendation:

That the San Mateo County Flood and Sea Level Rise Resiliency District (“District”) Board of Directors (“Board”) authorize the District CEO to execute a Master Service Agreement with Schaaf & Wheeler Consulting Civil Engineers (“S&W”) to complete data collection, 100% design, environmental compliance, and permitting for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project (Project), the District’s first regional sea level rise protection project.

Background and Discussion:

The urbanized San Francisco Bay shoreline area in the cities of Millbrae and Burlingame is vulnerable to flooding and sea level rise, threatening several billion dollars’ worth of regionally-significant assets, including major electrical distribution and water treatment facilities, U.S. Highway 101 and regional public transit (BART and Caltrain), major corporate sites, local businesses, and homes. Leveraging recently-completed sea level rise studies by each city, and the Shoreline Protection Program of San Francisco International Airport (SFO), the District is leading the Project to protect each city against a Bay water elevation equal to the FEMA 100-year flood with approximately 6 feet of sea level rise, which is approximately 10 feet above today’s high tide and connect to SFO’s efforts. The Project will prioritize nature-based solutions where possible, and seek to close gaps in the San Francisco Bay Trail and generally enhance public access and connectivity.

In mid-January of this year, the District released a Request for Proposals for the Project and in early March interviewed three consultant teams. The interview panel, which included senior staff from Millbrae and Burlingame, unanimously selected S&W based on many factors, including the high quality of the proposal, alignment with District objectives, experience of the staff proposed to be assigned to the Project, and the proposed Project cost.

A Master Service Agreement (MSA) with subsequent Task Orders is proposed as the contractual vehicle for S&W to provide services to the District for the Project. No work under the MSA shall commence or be billable to the District on any task without prior written authorization from the District by way of a Task Order executed by the District CEO, as authorized by the District Board. Project work conducted under the MSA will be undertaken in multiple Task Orders, starting with Task Order Number 1. This Board Agenda Item seeks District Board authorization for the District CEO to execute the MSA, while the next Agenda Item (4B) does the same for Task Order Number 1. As the Project progresses, the CEO will return to the Board to seek approval and authorization to execute subsequent Task Orders.

The MSA provides a master scope of services for the following primary tasks: project management; data collection; engineering to evaluate Project alternatives for feasibility; development of design documents; completion of construction documents suitable for public bid; environmental clearance under California Environmental Quality Act (CEQA) and potentially the National Environmental Policy Act (NEPA); and the development of permit applications to State and federal regulatory agencies. Since the Project is funded in part by a State grant to the District administered by the State Coastal Conservancy (SCC), the MSA also includes all applicable SCC grant requirements, including a term that ends in March 2026, in line with the SCC grant’s four-year term. The not-to-exceed amount of the MSA is \$10,145,000.

The District CEO will provide regular updates to the Board on the progress of work under this MSA, which is one of the largest sea level rise projects in California and is the District’s first regional sea level rise protection project that can serve as a model for the many areas with similar challenges.

Fiscal Impact on District Resources:

The not-to-exceed amount of \$10,145,000 for this MSA represents the most conservative estimate to complete 100% design, CEQA compliance, and permitting for the Project. The actual amount to complete these tasks will become much clearer during the process of identifying and defining the Project's preferred alternative, a key element of the first Task Order (described in the next Agenda Item). While, at this time, we believe it is likely that the final number under the MSA will be less than the not-to-exceed amount, it will exceed the \$4 million in SCC funding that the Board has authorized for this project at the January 24, 2022 meeting. Once the gap in funding between the final MSA amount and \$4 million becomes known, OneShoreline staff will work with Millbrae, Burlingame, SFO, and other agencies and asset owners benefitting from the Project to close funding gaps through cost-sharing agreements, grants, and other sources.

In addition to costs associated with Project consultants, the Project will demand substantial District staff time. The financial costs associated with District staff are budgeted in the approved FY 2021-22 Budget and will be included in future fiscal year budgets, including the FY 2022-23 Budget that will be proposed to the Board in June 2022.

Attachment:

Draft Master Service Agreement with Schaaf & Wheeler Consulting Civil Engineers for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project

**DRAFT MASTER SERVICE AGREEMENT
BETWEEN THE
SAN MATEO COUNTY FLOOD AND SEA LEVEL RISE RESILIENCY DISTRICT
AND SCHAAF & WHEELER CONSULTING CIVIL ENGINEERS
FOR THE
MILLBRAE AND BURLINGAME SHORELINE AREA
PROTECTION AND ENHANCEMENT PROJECT**

This MASTER SERVICE AGREEMENT (MSA) is entered into by and between the San Mateo County Flood and Sea Level Rise Resiliency District, an independent special district (“District”), and Schaaf & Wheeler Consulting Civil Engineers (“Consultant”) (together, the “Parties”) on April 1, 2022.

Recitals

WHEREAS, pursuant to the San Mateo County Flood Control District Act, as amended in 2019 by Assembly Bill 825, District may contract with independent contractors for the furnishing of services to or for District; and

WHEREAS, District has advertised publicly the availability of a contract and seeks the services of a consultant to perform tasks related to the evaluation, feasibility, design, environmental documentation, and permitting of the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project (Project), which is intended to provide protection against flooding and sea level rise and enable ecosystem restoration and recreational enhancements in San Mateo County, CA, along San Francisco Bay in the Cities of Millbrae and Burlingame; and

WHEREAS, District desires to utilize the services of Consultant as an independent contractor to provide services as described herein and subject to the required authorization set forth in this MSA, and Consultant represents that it is fully qualified to perform such services by virtue of its experience and the training, education and expertise of its principals and employees; and

WHEREAS, this MSA provides for a contractual vehicle for services to be provided to District by Consultant; and

WHEREAS, Consultant has provided a Master Scope of Services (Exhibit A) organized by task, in order to complete the work contemplated by this MSA; and

WHEREAS, no work under this MSA by Consultant shall commence or be billable to District on any task without prior written authorization by District by way of a Task Order approved by the District CEO, as authorized by the Board of Directors of the District, and issued to Consultant by way of a Notice to Proceed signed by the District CEO or their designee(s).

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. **Exhibits.** The following exhibits are attached to this MSA and incorporated by this reference:

- Exhibit A—Master Scope of Services
- Exhibit B—Payments and Rates
- Exhibit C—State Coastal Conservancy Requirements

2. **Services.** In consideration of the payments set forth in each Task Order, Consultant shall perform services for District in accordance with the terms, conditions, and specifications set forth in this MSA and in Exhibit A. No work for any task within Exhibit A by Consultant shall commence or be billable

to District without prior written authorization by District by way of a Task Order approved by the District CEO, as authorized by the Board of Directors of the District.

3. Payments. In consideration of the services provided by Consultant in accordance with all terms set forth in this MSA and in Exhibit A, District shall make payment to Consultant based on the rates and in the manner specified in Exhibit B. District reserves the right to withhold payment if District determines that the quantity or quality of the work performed by Consultant is unacceptable. In no event shall District's total fiscal obligation under this MSA exceed \$10,145,000. In the event that District makes any advance payments, Consultant agrees to refund any amounts in excess of the amount owed by District at the time of contract termination or expiration. Consultant is not entitled to payment for services not performed as required by this MSA.

4. Term. Subject to compliance with all terms and conditions, the term of this MSA shall be from April 1, 2022 to March 31, 2026.

5. Time of Performance. The services shall be performed on a timely, regular basis in accordance with the Schedule set forth in each Task Order issued by District.

6. State Coastal Conservancy Requirements. Since the Project is funded in part by an allocation to District administered by the State Coastal Conservancy (Conservancy), Consultant shall comply with all applicable Conservancy grant requirements, including any future grant agreement(s) with the Conservancy for the Project and any amendments thereto. Such current requirements are set forth in Exhibit C, which may be updated to comply with any changes to Conservancy grant requirements. In the event of a conflict between the terms of this MSA and the terms of Exhibit C, the terms of Exhibit C shall prevail.

7. Standard of Care. As a material inducement to District to enter into this MSA, Consultant hereby represents that it has the qualifications and experience necessary to undertake the services to be provided pursuant to this MSA, and will perform the services to a standard of reasonable professional care, for similar services on similar projects of like size and nature performed.

8. Standard of Performance. Consultant shall perform all work under this MSA and any/all Task Orders to all recognized applicable professional standards and pursuant to the above stated Standard of Care. Consultant hereby represents and covenants that it shall follow the professional standards used by a competent practitioner in performing all services required hereunder.

9. Termination.

(a) This MSA may be terminated by Consultant or by District at any time without a requirement of good cause upon thirty (30) days' advance written notice to the other party. Subject to availability of funding, Consultant shall be entitled to receive payment for services provided prior to termination of the MSA. Such payment shall be that prorated portion of the full payment determined by comparing the services actually completed to the services required by the MSA.

(b) District may terminate this MSA or a portion of the services referenced in Exhibit A based upon the unavailability of Federal, State, or other outside funds by providing written notice to Consultant as soon as is reasonably possible after District learns of said unavailability of outside funding.

(c) District may also terminate this MSA for cause, which is separate from the ability to terminate without cause as described above. In order to terminate for cause, District must first give Consultant notice of the alleged breach. Consultant shall then have 10 calendar days after receipt of such notice to cure the alleged breach. If Consultant fails to cure the breach within this period, District may immediately terminate this MSA without further action. In the event that District provides notice of an alleged breach pursuant to this section, District may, in extreme circumstances, immediately suspend performance of services and payment under this MSA pending the resolution of the process described in this paragraph. District has sole discretion

to determine what constitutes an extreme circumstance for purposes of this paragraph, and District shall use reasonable judgment in making that determination.

10. Suspension. District may, in writing, order Consultant to suspend all or any part of the Consultant's services under this MSA for the convenience of District or for work stoppages beyond the control of District or Consultant. Subject to the provisions of this MSA relating to termination, a suspension of the work does not void this MSA. In the event that work is suspended for a period exceeding 120 days, the schedule and cost for completion of the work will be adjusted by mutual consent of the Parties.

11. Contract Materials. Upon expiration or termination of this MSA, all finished or unfinished work products, documents, data, studies, maps, photographs, and other materials and efforts conducted by Consultant under this MSA shall become the property of District and shall be promptly delivered to District.

12. Relationship of Parties. Consultant agrees and understands that the work/services performed under this MSA are performed as an independent contractor and not as an employee of District and that neither Consultant nor its employees acquire any of the rights, privileges, powers, or advantages of District employees.

13. Hold Harmless. Consultant shall indemnify and hold harmless District and its officers, agents, employees, and servants from and against any and all claims, suits, or actions of every name, kind, and description resulting from this MSA, the performance of any work or services required of Consultant under this MSA, or payments made pursuant to this MSA brought for or on account of: (a) injuries to or death of any person, including Consultant or its employees/officers/agents; (b) damage to any property of any kind whatsoever and to whomsoever belonging; and/or (c) any other loss or cost, including, without limitation, that caused by the concurrent active or passive negligence of District and/or its officers, agents, employees, or servants. However, Consultant's duty to indemnify and hold harmless under this Section 8 shall not apply to injuries or damage for which District has been found in a court of competent jurisdiction to be solely liable by reason of its own negligence or willful misconduct. The duty of Consultant to indemnify and hold harmless as set forth by this Section shall continue after termination of the MSA and shall include the duty to defend as set forth in Civil Code Section 2778.

14. Assignability and Subcontracting. Consultant shall not assign this MSA nor any portion of it to a third party or subcontract with a third party to provide services required by Consultant under this MSA without the prior written consent of District. Any such assignment or subcontract without District's prior written consent shall give District the right to automatically and immediately terminate this MSA without penalty or advance notice.

15. Payment of Permits/Licenses. Consultant bears responsibility to obtain any license, permit, or approval required from any agency for services to be performed under this MSA at Consultant's own expense prior to commencement of said services. Failure to do so will result in forfeit of any right to compensation under this MSA.

16. Insurance.

(a) Consultant shall not commence work under this MSA until all insurance required under this Section has been obtained and such insurance has been approved by District. Consultant shall furnish District with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending Consultant's coverage to include the contractual liability assumed by Consultant pursuant to this MSA. These certificates shall specify or be endorsed to provide that thirty (30) days' notice must be given, in writing, to District of any pending change in the limits of liability or of any cancellation or modification of the policy.

(b) During the term of this MSA, Consultant shall have in effect workers' compensation and employer's liability insurance providing full statutory coverage, as required by Section 1861 and Section 3700 of the California Labor Code.

(c) During the term of this MSA, Consultant shall take out and maintain such bodily injury liability and property damage liability insurance as shall protect Consultant and all of its employees/officers/agents while performing work covered by this MSA from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage which may arise from Consultant's operations under this MSA, whether such operations be by Consultant, any subcontractor, anyone directly or indirectly employed by either of them, or an agent of either of them. Such insurance shall be combined single limit bodily injury and property damage for each occurrence and shall not be less than the amounts specified below:

Comprehensive General Liability..... \$2,000,000

Motor Vehicle Liability Insurance..... \$1,000,000

Professional Liability..... \$1,000,000

District and its officers, agents, employees, and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that (i) the insurance afforded thereby to District and its officers, agents, employees, and servants shall be primary insurance to the full limits of liability of the policy and (ii) if District or its officers, agents, employees, and servants have other insurance against the loss covered by such a policy, such other insurance shall be excess insurance only.

(d) In the event of the breach of any provision of this Section, including receipt of a notice indicating required insurance coverage will be diminished or cancelled, notwithstanding any other provision of this MSA to the contrary, District may immediately declare a material breach of this MSA and suspend all further work and payment pursuant to this MSA.

17. Compliance With Laws.

(a) All services to be performed by Consultant pursuant to this MSA shall be performed in accordance with all applicable laws, ordinances, and regulations, including, without limitation: the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Federal Regulations promulgated thereunder; the Americans with Disabilities Act of 1990, as amended, and the nondiscrimination requirements of 41 C.F.R. 60-741.5(a); if applicable, Section 504 of the Rehabilitation Act of 1973; and all other applicable Federal, State, and/or local laws prohibiting discrimination on the basis of race, color, national origin, ancestry, age, disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy), medical condition (cancer-related), military service, or genetic information; all applicable equal opportunity laws and requirements; and all applicable equal benefits laws and requirements, including, without limitation, laws prohibiting discrimination in the provision of equal benefits on the basis that the spouse or domestic partner of the Consultant's employee is of the same or opposite sex as the employee.

(b) All services to be performed by Consultant under this MSA shall also be performed in accordance with all applicable laws, ordinances and regulations, including, without limitation, appropriate licensure, certification regulations, provisions pertaining to confidentiality of records, and applicable quality assurance regulations. In the event of a conflict between the terms of this MSA and any applicable law or regulation, the requirements of the applicable law or regulation will take precedence over the requirements set forth in this MSA.

(c) Consultant shall timely and accurately complete, sign, and submit all necessary documentation evidencing compliance with the requirements of this Section 17. In addition, Consultant certifies that no finding of discrimination has been issued against Consultant in the past 365 days by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other investigative entity. If any such finding(s) of discrimination have been issued against Consultant within the past 365 days, Consultant shall provide District with a written explanation of the outcome(s) or remedy for the discrimination prior to execution of this MSA. Consultant shall also report to District's Chief Executive Officer ("CEO") the filing in any court or with any administrative agency of any complaint or allegation of discrimination on any of the bases prohibited by this Section 17 within 30 days of such filing, unless the complaint or allegation is dismissed within such 30 days. The report shall include a general description of the circumstances involved and a general description of the kind of discrimination alleged (for example, gender-, sexual orientation-, religion-, or race-based discrimination).

(d) Violation of and/or failure to comply with the provisions of this Section 17 shall be considered a material breach of the MSA, subjecting the MSA to immediate termination at the sole option of District and subjecting Consultant to penalties, disqualification from being considered for or being awarded a District contract for up to 3 years, and/or other sanctions.

18. Retention of Records; Right to Monitor and Audit.

(a) Consultant shall maintain all required records relating to services provided under this MSA for three (3) years after District makes final payment and all other pending matters are closed, and Consultant shall be subject to the examination and/or audit by a Federal grantor agency, the State and/or District.

(b) Consultant shall comply with all program and fiscal reporting requirements set forth by all applicable Federal, State, and local agencies and as required by District.

(c) Consultant agrees upon reasonable notice to provide to District or its authorized representative, to any Federal or State department having monitoring or review authority, and/or to any of their respective audit agencies access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules, and regulations, to determine compliance with this MSA, and to evaluate the quality, appropriateness, and timeliness of services performed.

19. Merger Clause; Amendments. This MSA, including all Exhibits and other attachments incorporated by reference, constitutes the sole MSA of the Parties and correctly states the rights, duties, and obligations of each party as of this document's date. In the event that any term, condition, provision, requirement, or specification set forth in the body of this MSA conflicts with or is inconsistent with any term, condition, provision, requirement, or specification in any Exhibit and/or other attachment, the provisions of the body of the MSA shall prevail. Any prior MSA, promises, negotiations, or representations between the Parties not expressly stated in this MSA are not binding. All subsequent modifications or amendments of the MSA shall be in writing and signed by the Parties.

20. Controlling Law; Venue. The validity of this MSA and of its terms, the rights and duties of the Parties, the interpretation of this MSA, the performance of this MSA, and any other dispute of any nature arising out of this MSA shall be governed by the laws of the State of California without regard to its choice of law or conflict of law rules. Any dispute arising out of this MSA shall be venued either in the San Mateo County Superior Court or in the United States District Court for the Northern District of California.

21. Notices. Any notice, request, demand, or other communication required or permitted under this MSA shall be deemed to be properly given when both: (a) transmitted via email to the email address listed below; and (b) sent to the physical address listed below by either being deposited in the United

States mail, postage prepaid, or deposited for overnight delivery, charges prepaid, with an established overnight courier that provides a tracking number showing confirmation of receipt.

In the case of District, to:

Name/Title: Makena Wong, Associate Project Manager
Address: 1700 South El Camino Real, Suite 502, San Mateo, CA 94402
Telephone: 650-272-7684
Email: mwong@OneShoreline.org

In the case of Consultant, to:

Name/Title: Charles D. Anderson, P.E. / President
Address: 4699 Old Ironsides Drive, Suite 350
Telephone: 408-246-4848
Email: canderson@swwsv.com

22. Confidentiality. Consultant, in the course of its duties, may have access to financial, accounting, statistical, and personal data of private individuals and employees of District. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this MSA are deemed confidential and shall not be disclosed by Consultant without written authorization by District. District shall grant such authorization if disclosure is required by law. Upon request, all District data shall be returned to District upon the termination of this MSA. Consultant's covenant under this Section 22 shall survive the termination of this MSA. It is hereby agreed that the following information is not considered to be confidential under this MSA:

- a. Information already in the public domain;
- b. Information disclosed to Consultant by a third party who is not under a confidentiality obligation;
- c. Information developed by or in the custody of Consultant before entering into this MSA;
- d. Information developed by Consultant through its work with other clients; and
- e. Information required to be disclosed by law or regulation, including, but not limited to, statute, subpoena, court order, or administrative order.

23. Non-Waiver of Terms, Rights and Remedies. Waiver by either party of any one or more of the conditions of performance under this MSA shall not be a waiver of any other condition of performance under this MSA. In no event shall the making by District of any payment to Consultant constitute or be construed as a waiver by District of any breach of this MSA, or any default which may then exist on the part of Consultant, and the making of any such payment by District shall in no way impair or prejudice any right or remedy available to District with regard to such breach or default.

24. Electronic Signatures. The Parties wish to permit this MSA and future documents relating to this MSA to be digitally signed in accordance with California law.

25. Payment of Permits/Licenses. Consultant bears responsibility to obtain any license, permit, or approval required from any agency for services to be performed under this MSA at Consultant's own expense prior to commencement of said services. Failure to do so will result in forfeit of any right to compensation under this MSA.

In witness of and in MSA with this MSA's terms and conditions, the Parties, by their duly authorized representatives, affix their respective signatures:

For Consultant, Schaaf & Wheeler Consulting Civil Engineers:

Consultant Signature Consultant Name (Print) Date

For District:

Len Materman Date
Chief Executive Officer

Exhibit A – Master Scope of Services

In consideration of the payments set forth in each Task Order, Consultant shall perform the services described below for District in accordance with the terms, conditions, and specifications set forth in this MSA.

No work for any task within Exhibit A by Consultant shall commence or be billable to District without prior written authorization by District by way of a Task Order approved by the District CEO, as authorized by the Board of Directors of the District. Additional services outside of those described herein must be authorized by the District's representative in writing prior to the commencement of that work.

Scope of Services (or "Scope of Work")

The following listed tasks will be completed as part of the Master Services Agreement (MSA).

Task 1: Project Management

Consultant will provide project management services during the term of the MSA. This subtask includes managing subconsultants, managing the Consultant team, monitoring project budgets and schedules, providing status updates to relevant steering groups, and maintaining a document tracking system to the satisfaction of the District. Key project staff will be available for telephone consultation and team meetings (including virtual, in person, or field review meetings) throughout the duration of the MSA on significant issues (or potential deviations) related to the project schedule, work plan, or fees.

Task 1.1: Prepare Schedule and Work Plan

Consultant will prepare a draft and final project work plan, including a QA/QC developed using widely accessible scheduling software. Consultant will refine the work plan and schedule based on District comments. Consultant will meet with the District Project Manager to finalize the scope of services, budget and baseline for the project schedule.

Consultant will update the project schedule monthly and e-mail the update to the District Project Manager. Throughout the project, Consultant will coordinate with the District Project Manager and staff on all aspects of the work.

Consultant will develop a master list of project deliverables, in collaboration with the District Project Manager. This list will map out the timing of each deliverable, including submittals, review, finalization, and identify critical paths.

Deliverables

1. Detailed Project Work Plan, Schedule, and Scope in an electronic format approved by District.
2. Master List of Deliverables

Task 1.2: Prepare Invoices, Progress Reports and Scheduling Revisions

Consultant will submit monthly invoices with activities and milestones, progress reports, and project schedule reports. These documents and their content will be prepared in an agreed-upon format between Consultant and District.

Deliverables

1. Monthly invoices, status reports, and project schedule updates.

Task 1.3: Attend Project Management Meetings

Consultant will attend monthly project management meetings with District. Consultant will prepare the meeting agendas and action items in consultation with the District Project Manager. These meetings will be conducted remotely until circumstances allow for in-person meetings at the District office in San Mateo.

Deliverables

1. Monthly Project Management meeting preparation materials
2. Monthly Project Management meeting agendas
3. Summary of meeting action items

Task 1.4: Attend Meetings with Project Partners

Relevant project partners will be engaged throughout the project planning and design process, including city managers, public works directors, and city staff from the Cities of Millbrae and Burlingame. These partners will convene quarterly to receive updates and give input on key project milestones. Consultant will attend these meetings and will prepare the meeting agendas and action items in consultation with the District Project Manager. These meetings will be conducted remotely until circumstances allow for in-person meetings at the District office in San Mateo.

Deliverables

1. Quarterly Project Partner meeting preparation materials
2. Meeting summary notes

Task 1.5: Presentation Support at Key Meetings (Optional)

Consultant will support District and the Cities of Millbrae and Burlingame on preparing materials for potential presentations on a quarterly basis, including City Council meetings, public workshops, or meetings with key property owners. A total of six such meetings is anticipated over the duration of Task Order No. 1. Additional meeting support can be provided as an optional service upon request.

Deliverable

1. Meeting Presentation Materials, as requested

Task 2: Data Gathering

Consultant will work with District, the Cities of Millbrae and Burlingame, and other project partners to identify and gather relevant and readily available existing information for the Project and Project sites. After existing work has been reviewed and synthesized, Consultant will collect information needed to close key data gaps and begin design and environmental clearances.

Task 2.1: Identify, Gather, and Review Existing Information

Consultant will work with District to identify, gather, and review relevant background information for the Project and Project sites. Such information may include, but is not limited to: existing engineering data/studies for the Project area, including elevation and land surveys, hydrologic and hydraulic studies, groundwater studies, and geotechnical data; biological or cultural resource studies, as well as mapping, reports and documentation of special status species in the vicinity of the Project site; planning documents by the affected jurisdiction(s), including relevant General Plans, Project Plans and/or Master Plans; additional hazards and hazardous materials assessments for the Project area; and CEQA documents for similar projects and/or geographies.

Consultant will gather data that analyzes environmental conditions, focusing on relevant environmental statutes and regulations that include, but are not limited to: CEQA, NEPA, the Migratory Bird Treaty Act, state and federal Endangered Species Acts, Clean Air Act, Clean Water Act, Porter-Cologne Act, California Fish and Game Code, cultural and archaeological statutes, noise ordinances, and traffic laws.

Deliverable

1. Digital folder with an organized file structure of all background information identified

Task 2.2: Field and Desktop Investigations

Consultant will conduct field and desktop investigations to fill key data gaps to develop basis of information for further detailed study and design.

Task 2.2.1: Elevation Surveys

Consultant will complete an aerial survey of the Project area, including offshore and landward as necessary to encompass the limits of potential Project impact. This survey will be suitable for preparing construction document level planimetrics, ground elevations and contours, and offshore bathymetry. Consultant will:

- Provide horizontal and vertical control to State Plane Coordinate System and NAVD88, respectively
- Schedule flight(s) for low tide and best daylight hours
- Schedule flight(s) with San Francisco International Airport
- Furnish point cloud data set
- Reduce point cloud data set into digital mapping appropriate for plan sheets

Task 2.2.2: Transect Surveys

Consultant will complete field transects at approximately 1,000-foot-spacing immediately offshore from the Project reach. The transect surveys will be conducted to verify aerially derived bathymetry, identified eelgrass, and physical anomalies that may have cultural or historical attributes and potential hard

substrate habitat(s), such as 'debris piles' for biological communities other than mudflat/benthic that could provide habitat for a different suite of species and, if impacted, would require public disclosure and potential mitigation.

Task 2.2.3: Bridge Scans on Interior Creeks and Channels

Consultant will complete bridge geometry scans to define bridges and culverts three dimensionally as suitable for the hydraulic analyses to be completed as part of Task 2.4. Scanned data will be tied to the same horizontal and vertical control network used for the County's 2017 LiDAR data set and used for hydrologic and hydraulic analyses. The scans are also suitable as record data for the bridges and culverts.

Task 2.2.4: Utility Research

Consultant will obtain available record information from public agencies and private utilities at a level sufficient for planning and preliminary design. Depending upon the preferred Project alternative and discovery of interfering utilities, potholing may be recommended. Those costs are unknown and not included in the scope of services.

Task 2.2.5: Land Surveys

Consultant's Licensed Land Surveyor will complete land surveys in compliance with State law as needed to support other tasks.

Task 2.2.6: Easement and Right-of-Way Reconciliation

Consultant's Licensed Land Surveyor will procure title reports for all properties within or adjacent to the Project limits, reconcile recorded property and easement boundaries, and provide said boundaries on State Plane coordinates for inclusion with Project plan documents.

Deliverables

1. Digital version of aerial photography
2. Digital record of horizontal and vertical control networks
3. Point cloud data file
4. ACAD base mapping
5. Shoreline transects
6. Bridge scans and point data
7. Digital or scanned utility maps
8. GIS shapefiles of utility information
9. Digital map with rights-of-way and easements
10. Printed materials upon request

Task 2.3: Coastal Protection Analyses

Consultant will complete coastal hazard and protection analyses for the defined shoreline protection reach. Coastal flood hazards will be evaluated using FEMA-approved methodologies to establish the maximum wave height and maximum wave runup associated with the 100-year storm surge, for each identified Project alternative. Coastal analyses will be based on published data, the transects obtained in Task 2.2.2, and FEMA's California Coastal Analysis and Mapping Project. The following conditions will be assessed:

1. Required top of flood protection elevations for Project alternatives under existing tidal conditions (quantitative analysis)
2. Required top of flood protection elevations for Project alternatives with future sea level rise (quantitative analysis)
3. Erosion protection for alternative coastal barriers (quantitative)
4. Sedimentation for Project alternatives under existing tidal conditions (qualitative)
5. Sedimentation for Project alternatives with future sea level rise (qualitative)
6. Preliminary design of alternative wave break

Deliverable

1. Coastal Protection Analysis Report

Task 2.4: Hydrologic and Hydraulic Studies

Consultant will complete hydrologic and hydraulic studies for the area tributary to the shoreline protection reach and the creeks and drainage channels within that tributary area. Local drainage facilities will be evaluated as necessary to establish the existing residual 100-year floodplain following NFIP mapping standards and FEMA criteria for interior drainage studies. Hydrologic and hydraulic studies will evaluate flood risks from San Francisco Bay, including future sea level rise, and the combination of coincident 100-year Bay and fluvial events. Future tributary discharges without hydraulic constrictions will be estimated using the State of California's Cal-Adapt climate adjustment tools.

These studies will be performed to be adequate as a basis for Project design and ultimate certification for FEMA accreditation, including FEMA's interior drainage and closed system requirements.

It is explicitly agreed that local storm water systems – except for those 18" in diameter and larger that outfall directly to San Francisco Bay or one of the tributary creeks or canals – are not part of the Project improvements. Because it is understood that these storm water systems already have deficiencies, one objective of these analyses will be to support the fact that the proposed Project will not adversely impact these systems. Another objective is to evaluate the systems to the extent required to understand residual interior flooding under existing and post-Project conditions for FEMA certification of improvements.

Each significant storm drain gravity outfall (assumed to be 18 inches in diameter or larger) or pumped outfall will be included in the hydraulic model.

There are five major interior drainage outfalls to the Bay:

1. Sanchez Creek watershed outfall (including all outfalls to lagoon) – Burlingame
2. Easton Creek watershed outfall – Burlingame
3. Mills Creek watershed outfall – Burlingame
4. El Portal Creek watershed outfall (Cowan Canal) – Burlingame
5. Highline Canal/Lomita Canal – Millbrae

Under existing conditions, some of these systems may have deficiencies that the two cities would address with their own improvements. Depending upon the ultimately preferred LEDPA Project, new flood control improvements to protect the lower areas from tidal flooding from the Bay could result in an increased barrier to gravity drainage to the Bay. Hydrologic and hydraulic studies will evaluate the mitigation measures that would be needed to offset impacts to the depth or extent of local 100-year flooding caused by identified Project alternatives.

Task 2.4.1 Coordination of Interior Studies

Consultant will coordinate the tributary interior hydrology and hydraulic studies described under this subtask with the coastal protection analyses completed under Task 2.3, design development identified in Task 3, and environmental documentation described in Task 4.

This coordination includes compiling statistically based coincident tide cycle boundary conditions for hydrologic and hydraulic modeling. Coincident tide cycles for impact analysis and design will be derived using available long-term tide data and streamflow data relevant to the San Francisco Peninsula.

Task 2.4.2: Identify Tributary Drainage Systems and Watersheds

Review, compile, and update available storm drain system information including collection pipes and pump station characteristics for Millbrae and Burlingame and obtain previously completed hydrologic/hydraulic models for the major interior drainage outfalls along the project reach. Interior drainage analyses will be based on ground information with an assumption that under extreme runoff events, local storm drain systems are surcharged. Therefore, detailed surveys to establish storm drain inverts – except for those 18" in diameter and larger that outfall directly to San Francisco Bay or one of the tributary creeks or canals – are not necessary and not included in this scope of work. Since the analyses will only reflect the hydrologic response of interior watersheds, limited storm drainage trunk data will need to be collected only. Local precipitation gage data and corresponding stream flow or stage gage data will also be collected.

Task 2.4.3: Develop Interior Drainage Criteria

Review existing Burlingame and Millbrae drainage criteria, San Mateo County drainage criteria, FEMA criteria, and criteria from other local Bay Area agencies and develop a clearly defined criteria to meet local, state, and federal requirements for the identification of level of service and deficiencies.

Task 2.4.4: Develop Hydrologic and Hydraulic Models of Existing Conditions

Complete hydrologic model(s) to provide design discharge hydrographs for each of the five outfall systems will be developed. The hydrologic models will include all the watersheds draining to each of the five outfalls. The hydrologic models will reflect the hydraulics impacts of the conveyance trunks for the watersheds upstream of approximately El Camino Real implicitly, as they will not be modeled explicitly in the hydraulic portion of the models.

Detailed hydraulic models of the five outfall systems and their tributaries from the Bay upstream to approximately El Camino Real, will be developed. The models will include the open channel trunks and storage areas behind outfalls into these open channels (approximately 2 square miles) only. The boundary condition for these models will be the Bay.

Approximate hydraulic model quantities are tabulated below.

Stream/Channel	Beginning	End	Length (feet)	Bridge/Culvert Crossings
South Lomita Canal	BART	Highline Canal	5,100	1
Unnamed	SFO	Highline Canal	2,250	pipe
Highline Canal	BART/Caltrain	Bay	3,300	3
El Portal Creek	BART/Caltrain	Bay	4,750	5
Gilbreth Creek	Highway 101	El Portal Creek	1,100	0
Mills Creek	Caltrain	Bay	5,950	4
Easton Creek	Caltrain	Bay	2,400	6
Sanchez Creek	California Drive	Burlingame Lagoon	1,070	4
Burlingame Lagoon	Sanchez Creek	Bay	7,500	2
Anza Lagoon		Bay	1,300	1

The hydrology and hydraulics will be calibrated and validated using available information including regional rainfall and streamflow data. The calibration will consist of a review of the hydrology at the outfalls and a detailed refinement of the hydraulics in the low-lying areas near the outfalls.

The hydrology review will include the calibration and validation of rainfall/runoff transformation compared to available gage data, flood frequency analyses and calibration/validation of outfall water surface elevations near the outfalls compared to available gage data and anecdotal data.

These models will be used to as the basis for the FEMA-required interior drainage study and as the baseline condition for CEQA/NEPA impact analyses. The models will also be used to assess design alternative pump stations at each creek mouth or the alternative tidal lagoon facility and evaluate the interaction of fluvial flooding with coincident tides.

Limits of hydraulic study are indicated in the figure below.



Deliverable

1. Interior Drainage Study

Task 2.4.5: Analyze Impact of Sea Level Rise for Tidal Lagoon Improvement Alternatives

For the proposed conditions, the hydraulic model will be extended to the proposed tidal lagoon and the boundary conditions will be moved to outside of the proposed lagoon. Alternatives will be incorporated as directed by the design team.

Using the validated hydraulic model(s) of both existing and proposed conditions from Task 2.4.3 and statistically derived coincident tide cycles based on incremental sea level rise with randomized timing relative to peak discharge from Task 2.4.1, alternative Project impacts to coastal and riverine flooding within the five tributary creeks and channels will be analyzed using these boundary conditions:

- Existing tide cycle with expected value timing for FEMA certification and to establish the baseline condition for CEQA/NEPA analyses. This represents conditions for the No Project Alternative.
- A free discharge condition (no tidal backwater) with existing interior drainage systems to establish points of interior hydraulic control. This indicates the limits of potential project benefit and is applicable only to offshore alternatives.
- Tide cycle with sea level rise and expected value timing. This boundary condition is used to address project impacts from offshore alternatives.
- Tide cycle with sea level rise and level of confidence in the timing between peak riverine discharge and high tides acceptable to the District and its Partners. This more robust boundary condition would be used as the basis of design for offshore alternatives.

It is assumed that an alternative will be considered only if it can be shown that there is no impact or there is a beneficial impact to interior drainage. As discussed above, it is assumed that the interior systems – except for those 18” in diameter and larger that outfall directly to San Francisco Bay or one of the tributary creeks or canals – will not be improved. It is assumed that the project as proposed must not provide a detrimental impact to any interior system that outfall into the open channels or lagoons.

Recent local flood control improvement construction bids will be used to develop preliminary construction costs for each candidate alternative. From there, an alternative selection process that includes costs, benefits, constructability, resiliency, ability to permit, public perception and aesthetics, environmental and recreational benefits and so on will be used to formulate a selection of alternatives and a final preferred project alternative.

Task 2.4.6: Analyze Impact of Sea Level Rise for Interior Improvement Alternatives

If project constraints require an alternative that no longer includes the tidal lagoon and improvements must be constructed at the shoreline or inland, the model will be modified to reflect inland alternatives. The improvements could include some combination of floodwalls, bridge and culvert improvements, tide gate structures, and pumping facilities.

For each project alternative, establish scope of project improvements required to meet the interior drainage requirements established in Task 2.4.3. It is assumed that an alternative will be considered only if it can be shown that it can meet all interior drainage criteria at the outfall of the interior system (from the pipe systems into the open channels or lagoons).

Project impacts to coastal and riverine flooding within the five tributary creeks and channels will be analyzed using these boundary conditions:

- Existing tide cycle with expected value timing for FEMA certification and to establish the baseline condition for CEQA/NEPA analyses. This represents conditions for the No Project Alternative.
- Tide cycle with sea level rise and expected value timing. This boundary condition is used to address project impact from onshore and interior alternatives.
- Tide cycle with sea level rise and confidence value timing. This more robust boundary condition would be used as the basis of design for onshore and interior alternatives.

Task 2.4.7: Optimize Design and Operation of Selected Improvement Alternatives

The model reflecting the selected improvement alternative will be run using a selected long-term window (from 2 weeks to 2 months) to refine the understanding of the proposed tide gate/pump station operations to provide design parameters. The long-term simulation data will be developed from the data collected in Task 2.4.1. Alternative project designs will be evaluated using future 100-year discharges with interior capacity restrictions removed. Tidal lagoon alternatives will be further evaluated assuming a free discharge downstream boundary condition.

Task 2.5: Geotechnical Data and Subsurface Exploration

Consultant will work with the District and the Cities of Millbrae and Burlingame to identify, compile, and evaluate available geotechnical information for the project area and vicinity. The data sources will include the District's identified available information in their files, published geologic maps, and unpublished geotechnical reports for public facilities and from the Cities' files for nearby private improvements.

Data will also be obtained from state sources such as Caltrans and the Department of Toxic Substances Control. The data will be collected, compiled, and stored in a project-specific GIS database. The extent and reliability of the data will be assessed and used to determine data gaps and inform the subsurface exploration and testing plans. Reliable data will be leveraged to the extent possible to control costs.

Task 2.5.1: Review Existing Data and Fill Subsurface Information Gaps

Consultant will identify data gaps and develop a field exploration to collect sufficient data to address the identified data gaps. A preliminary field exploration plan has been developed to conform with accepted FEMA/DWR guidelines.

The plan assumes one exploration point every 1,000 linear feet and additional points where levees may be used. It is further assumed that reliable and useable available subsurface information from previous investigations will cover one-third of the explorations.

Task 2.5.2: Field Investigations

Geotechnical field investigations within the project limits will include a mix of soil borings and Cone Penetration Tests (CPT), with a ratio of one boring for every three CPT probes. This subtask is based on

a combined total of 22 field exploration days are required to appropriately cover the 46,000 feet of flood barrier and potential pump stations. A similar level of geotechnical effort is anticipated for other flood barrier alternatives. All planned exploration locations will be initially located in the field using handheld GPS devices.

Consultant will conduct detailed site reconnaissance to identify and review logistical issues related to the implementation of the exploration work. Preliminary locations of borings and CPT soundings will be marked for clearance through Underground Service Alert (USA). For areas where it appears that private underground utilities (or other underground facilities not addressed by USA) are present, a subcontracted underground utility locating service will be retained to mark the locations of underground utilities. Underground utility locating may be needed for about 40% of the exploration locations.

The potential presence of buried rock and rubble under the perimeter of the filled ground will also require careful exploration and planning. Consultant will apply for and obtain applicable permits (drilling or encroachment) from the local agencies (San Mateo County, Millbrae, Burlingame, Caltrans, if necessary) having jurisdiction for the boring locations. Many exploration locations will likely require access onto or through private property. Therefore, temporary access agreements will need to be obtained. For the exploration locations within the public right-of-way, it is anticipated that about half of the sites will require traffic control or closing parking spaces.

Borings will be drilled using a combination of hollow-stem and mud-rotary drilling methods to depths between 20 and 50 feet below existing grade, depending on the planned improvements and subsurface conditions that are encountered at a given location. Borings will generally be to a depth equivalent to two to three times the planned levee or floodwall height and extended in all cases to at least 10 feet below the invert of the adjacent channel. Soil samples will be collected at regular intervals so that sufficient laboratory testing can be performed to classify the soils encountered and develop engineering parameters for strength and compressibility.

Task 2.5.3: Laboratory Testing

Laboratory testing of samples will be programmed based on the anticipated temporary loading conditions during construction and long-term loading conditions and will index properties, strength, permeability, consolidation, and corrosion. The selection of laboratory tests will be determined based on conditions encountered and USACE guidelines.

Task 2.5.4: Geotechnical Analyses and Report

Consultant will complete geotechnical analysis of the subsurface conditions and laboratory test results to support design and construction recommendations and as the basis for discussions of construction constraints for the selected alternative. Analyses will be performed under the direction of a Registered Geotechnical Engineer to develop conclusions and geotechnical-related recommendations for the design and construction of the floodwalls, levees, and other project elements. The analyses will be completed in accordance with USACE, DWR, and other applicable standards and guidelines. Floodwall and levee seepage and stability analyses will be performed using SEEP/W and SLOPE/W for representative cross-sections based on observations, levee and floodwall geometry, and subsurface conditions.

Results of the geotechnical investigation, laboratory testing, and engineering analyses will be provided with recommendations in a project geotechnical report. The report will be prepared in draft form and then finalized after review at the 30% design level. Addenda to the final report will be prepared during subsequent phases of the project.

Deliverable

1. Geotechnical Report

Task 2.6: Corrosion Study

Consultant will complete a corrosion study to identify design rates of steel corrosion and provide recommendations to mitigate corrosion of concrete structures in a marine environment. This study will be used to inform Project alternatives and the costs thereof.

Consultant will establish corrosion rates for steel structures and elements intended that would be exposed to the Bay versus the area exposed along interior creeks and canals. Consultant will visit the site(s) and verify how existing structural elements are performing based on their exposure conditions. Consultant will examine other steel structures at SFO as allowed, in South San Francisco, San Mateo, Foster City, and Redwood City to estimate approximate corrosion rates for piles in the splash zone and other exposures. Consultant will compare the field data with the theoretical data from ISO Standards, NACE Standards, CalTrans, etc. to propose design corrosion rates. Corrosion rates are anticipated to be different in the areas exposed to the Bay versus interior areas.

Deliverable:

1. Corrosion Study Report

Task 2.7: Data Gathering for Environmental Documents and Permitting

Data gathering efforts will reflect the likelihood of preparing an expanded Environmental Impact Report (EIR) to streamline any potential NEPA documentation required for the Project, which will depend on whether federal funding is used to support the project and the requirements and expectations of federal regulatory agencies with authority over the project.

Task 2.7.1: Biological Resources Assessment

Consultant will prepare a Biological Resources Assessment (BRA) report to address the baseline marine and terrestrial biological conditions that could be affected by the project and will be of sufficient detail to support the CEQA and/or NEPA environmental review and regulatory permitting processes.

The focus of the BRA will be to inventory and assess the possible biological resources that could be affected by the project and identify measures to avoid, minimize, and/or compensate for potential effects to state and federally listed species and other regulated biological resources. The proposed work program involves review of existing literature sources (e.g., California Department of Fish and Wildlife [CDFW] California Natural Diversity Database [CNDDDB], United States Fish and Wildlife Service [USFWS] Critical Habitat Mapper), a reconnaissance-level site visit, and preparation of the BRA report to incorporate the findings of the detailed field investigation, assess potential impacts, and develop recommendations.

Work includes developing safety documents, reviewing background information, and conducting site surveys based on mapped critical habitat, Essential Fish Habitat, and submerged vegetation known to exist. Background review will include review of the base maps in CAD and/or GIS formats and preparation of preliminary desktop vegetation and habitat mapping.

Following the background review and desktop mapping, a reconnaissance-level field survey will be completed to document marine, estuarine and other aquatic resources, terrestrial vegetation and habitat types and other terrestrial resources (e.g., native trees), and assess the site for the capacity to support special status species and other regulated biological resources (e.g., Essential Fish Habitat). This will include a broad-based assessment of soft bottom communities (benthic infauna) conducted in locations of the proposed levee and/or breakwater to describe and quantify the intertidal and subtidal soft bottom communities. Soft bottom sampling will utilize a shallow draft motorized vessel outfitted with a davit or boom to support the deployment of a single or double Van Veen grab to take sediment collections to approximately 1.0-foot depth.

The collected samples will be analyzed for physical grain size, and then rinsed through a 1.0 mm sieve. Remaining material placed in laboratory containers for eventual sorting and species identification. Additionally, the site visit will include scuba diving or drop camera validation surveys of observed acoustic anomalies detected during sonar surveys to assess presence/absence of eelgrass (*Zostera spp.*) and document existing subtidal habitat(s).

The results of the research and field survey will be documented in the BRA report, including lists of observed species and potential for special status species to occur at the project site. The BRA report will be accompanied by maps depicting location(s) of special status species and/or other regulated biological resources, if any, in relation to the project site and related facilities, CNDDDB and other database query results, and surveyed areas.

The analysis will include an evaluation of regulated biological resources that may occur or are known to occur within a 5-mile buffer of the project site. The BRA will also include vegetation/habitat maps and site photographs as figures or attachments. Where potential impacts are identified, recommended measures will be developed to avoid, minimize, and/or compensate for identified impacts.

Measures, and any monitoring strategies, will be developed based on previous experience with projects in this region of San Mateo County and regulatory agency requirements for coastal/bay projects. They will be of sufficient detail for use in the subsequent environmental review and regulatory permitting processes, including those with the USACE, San Francisco Bay Conservation and Development Commission, State Lands Commission, Regional Water Quality Control Board, and/or CDFW. It is assumed USACE would initiate consultation with the National Marine Fisheries Service (NMFS) and/or USFWS pursuant to Section 7 of the Federal Endangered Species Act. Therefore, Consultant's BRA report will provide the level of analysis necessary to assist with USACE's consultation with NMFS and/or USFWS.

A stand-alone Biological Assessment will be prepared that will serve as the focused consultation document. Consultant will coordinate with all involved parties to determine the level of potential effects and to develop/refine measures to avoid and minimize impacts to federally and/or state listed species.

Deliverable

1. Biological Resources Assessment Report

Task 2.7.2: Cultural and Historic Resources Assessment

The project's location on the periphery of the San Francisco Bay and in an area of rapid development has the potential to encounter historical and prehistoric resources that could be potentially impacted by project activities. The cultural resources report will address archaeological resources, historic built resources, and the potential for previously unrecorded resources that could be encountered because of the Project alternatives.

The following tasks are included in this work effort to meet the CEQA and National Historic Preservation Act (Section 106) requirements regarding cultural resources. The Cultural Resources Technical Report prepared under this subtask will present findings, recommendations, and impact assessments including:

- California Historical Resources Information System (CHRIS) records search
- Historical map examination
- National Register of Historic Places listings
- State Lands Commission Shipwreck Database listings
- California Register of Historical Resources
- Built Environment Resources Directory
- Archaeological Determinations of Eligibility list
- California Historical Landmarks
- Native American Heritage Commission (NAHC) / Sacred Lands File (SLF) search
- Pedestrian survey with 10-meter transects
- Geoarchaeological review
- Paleontological inventories

If cultural resources are identified that could meet the definition of historic properties or historical resources are identified, additional documentation and study beyond that proposed in this scope of work would be required to address environmental review requirements. If an adverse effect to a historic property (or a significant impact to a historical or unique archaeological resource, or Tribal Cultural Resource) would occur, additional consultation among the consulting parties would be required, and would ultimately require the execution of a Memorandum of Agreement to resolve such an effect.

Deliverable

1. Cultural and Historic Resources Assessment

Task 2.7.3: Hazardous Material Investigations

Due the filling of the tideland areas in the 1950s, 1960s, 1970s, and current and/or historical land uses (e.g., municipal landfill, gasoline stations, rental car facilities, airport operations), there is the potential to encounter contaminated soil and/or groundwater during subsurface construction activities. It is anticipated the following environmental concerns may be present in the Project area:

- known soil and/or groundwater release sites such as Cortese sites
- landfills
- PFAS releases
- underground storage tank sites
- lead based paint
- asbestos containing materials
- aerial deposited lead (highway)
- aerial deposited fuel (airport)
- common railroad corridor contaminants
- artificial fill
- open water/bay concerns (sediment disturbance, dewatering)

Task 2.7.3.1 Phase I Study. A desktop *Hazardous Materials Evaluation* will identify potential impacts from hazardous materials and wastes associated with the proposed project. The project area for the *Hazardous Materials Evaluation* report includes the project footprint plus 100 feet. The evaluation will include a preliminary review of potential hazards associated with the existing project area that may affect the environment and construction/operation of the proposed project.

Task 2.7.3.2 Phase II Study (Optional). A Phase II Environmental Site Assessment (ESA) will be performed along the shoreline (landside) and in the offshore areas (waterside) completed by advancing soil borings on a linear basis along the potential construction alignment and in areas identified in areas of concern identified in the Hazardous Materials Evaluation. The scope of work of the Phase II ESA is intended to support the preparation of the CEQA document and also obtain data that may be required to satisfy permitting requirements. For the landside assessment activities, up to 18 soil borings will be advanced on a linear basis along the shoreline (one boring every approximately 1,000 feet). The borings will be advanced to a depth of 5 feet below ground surface (bgs) using a direct-push drilling rig.

Soil samples will be collected at depths of 1, 3, and 5 feet bgs and one grab groundwater sample will be collected per boring, if encountered. For the waterside assessment activities, sediment samples will be collected from 18 locations at depths of 1, 3, and 5 feet bgs from geotechnical cores/grab samples. Quality assurance/quality control (QA/QC) samples (i.e., duplicate and equipment blank samples) will also be collected.

Soil, groundwater, and sediment samples will be collected and analyzed for total petroleum hydrocarbons in the gasoline, diesel, and oil ranges by United States Environmental Protection Agency (EPA) test method 8015B; Title 22 metals by EPA method 6010B/7471A; volatile organic compounds by EPA method 8260B with EPA method 5035 preservation; semi-volatile organic compounds by EPA method 8270C; polychlorinated biphenyls by EPA method 8082, organochlorine pesticides by EPA method 8081A, and per- and polyfluoroalkyl substances (PFAS) by EPA method 537.

A Phase II ESA report will be prepared that includes a summary of field sampling activities and laboratory analytical testing results and provides conclusions and recommendations regarding potentially impacted soil, sediment, and/or groundwater that may be encountered during subsurface construction activities. Since the project involves providing a shovel ready project, the Phase II ESA will be performed prior to beginning the EIR.

The following assumptions were utilized during the development of the cost estimate for the Phase II ESA:

- A boring permit will be required from San Mateo County Health, Environmental Health Services for the landside soil borings because groundwater may be encountered. One permit will be sufficient for the 18 proposed boring locations.
- If encroachment permits or access agreements for borings on private property are required, these will be obtained by others.

- Waterside cores/grab samples will be collected by the project geotechnical engineering firm. Consultant will collect sub-samples from the cores/grab samples and place the samples into laboratory supplied containers.
- The boring/core logs for the sediment cores/grab samples will be prepared by the geotechnical engineering firm.
- Up to 4 days on site for landside assessment activities.
- Up to 10 days of sampling for the waterside assessment activities.
- Up to 63 soil samples, 70 sediment samples, and 23 groundwater samples (including QA/QC samples) will be analyzed on a standard 10 business day turnaround time except for PFAS analysis, which will be analyzed on a standard 15 business day turnaround time.
- One 55-gallon drum of investigative derived waste will be generated as part of landside assessment activities and disposed of as non-hazardous waste.

Deliverables

1. Phase I Hazardous Materials Evaluation Report
2. Phase II Environmental Site Assessment Report

Task 2.8: Jurisdictional Wetland Delineation

Consultant will conduct a field investigation within the potential Project limits to collect data necessary to identify and delineate the geographic extent of potential jurisdictional waters in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the Corps' 1987 Wetlands Delineation Manual, the Corps' 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) and supporting guidance documents based on current and historic land use conditions.

The location of each jurisdictional water potentially subject to Corps and RWQCB jurisdiction will be field located using a Trimble Pathfinder XRS GPS unit (accuracy <50cm). Field data taken regarding vegetation, soil, and hydrology conditions observed during the delineation process will be digitally formatted by Consultant and data linked for use in ARC/INFO during data analysis. As some areas within potential Project limits are currently tidal wetlands, field data studies will concentrate on defining the wetland/upland interface.

All areas identified as potential jurisdictional waters of the United States and / or State will be mapped on to a 100-scale base map. The base map will consist of a color orthorectified aerial photograph and engineer level topographic mapping. All potential jurisdictional areas identified during data analysis and mapping will be reviewed with respect to possible exemption from Corps and RWQCB jurisdiction.

Task 2.8.1: Jurisdictional Determination Report

Consultant will prepare a jurisdictional determination report in accordance with Corps guidelines and upon client review and approval will submit the report to the Corps for verification under the Corps Preliminary Jurisdictional Determination procedure. This procedure assumes that a connection to navigable waterways is present and precludes the need for more detailed report documentation and review by the Corps under the Corps/USEPA Rapanos evaluation guidelines. The rationale for the use of the Preliminary Jurisdictional Determination procedure is: (1) the jurisdictional waters potentially impacted by the project are tidal and as such there is no argument that there is a lack of connection with traditionally navigable water, (2) the delineation can be completed and verified by the Corps in a shorter time frame, and (3) the approach is less costly than obtaining a verified jurisdictional determination from the Corps.

This task also includes investigations allowing a determination of jurisdictional boundaries pursuant to regulatory requirements of the RWQCB (wetlands/water jurisdiction of RWQCB is not always consistent with that of the Corps and may include areas not considered jurisdictional by the Corps), the California Department of Fish and Wildlife, BCDC and the State Lands Commission.

It is assumed that access to potential jurisdictional waters will be granted to Consultant staff for sampling, including hand digging shallow pits in both City and private properties.

Task 2.8.2: Verification of Corps Jurisdictional Determination

Consultant will coordinate with the Corps, as necessary, during the jurisdictional determination process which may include a site visit with Corps staff, phone calls, emails, meetings, and preparation of additional information or documents (i.e., maps, watershed data, functional analysis methods, etc.). Consultant will coordinate all aspects of the jurisdictional determination process with the client and/or designated representative. Consultant will keep the client informed of the jurisdictional determination progress with a monthly phone call or email. Note that verification of regulatory jurisdictional boundaries of RWQCB, CDFW, BCDC and State Lands is typically accomplished as part of the regulatory permit process. Once delineations are verified, Consultant will transfer a final digital version of the jurisdictional boundaries to the Project Lead who will direct the information transfer for inclusion on project plans.

If a more accurate survey is required at various locations along the project levee, Consultant will accompany the project surveyor subcontractor as necessary to assure that the jurisdictional boundary is accurately surveyed to an engineer scale level of accuracy.

Task 2.8.3: Surveys for Listed Species

Locations along the Bay shoreline may be considered potential habitat for federally listed and state-listed threatened species. Protocol surveys will be conducted within the potential API. Surveys will be conducted by species experts specifically permitted to work with the listed species by the USFWS. Surveys will follow established agency protocol in term of timing of surveys and spacing of sampling stations. At the end of the survey, Consultant will map location of listening stations, all pairs or individual species located during the surveys, information on disturbances (e.g., dogs, air traffic) and weather information. Once the protocol surveys are complete, Consultant will generate a letter report that will include data sheets, a map showing the location of the listening stations, location of listed species detected during the surveys, and survey results and information from other protocol surveys that have been conducted within proximity to the Project site. The letter report will be submitted to the USFWS for review and comment. Consultant will coordinate with the USFWS regarding survey results and to establish any conservation measures that may be required such as work windows and buffer limits.

Deliverable

1. Jurisdictional Wetland Determination Report

Task 3: Design Plans, Specifications, and Cost Estimates

Table 1 lists the design plan sheet types expected at various submittal stages. Not all project elements will necessarily be part of the construction document package depending upon the preferred Project alternative selected for detailed design. Project plans will be produced on 22-inch by 34-inch sheets for true half-scale 11-inch by 17-inch companion plans, in electronic and printed formats. Specifications will be compiled in Microsoft Word with final camera-ready documents in a pdf format.

Table 1: Design and Construction Document Submittals

Sheet Type	30% PS&E (Task 3.1)	60% PS&E (Task 3.2)	90% PS&E (Task 3.3)	Final PS&E (Task 3.4)
Cover Sheet	•	•	•	•
Drawing List	•	•	•	•
Sheet Index	•	•	•	•
Notes, Abbreviations, and Legend	•	•	•	•
Site Access and Haul Routes	•	•	•	•
Pre-Approved Storage and Stockpile Areas	•	•	•	•
Traffic Detour Plans	•	•	•	•
Survey Control Layout and Rights of Way		•	•	•
Demolition and Utility Relocations		•	•	•
Grading Plans		•	•	•
Sheet Pile Installation Plans	•	•	•	•
Floodwall Plans and Profiles	•	•	•	•
Shoreline and Trail Access Plans	•	•	•	•
Construction Details			•	•
Paving and Striping			•	•
Typical Cross Sections	•	•	•	•
Cross Sections		•	•	•
Structural Plans		•	•	•
Structural Details			•	•
Architectural Plans			•	•
Architectural Details			•	•
Landscaping and Irrigation		•	•	•
Site Furnishings		•	•	•
Wayfinding and Interpretive Elements			•	•
Electrical Plans		•	•	•
Electrical Details			•	•
Corrosion Protection Plans and Details			•	•

Task 3.5: Constructability Reviews

Prior to submittal for District review, each PS&E submittal will be reviewed by construction professionals – not contractors – under contract to Consultant. This will include constructability review of the plans, specifications, construction sequencing simulations, product lead time information, site logistics, costs, contingencies, and scheduling.

Task 3.6: Bid Documents

Consultant will prepare bid documents including a Project Manual, Construction Drawings, regulatory authorizations package, and the entire suite of documents required for public bid advertisement following District procedures.

Task 4: Environmental Documents and Permitting

Consultant will complete a Draft Environmental Impact Report (EIR) as required by the California Environmental Quality Act (CEQA). The appropriate level of CEQA documentation for the project is an EIR since it is reasonably anticipated the project could result in a significant unavoidable impact. The federal lead agency and District may partner together as joint lead agencies for the preparation of a joint CEQA-NEPA document (EIR-EIS or EIR-EA). Alternatively, the federal lead agency may choose to prepare a separate, stand-alone NEPA document, either concurrently with or following completion of the CEQA process. Given these possibilities, Consultant will prepare an expanded EIR as the most streamlined and cost-efficient approach to environmental compliance.

Task 4.1: Environmental Scoping

Consultant will complete environmental scoping tasks in advance of preparing CEQA/NEPA documents under subsequent task order(s).

Task 4.1.1: Project Description

Consultant will develop alternative descriptions so that input from agencies and the public received during the public scoping period may be used to inform the alternatives.

Task 4.1.2: Initial Study and NOP

An Initial Study will be prepared to identify and characterize potential impacts of the project, based upon the project description developed under Task 4.1 and approved by the District. The Initial Study will address each of the environmental issues areas from the 2022 CEQA Guidelines Appendix G Environmental Checklist and identify issue areas where the project may have potentially significant impacts. Consultant will prepare a Notice of Preparation (NOP), including an overview of the proposed project and guidance for the public on how to submit comments. The District will publish the NOP on its website and distribute it to its mailing list for the project; the NOP is filed electronically with the State Clearinghouse (SCH), as well as with the San Mateo County Clerk Recorder to initiate the project's 30-day public scoping period.

During this stage, Consultant will help the District conduct Native American government-to-government consultation in accordance with Assembly Bill (AB) 52. The purpose of AB 52 consultation is to identify any Tribal Cultural Resources (TCRs) within the project site that may be impacted by the proposed Project. Consultant will draft letters and a map of the project site for the District to send to Native American tribal government contacts, as well as provide District with a tracking table and instructions for successful AB 52 consultation. The results of the AB 52 consultation will be included in the appropriate sections of the EIR. Consultant will also help the District with Tribal Consultation under Executive Order 12898 for NEPA purposes.

Task 4.1.3: Public Scoping and Development of Alternatives

During the public scoping period, Consultant will assist District staff in planning and conducting a meeting for the public, during which Consultant will provide a presentation with an overview the CEQA process and timeline, the proposed project purpose, need, and preliminary design, and the procedures to submit comments on the project. Comments will be summarized into general themes to be addressed in the EIR and inform the development of project alternatives. Alternatives to the project will also draw from the data collected under Task 2, the 30 percent design conducted under Task 3, and the alternatives identified in previous studies. Alternatives will be aligned with the District's goals and objectives to provide environmental and recreational improvements concurrent with the reduction of climate change-related flood hazards.

Task 4.1.4: Support Regulatory Outreach during CEQA through DEIR

Consultant will support the District's outreach to regulatory agencies through the preparation of the Draft EIR (DEIR) with experiential and specific Project-related technical information. Consultant will identify the multiagency jurisdictional delineations and provide an assessment of permit feasibility for each project alternative. This assessment also includes early engagement of regulatory officials prior to the Notice of Preparation. Once the Draft EIR is published and comments are received, parallel design can progress to an adequate level for actionable review, and formal permit submittals will be made under subsequent task order(s). The following authorizations and concurrences are anticipated, and outreach efforts undertaken for this subtask will be concentrated on:

- U.S. Army Corps of Engineers (Clean Water Act (CWA) Section 10 and 404 Permits)
- National Marine Fisheries Service and U.S. Fish and Wildlife Service Biological (Endangered Species Act Section 7 Consultation Biological Opinions to the USACE)
- National Marine Fisheries Service (Essential Fish Habitat Consistency Determination)
- California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement and Possible Incidental Take Permit)
- San Francisco Bay Regional Water Quality Control Board (CWA 401 Water Quality Certification and Porter Cologne Act Waste Discharge Requirements)
- San Francisco Bay Conservation and Development Commission (Development Permit and Coastal Zone Management Act Consistency Determination)
- State Lands Commission (Lease)
- Caltrans
- County of San Mateo
- County of San Francisco

- City of Burlingame
- City of Millbrae
- United States Coast Guard (Authorization required for Bridge Spans over tidal waters including streams unless determined there is no significant impact to navigation which is likely for the project)

Task 4.2: Administrative Draft EIR and MMRP

Following District concurrence with the range of alternatives developed for the Project, an Administrative Draft EIR will be written to address an expanded list of environmental issue areas. For several of the key environmental topics, the completed reports and evaluations, surveys, photographs, site visit notes, and other documentation from Task 2 will be included, including reports or data related to hydrology and water quality, geology and transportation, biological resources, cultural resources, and hazardous materials.

The expanded EIR requires more extensive analysis and documentation related to federal regulations and includes the preparation of technical reports including: Federal Clean Air Act (FCAA) Conformity Analysis; Paleontological Resources Assessment and a summary of Biological Resources Assessment; and Cultural Resources Technical Study. These technical studies will be prepared concurrently with the Administrative Draft EIR, addressing the identified alternatives, and informing the analysis of impacts and associated mitigation measures. Rincon will submit the Administrative Draft EIR with a Mitigation Monitoring and Reporting Plan (MMRP), for District’s review and comment.

Task 4.2.1: Aesthetics

The aesthetics analysis will consider such issues as alteration of public views, changes in visual character, and increased light and glare. Particular attention is paid to the massing of structures using the engineering renderings and conceptual design. Given the potential to block views of the bay from public viewpoints, this issue will have heightened public scrutiny.

Task 4.2.2: Air Quality

This section will be prepared in accordance with Bay Area Air Quality Management District (BAAQMD) Guidelines by analyzing temporary construction effects from developing the preferred alternative and the operational impacts from potential back-up generators or pumping devices that may be required in emergencies. A construction Health Risk Analysis (HRA) for the project will evaluate the potential for localized concentrations of PM2.5 and other air toxics (TACs) associated with site construction that would impact nearby existing residents. Individual and cumulative health risk analysis associated with project construction will be conducted following methodologies outlined in BAAQMD’s Recommended Methods for Screening and Modeling Local Risks and Hazards (May 2012).

Task 4.2.3: Greenhouse Gas Emissions

This analysis will consider the project’s potential contribution to cumulative impacts related to greenhouse gas (GHG) emissions and climate change. An overview of the current regulatory framework regarding GHG emissions and climate change, including SB 32, AB 32, SB 97, and SB 375, as well as adopted amendments to the CEQA Guidelines, will be described.

Task 4.2.4: Environmental Justice

Due to the location of disadvantaged communities within the Project area, Consultant will prepare an assessment of the project’s impacts on environmental justice issues under Executive Order 12898. This assessment considers the composition of the affected area to determine whether low-income, minority or tribal populations are present and whether there may be disproportionately high and adverse human health or environmental effects on these populations. It also considers relevant public health and industry data concerning the potential for multiple exposures or cumulative exposure to human health or environmental hazards in the affected population, as well as historical patterns of exposure to environmental hazards. Consultant will address the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed action.

Task 4.2.5: Land Use and Planning

This section of the EIR will examine land use policy issues. Consultant will prepare an objective discussion of whether and how the proposed project would be consistent with existing City of Burlingame and City of Millbrae policy documents, regional planning policies, and state regulations and policies. Particular attention will be paid to Burlingame’s Zoning Ordinance Update to protect the shoreline.

Task 4.2.6: Noise

The noise analysis will examine both temporary construction noise and sporadic long-term operational noise associated with emergency generators. Construction noise will be estimated based on information from the U.S. Environmental Protection Agency, the Federal Transit Administration, and the Federal Highway Administration.

Traffic noise will be estimated based on estimated construction traffic volume data. In addition, the analysis will evaluate temporary construction and long-term vibration associated with the project, which will be estimated based on information from the Federal Highway Administration.

Task 4.2.7: Utilities and Service Systems

Using data collected in Task 2, Consultant will address the project's potential to impact utilities and service systems, including the need to protect, abandon or relocate existing utilities. PG&E has a major high voltage transmission line running through the project area that creek floodwalls would be under. The design and environmental team will work with utility and service providers to address these potential issues and develop strategies to reduce or avoid utility impacts to the extent feasible.

Task 4.3: Draft EIR and NOA

The Draft EIR will be based upon responses to comments from the District and associated revisions to the Administrative Draft EIR. In addition, Consultant will maintain the administrative record for their analyses and provide an electronic copy of all data sources used when transmitting the Draft EIR to the District. Rincon will upload the Draft EIR to the SCH with the required Notice of Availability (NOA) of the Draft EIR, which will also be filed with the San Mateo County Clerk.

It is assumed that District staff will distribute the NOA to responsible and trustee agencies and interested organizations and individuals. It is also assumed the District will be responsible for required newspaper ads and other public noticing of the document's availability, such as radius label mailing or on-site posting.

Given the project's regional significance, a longer Draft EIR public review period than the minimum required 45 days is recommended to allow for more meaningful public/community engagement. Environmental documents will be ADA compliant for reader accessibility.

Native American government-to-government consultation is included in the scope of services in accordance with AB 52. The purpose of AB 52 consultation is to identify any Tribal Cultural Resources (TCRs) within the project site that may be impacted by proposed development. Consultant will also assist the District with Tribal Consultation under Executive Order 12898 for NEPA purposes.

Task 4.4: Public Review and Responses to Comments

During the Draft EIR public review period, Consultant will prepare for and attend one in-person public hearing to present the environmental impact conclusions and proposed mitigation measures, during which the District will present the project to the public and solicit public comments on the proposed project and the Draft EIR.

Consultant's team will provide support by responding to technical or CEQA-related questions at the hearing. Draft responses to all public comments received on the Draft EIR may be categorized into comment topics if numerous comments on the same issue(s) are received. An electronic version of the Responses to Comments to the District will be submitted for review and comment and we will respond to one consolidated set of comments and associated revisions.

Task 4.5: Final EIR, Findings of Fact, and Statement of Overriding Considerations

The Final EIR will consist of the Draft EIR, including the technical reports and MMRP, the District-approved Responses to Comments on the Draft EIR, and an overview of Errata resulting from responses to comments. A Screencheck Final EIR will be furnished to the District for final review and approval prior to producing hard copies of the Final EIR, which will be considered for certification at a public hearing of the District Board of Directors.

Consultant will prepare a CEQA *Findings [of Fact] and Statement of Overriding Considerations* based on the impact conclusions of the EIR. The CEQA Findings will be submitted alongside the Final EIR, and will contain a discussion of alternatives, including the rationale for rejecting any of the analyzed project alternatives, using in part the project objectives. This scope of work assumes that if alternatives are determined to be infeasible due to financial considerations, or that the Statement of Overriding Considerations relies on specific economic or financial factors, corresponding financial data to support these conclusions will be provided by the District.

Task 4.6: Public Hearing, Certification, and NOD

Consultant will provide support with the public hearing of the District Board of Directors during which certification of the Final EIR is considered; this support may include answering technical questions related to the project, the CEQA analysis and conclusions, or the applicable CEQA requirements. Consultant will record public comments made during the hearing and provide them to the District as a matter of record; responses to comments will not be prepared. Consultant will also prepare a Notice of Determination (NOD) and submit it to District staff within one day of Project approval, for delivery to the County Clerk and SCH.

Deliverables

1. Electronic copies of Administrative Draft EIR, technical reports, and MMRP in MS Word and Adobe Acrobat (pdf)
2. Responses to District comments and Revised Administrative Draft EIR
3. Electronic copies of Screencheck Draft EIR in MS Word and Adobe Acrobat (pdf)
4. Public Review Draft EIR and associated appendices, including eight hard copies, eight copies on CDs, and one electronic version of each in pdf and MS Word
5. One pdf version of the NOA and NOC for SCH submittal
6. Draft EIR public hearing meeting notes and public comments in MS Word
7. Electronic version of the Administrative Draft Response to Comments document
8. Electronic version of the Screencheck Draft Response to Comments document
9. 15 hard copies and one electronic copy of the Final Response to Comments document
10. Electronic versions of the Draft and Final Findings [of Fact] and Statement of Overriding Considerations
11. One pdf version of the NOD for District to file with County Clerk and SCH
12. One pdf version of the complete administrative record for environmental analyses and EIR

District will Furnish the Following

- District will submit notices to San Mateo County Clerk and pay applicable filing fees

Task 4.7: Environmental Permitting through Design

Consultant will identify all federal and state regulatory requirements, required consistency determinations, and permits, including, but not limited to, those of the U.S. Army Corps of Engineers, National Marine Fisheries Service, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, San Francisco Bay Regional Water Quality Control Board, State Lands Commission, and the San Francisco Bay Conservation and Development Commission. The Consultant will prepare permit applications with the necessary documentation, including design plans and reports, Environmental Assessments and Wetlands Delineations, and analyses required for findings of the Least Environmentally Damaging Practicable Alternative by the agencies requiring such findings under the U.S. Environmental Protection Agency (USEPA) 404 (b)(1) Alternatives Analysis Guidelines (Section 404(b)(1) alternatives analysis), mitigation plans, and Consultant will ensure the project design meets all regulatory requirements. Consultant will ensure consistency between CEQA / NEPA requirements and Section 404(b)(1) alternatives analysis requirements regarding project purpose and selected alternative.

Task 4.7.1: Prepare USACE Permit Application

Consultant will prepare and submit, upon District approval, an application to the U.S. Army Corps of Engineers (USACE) for the Project. The USACE permit application will consist of either a Preconstruction Notification (PCN) for a Nationwide Permit (NWP) or an Individual Permit, depending on the type and magnitude of impacts. This scope of work assumes that the Project will require an Individual Permit. Adjustments to the scope of work and cost can be accommodated if the Project impacts are minimized to

the point that a Nationwide Permit is feasible. Since the Project will require work within Section 10 River and Harbors Act waters, the permit application package will also include a request for Section 10 Authorization.

Consultant will prepare and submit an Individual Permit application to the USACE for placement of fill in wetlands or other waters of the United States related to the proposed Project. The permit application will include the project description including project plan drawings showing areas of impact to Waters of the United States, technical documentation of the wetland delineation (see Task 2.9), an environmental assessment, a Section 404(b)(1) alternatives analysis (see Task 4.7.2), an analysis of compliance with the USACE's public interest review criteria, compliance with Section 106 of the National Historic Preservation Act (see Task 4.7.3), and a conceptual wetland mitigation plan that would compensate for wetland impacts (see Task 4.7.4). Upon District approval, Consultant will provide the permit application and required documentation to the USACE for review and approval.

Task 4.7.2: USACE and RWQCB-Required EPA 404 (b)(1) Alternatives Analysis

Consultant will prepare a project alternatives analysis report demonstrating that the proposed project avoids, where practicable, waters of the United States (including wetlands) as per the U.S. Environmental Protection Agency Clean Water Act, Section 404(b)(1) Project Alternatives Analysis Guidelines. The Alternatives Analysis will also provide documentation of how the project has been minimized where impacts to jurisdictional waters are unavoidable on site to reduce impacts. USACE and RWQCB regulations require that only the Least Environmentally Damaging Practicable Alternative can be authorized. Upon District approval, Consultant will provide the analysis report and required documentation to the USACE and RWQCB for review and approval.

Task 4.7.3: Compliance with Section 106 of the National Historic Preservation Act

As part of the USACE's permit process, the USACE will need to verify that the project is consistent with the requirements of Section 106 of the National Historic Preservation Act and will conduct separate coordination with the State Historic Preservation Office (SHPO). Based on the cultural and historical resources reports (Task 2.8.2), materials will be packaged as part of the permit application documentation for use by the USACE as part of their Section 106 review. Upon District approval, Consultant will provide the required Section 106 documentation to the USACE for review and approval.

Task 4.7.4: Conceptual and Final Mitigation Plan

As part of the Individual Permit application, Consultant will prepare a conceptual wetland mitigation plan for compensation of impacts to wetlands and waters of the U.S. A final wetland mitigation plan will also be prepared based on comments from regulatory agencies on the conceptual plan. The mitigation plan will be based on calculated impacts and mitigation requirements as spelled out in the CEQA Biological Assessment (See Task 2.8.1) and will satisfy content and format requirements of the USACE, RWQCB, USFWS, NMFS, BCDC, and CDFW (and SLC, if required) related to compensation for impacts to jurisdictional areas, sensitive species, and sensitive species habitat. Upon District approval, Consultant will provide the required Mitigation Plans documentation to the various agencies for review and approval.

Task 4.7.5: Prepare Endangered Species Act Biological Assessment

A "likely to adversely affect" finding is warranted for this Project and an Endangered Species Act (ESA) Biological Assessment, including conservation measures to avoid potential impacts to any federally listed species, will need to be prepared to initiate a Section 7 consultation with the USFWS and NMFS. Consultant will prepare documents necessary to initiate a consultation with the USFWS and NMFS pursuant to Section 7 of the Endangered Species Act including a draft USACE letter requesting the Section 7 consultation and the Biological Assessment report addressing federally listed species. Consultant will prepare the Biological Assessment pursuant to requirements of the Endangered Species Act and the Code of Federal Regulations (50 CFR Section 402.12). As required, the Biological Assessment will include an Introduction; Project Description including proposed conservation measures to protect listed species; description of the action area where direct and indirect effects will occur; description of listed species and critical habitats within the action area; an effects analysis including cumulative effects; and a finding (this Project will have a "likely to adversely affect" finding). Upon District approval, Consultant will provide the required ESA Biological Assessment to the Corps, USFWS, and NMFS for review and approval.

Task 4.7.6: Prepare Essential Fish Habitat Evaluation

Consultant will prepare the necessary Essential Fish Habitat (EFH) evaluation pursuant to the Magnuson-Stevens Fishery Conservation and Management Act. The EFH evaluation will provide an assessment of the project's effects to EFH and Conservation recommendations to avoid, minimize, mitigate, or otherwise offset those adverse effects. HBG will prepare (1) the EFH Assessment report, and (2) a draft USACE letter to the NOAA Fisheries (the National Marine Fisheries Service) requesting the EFH consultation. Upon District approval, Consultant will provide the EFH report and draft letter to the Corps for review and approval as part of the required permit application documentation. The EFH study will be appended to the ESA Biological Assessment prepared in Task 4.7.5. A copy of the EFH study will also be provided to the NMFS.

Task 4.7.7: Prepare RWQCB Application for State 401 Water Quality Certification

Consultant will prepare the authorization request for State 401 Water Quality Certification following current RWQCB guidelines for submission. Included with the application submittal will be a copy of the USACE permit application. Upon District approval, Consultant will provide the permit application and required documentation to the RWQCB for review and approval.

Task 4.7.8: Prepare BCDC Permit Application

Consultant will prepare the authorization request for a Major Permit from BCDC following current BCDC guidelines for submission. Included with the application submittal will be a copy of the USACE permit application. Upon District approval, Consultant will provide the permit application and required documentation to the BCDC for review and approval. This task includes the Design Review Board (DRB) process.

Task 4.7.9: Prepare CDFW Application for Incidental Take Permit

Consultant will prepare the necessary application documentation to obtain incidental take authorization for state endangered species under the CDFW 2080/2081 Program. Upon District approval, Consultant will provide the application for incidental take authorization and required documentation to the CDFW for review and approval.

Task 4.7.10: Prepare CDFW Application for Streambed Alteration Agreement

Consultant will prepare the application for a Streambed Alteration Agreement from CDFW for impacts to stream courses as part of the Project. The application will be prepared pursuant to CDFW guidelines for submission. Upon District approval, Consultant will provide the application for incidental take authorization and required documentation to the CDFW for review and approval.

Task 4.7.11: Prepare Application to State Lands Commission

In the event the Project encroaches on State property or may need to use state property for a mitigation site, an authorization from the State Lands Commission (SLC) may be necessary. Consultant will prepare the necessary documentation to obtain authorization for from the SLC if necessary. Upon District approval, Consultant will provide the application for incidental take authorization and required documentation to the SLC for review and approval.

Task 5: FEMA Coordination

Project improvement plans and background design materials will be coordinated with the Federal Emergency Management Agency (FEMA). Based on conversations with FEMA Region IX staff, the appropriate technical means for FEMA review and approval of the proposed levee improvements is the Conditional Letter of Map Amendment Process using the MT-2 submittal forms. The intent of this task is to obtain FEMA concurrence that the proposed levee improvements will qualify for accreditation, prior to completing the Contract Documents. Task items include the following:

Task 5.1: Coordination with FEMA Representatives

Prior to preparing a formal submittal to certify the flood protection elements with FEMA and obtain their approval of regulatory mapping changes, coordinate with FEMA Region IX staff regarding the proper mechanism for flood barrier accreditation.

Task 5.2: Submit CLOMR and Respond to Review Comments

Consultant will preparation an MT-2 CLOMR submittal package, or other package as recommended by FEMA, and coordinate with FEMA and its technical review team to obtain certification.

Exhibit B – Payments and Rates

In consideration of the Master Scope of Services provided by Consultant described in Exhibit A and subject to the terms of this MSA, District shall pay Consultant based on the following fee schedule and terms.

Under no circumstances shall the amount paid by District to Consultant exceed \$10,145,000. Consultant shall provide District with a written itemized invoice that allows the District to reconcile the work performed. All invoices shall include the MSA number, project location, dates of services, and specified work completed.

Remit Invoices to:

San Mateo County Flood and Sea Level Rise Resiliency District

1700 South El Camino Real, Suite 502

San Mateo, CA 94402

Email: LDong@OneShoreline.org

Payment will be made within 45 days of invoice receipt.

Millbrae and Burlingame Shoreline Area Protection and Enhancement Project Fee Schedule
Master Scope of Services

Task	Task Name	Hourly Rates								Subtotal	Cal Engineering & Geology	Kier & Wright	Rincon Consultants	Huffman Broadway Group	Wood Rodgers	Biggs Cardosa Associates	BFS Landscape Architects	JDH Corrosion Consultants	Tanner Pacific	Subconsultant Subtotal	Total
		\$250	\$250	\$250	\$215	\$175	\$175	\$150													
1.0	Project Management																				
1.1	Prepare Schedule and Work Plan	24	8	4				16	\$ 11,400	\$ 2,880		\$ 5,000	\$ 10,000							\$ 17,880	\$ 29,280
1.2	Prepare Invoices, Progress Reports, and Scheduling Revisions	400						96	\$ 114,400	\$ 14,700		\$ 15,500	\$ 20,000			\$ 19,530		\$ 9,000	\$ 78,730	\$ 193,130	
1.3	Prepare for and Attend Project Management Meetings (48 meetings)	180	32	8	24	48	48	96	\$ 91,360	\$ 5,000		\$ 41,240	\$ 65,000			\$ 10,980		\$ 4,440	\$ 126,660	\$ 218,020	
1.4	Prepare for and Attend Meetings with Project Partners (12 meetings)	64		4	4			8	\$ 19,060			\$ 25,000							\$ 25,000	\$ 44,060	
1.5	Presentation Support at Key Meetings (12 total) (Optional)	48			24			24	\$ 17,160										\$ -	\$ 17,160	
		716	40	16	52	48	48	216	\$ 253,380	\$ 22,580	\$ -	\$ 61,740	\$ 120,000	\$ -	\$ -	\$ 30,510	\$ -	\$ 13,440	\$ 248,270	\$ 501,650	
2.0	Data Collection																				
2.1	Identify, Gather, and Review Existing Information	40	16	24	80				\$ 37,200										\$ -	\$ 37,200	
2.2	Field and Desktop Investigations								\$ -										\$ -	\$ -	
2.2.1	Elevation Surveys	8						40	\$ 9,000		\$ 164,000								\$ 164,000	\$ 173,000	
2.2.2	Transect Surveys	8			24	4			\$ 7,860		\$ 40,000								\$ 40,000	\$ 47,860	
2.2.3	Bridge Scans on Interior Creeks and Channels	8	8					40	\$ 29,000		\$ 70,000								\$ 70,000	\$ 99,000	
2.2.4	Utility Research	8			40	80	80	160	\$ 62,600										\$ -	\$ 62,600	
2.2.5	Land Surveys	8			24				\$ 7,160		\$ 50,000								\$ 50,000	\$ 57,160	
2.2.6	Easement and ROW Reconciliation (170 parcels @ \$5,000 per parcel)	8			24			40	\$ 13,160		\$ 850,000								\$ 850,000	\$ 863,160	
2.3	Coastal Protection Analyses	24	8	120		20		160	\$ 65,500										\$ -	\$ 65,500	
2.4	Hydrologic and Hydraulic Studies								\$ -										\$ -	\$ -	
2.4.1	Coordination of Interior Studies	40	8	40	120			120	\$ 65,800										\$ -	\$ 65,800	
2.4.2	Identify Tributary Drainage Systems and Watersheds								\$ -				\$ 16,620						\$ 16,620	\$ 16,620	
2.4.3	Develop Interior Drainage Criteria								\$ -				\$ 3,860						\$ 3,860	\$ 3,860	
2.4.4	Develop Hydrologic and Hydraulic Models of Existing Conditions								\$ -				\$ 124,590						\$ 124,590	\$ 124,590	
2.4.5	Analyze Impact of Sea Level Rise for Tidal Lagoon Boundary Conditions								\$ -				\$ 24,265						\$ 24,265	\$ 24,265	
2.4.6	Analyze Impact of Sea Level Rise for Interior Improvement Alternatives								\$ -				\$ 54,980						\$ 54,980	\$ 54,980	
2.4.7	Optimize Design and Operation of Selected Improvement Alternatives								\$ -				\$ 16,860						\$ 16,860	\$ 16,860	
2.5	Geotechnical Data and Subsurface Exploration								\$ -										\$ -	\$ -	
2.5.1	Review Existing Geotechnical Data and Fill Subsurface Information Gaps	24	8	16					\$ 12,000	\$ 17,480									\$ 17,480	\$ 29,480	
2.5.2	Field Investigations								\$ -	\$ 264,830									\$ 264,830	\$ 264,830	
2.5.3	Laboratory Testing	8							\$ 2,000	\$ 37,060									\$ 37,060	\$ 39,060	
2.5.4	Geotechnical Analyses and Report	64	8					80	\$ 30,000	\$ 66,560									\$ 66,560	\$ 96,560	
2.6	Corrosion Study					4			\$ 860								\$ 37,500		\$ 37,500	\$ 38,360	
2.7	Data Gathering for Environmental Documents and Permitting								\$ -										\$ -	\$ -	
2.7.1	Biological Resources Assessment	10			20			30	\$ 11,300		\$ 87,151	\$ 115,000							\$ 202,151	\$ 213,451	
2.7.2	Cultural and Historic Resources Report	10			20			30	\$ 11,300		\$ 73,320	\$ 3,000							\$ 76,320	\$ 87,620	
2.7.3.1	Phase I Hazardous Materials Study	10			20			30	\$ 11,300		\$ 28,925								\$ 28,925	\$ 40,225	
2.7.3.2	Phase II Hazardous Materials Study	10			20			30	\$ 11,300		\$ 232,440								\$ 232,440	\$ 243,740	
2.8	Jurisdictional Wetland Delineation								\$ -										\$ -	\$ -	
2.8.1	Jurisdictional Determination Report	40			80			120	\$ 45,200			\$ 36,000							\$ 36,000	\$ 81,200	
2.8.2	Verification of USACE Jurisdictional Determination								\$ -			\$ 9,000							\$ 9,000	\$ 9,000	
2.8.3	Surveys for Listed Species								\$ -			\$ 15,000							\$ 15,000	\$ 15,000	
		328	56	200	476	144	120	920	\$ 432,540	\$ 385,930	\$ 1,174,000	\$ 421,836	\$ 178,000	\$ 241,175	\$ -	\$ -	\$ 37,500	\$ -	\$ 2,438,441	\$ 2,870,981	
3.0	Design Plans, Specifications, and Cost Estimates (PS&E)																				
3.1	30% PS&E	180	60	120	180	360	360	720	\$ 362,700	\$ 10,200		\$ 30,000		\$ 99,500	\$ 90,310	\$ 32,500	\$ 117,720	\$ 380,230	\$ 742,930		
3.2	60% PS&E	120	80	160	220	500	500	900	\$ 447,300	\$ 213,770		\$ 30,000		\$ 1,249,500	\$ 29,725	\$ 25,000	\$ 41,700	\$ 1,589,695	\$ 2,036,995		
3.3	90% PS&E	120	90	180	270	600	600	1080	\$ 527,550	\$ 20,960		\$ 8,000	\$ 92,000	\$ 562,275	\$ 170,000	\$ 15,000	\$ 42,900	\$ 911,135	\$ 1,438,685		
3.4	Final PS&E	60	20	60	120	106	106	220	\$ 130,900	\$ 6,980		\$ 4,000	\$ 5,120	\$ 208,250	\$ 102,500	\$ 5,000	\$ 33,300	\$ 365,150	\$ 496,050		
3.5	Constructability Reviews	40	22		80	26	26		\$ 41,800			\$ 140,000							\$ 140,000	\$ 181,800	
3.6	Bid Documents	20	8		30	56	56	80	\$ 45,050			\$ 8,000	\$ 5,120	\$ 62,475	\$ 53,300	\$ 5,000			\$ 133,895	\$ 178,945	
		540	280	520	900	1648	1648	3000	\$ 1,555,300	\$ 251,910	\$ -	\$ -	\$ 80,000	\$ 242,240	\$ 2,182,000	\$ 445,835	\$ 82,500	\$ 235,620	\$ 3,520,105	\$ 5,075,405	
4.0	Environmental Documentation and Permits																				
4.1	Environmental Scoping								\$ -										\$ -	\$ -	
4.1.1	Project Description	40						40	\$ 16,000		\$ 21,230	\$ 8,000							\$ 29,230	\$ 45,230	
4.1.2	Initial Study and NOP	24		60	80				\$ 38,200	\$ 5,840		\$ 44,296							\$ 50,136	\$ 88,336	
4.1.3	Public Scoping and Development of Alternatives	40				160	160	80	\$ 78,000		\$ 43,610	\$ 8,000					\$ 21,120		\$ 72,730	\$ 150,730	
4.1.4	Support Regulatory Outreach during CEQA through ADEIR				16				\$ 3,440		\$ 15,000	\$ 125,000							\$ 140,000	\$ 143,440	
4.2	Administrative Draft EIR and MMRP	20			20	40	40	20	\$ 26,300		\$ 208,080	\$ 30,000							\$ 238,080	\$ 264,380	
4.3	Draft EIR and NOA	20			10	20	20	10	\$ 15,650		\$ 38,886								\$ 38,886	\$ 54,536	
4.4	Public Review and Responses to Comments	20			10	20	20	10	\$ 15,650		\$ 13,698	\$ 30,000							\$ 43,698	\$ 59,348	
4.5	Final EIR, Findings of Fact, and Statement of Overriding Considerations	8							\$ 2,000		\$ 76,400								\$ 76,400	\$ 78,400	
4.6	Public Hearing, Certification, and NOD	8			16				\$ 5,440		\$ 9,566	\$ 12,000							\$ 21,566	\$ 27,006	
4.7	Environmental Permitting through Design				16				\$ 3,440		\$ 725,000								\$ 725,000	\$ 728,440	
		180	0	60	168	240	240	160	\$ 204,120	\$ 5,840	\$ -	\$ 470,766	\$ 938,000	\$ -	\$ -	\$ -	\$ -	\$ 21,120	\$ 1,435,726	\$ 1,639,846	
5.0	FEMA Coordination								0.00										\$ -	\$ -	
5.1	Coordination with FEMA Representatives	8			40				\$ 10,600										\$ -	\$ 10,600	
5.2	Submit CLOMR and Respond to Review Comments	16		24	80	60		40	\$ 43,700										\$ -	\$ 43,700	
		24	0	24	120	60	0	40	\$ 54,300										\$ -	\$ 54,300	
TOTAL		1788	376	820	1716	2140	2056	4336	\$ 2,499,640	\$ 666,260	\$ 1,174,000	\$ 954,342	\$ 1,316,000	\$ 483,415	\$ 2,182,000	\$ 476,345	\$ 120,000	\$ 270,180	\$ 7,642,542	\$ 10,142,182	

Exhibit C – State Coastal Conservancy Addendum

Since the Project is funded in part by an allocation to District administered by the Conservancy, Consultant shall comply with the following terms and conditions. In the event of a conflict between the terms of this MSA and this Exhibit, the terms of this Exhibit shall prevail.

1. Insurance. Throughout the term of this MSA, Consultant shall procure and maintain insurance, as specified in this section, against claims for injuries to persons or damage to property that may arise from or in connection with any activities associated with the Project undertaken pursuant to this MSA.

a. Minimum Scope of Insurance. Coverage shall be at least as broad as:

- i. Insurance Services Office (“ISO”) Commercial General Liability coverage, occurrence basis (Form CG 00 01) or comparable.
- ii. Automobile Liability coverage - ISO Form Number CA 0001, Code 1 (any auto).
- iii. Workers’ Compensation insurance as required by the Labor Code of the State of California, and Employer’s Liability insurance.
- iv. Watercraft Liability: If the project will utilize private watercraft, endorsement to Commercial General Liability policy or Protection and Indemnity Insurance. Such insurance shall cover liability arising out of the maintenance and use of any watercraft covering owned, hired and non-owned vessels.
- v. Course-of-construction (also known as “Builder’s Risk”) insurance covering all risks of loss. (Any proceeds of loss payable under this coverage shall be used to replace, rebuild or repair the damaged portions of the facilities and structures constructed under this agreement.)
- vi. Property insurance covering the loss, damage, or destruction of the facilities or structures constructed under this agreement against fire and extended coverage perils. (Any proceeds of loss payable under this coverage shall be used to replace, rebuild and/or repair the damaged portions of the facilities and structures constructed under this agreement.)

b. Minimum Limits of Insurance. Consultant shall maintain coverage limits no less than:

a. General Liability: <i>(Including operations, products and completed operations, as applicable)</i>	\$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the activities under this agreement or the general aggregate limit shall be twice the required occurrence limit.
b. Automobile Liability:	\$1,000,000 per accident for bodily injury and property damage.
c. Worker’s Compensation	As required by law with Employer’s Liability of no less than \$1,000,000
d. Watercraft Liability (for private vessel) coverage, if required under 1.d., above	In the following amounts: a. Vessels under 30 ft.: \$1,000,000 combined single limit.

	b. Vessels over 30 ft. or vessel involved in research: \$2,000,000 combined single limit.
e. Course of Construction:	Completed value of the project with no coinsurance penalty provisions.
f. Property Insurance	90 percent of full replacement cost of the facilities or structures.

c. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the Conservancy Executive Officer.

d. Required Provisions Concerning the Conservancy and the State of California.

- i. Each insurance policy required by this section shall be endorsed to state that coverage shall not be canceled by either party, except after thirty days' prior written notice by first class mail has been given to the Conservancy; or in the event of cancellation of coverage due to nonpayment, after ten days prior written notice to the Conservancy. Consultant shall notify District and Conservancy within two days of receipt of notice that any required insurance policy will lapse or be cancelled. At least ten days before an insurance policy held by the grantee lapses or is cancelled, Consultant shall provide District and Conservancy with evidence of renewal or replacement of the policy.
- ii. Consultant hereby grants to the State of California, its officers, agents, employees, and volunteers, a waiver of any right to subrogation which any insurer of the Consultant may acquire against the State of California, its officers, agents, employees, and volunteers, by virtue of the payment of any loss under such insurance. Consultant agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not Consultant has received a waiver of subrogation endorsement from the insurer.
- iii. The general liability and automobile liability policies are to contain, or to be endorsed to contain, the following provisions:
 - a) The State of California, its officers, agents and employees are to be covered as additional insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of Consultant; and with respect to liability arising out of work or operations, including completed operations, performed by or on behalf of Consultant including materials, parts or equipment furnished in connection with such work or operations.
 - b) For any claims related to this MSA, Consultant's insurance coverage shall be primary insurance with respect to the State of California, its officers, agents and employees, and not excess to any insurance or self-insurance of the State of California.
 - c) The limits of the additional insured coverage shall equal the limits of the named insured coverage regardless of whether the limits of the named insurance coverage exceed those limits required by this MSA.
- iv. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of Section 2782 of the Civil Code.

- e. **Acceptability of Insurers.** Insurance shall be placed with insurers admitted to transact business in the State of California and having a current Best's rating of "B+:VII" or better or, in the alternative, acceptable to the Conservancy and approved in writing by the Conservancy Executive Officer.
- f. **Verification of Coverage.** Consultant shall furnish District and Conservancy with original certificates and amendatory endorsements, or copies of the applicable policy language, effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Conservancy Executive Officer before work commences. The Conservancy reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting the coverage, at any time.
- g. **Subcontractors.** Consultant shall include all subcontractors as insureds under its policies or shall require each subcontractor to provide and maintain coverage consistent with the requirements of this section. To the extent generally available, grantee shall also require each professional contractor to provide and maintain errors and omissions liability insurance appropriate to the contractor's profession and in a reasonable amount in light of the nature of the project with a minimum limit of liability of \$1,000,000.
- h. **Premiums and Assessments.** The Conservancy is not responsible for premiums and assessments on any insurance policy.

2. **Work Products and Acknowledgement of Conservancy Support.** All material, data, information, and written, graphic or other work produced, developed or acquired under this MSA is subject to the unqualified and unconditional right of the Conservancy to use, reproduce, publish, display, and make derivative use of all such work, or any part of it, free of charge and in any manner and for any purpose; and to authorize others to do so. If any of the work is subject to copyright, trademark, service mark, or patent, the Conservancy is granted and shall have a perpetual, royalty-free, nonexclusive and irrevocable license to use, reproduce, publish, use in the creation of derivative works, and display and perform the work, or any part of it, and to grant to any third party a comparable and coextensive sublicense. In order to acknowledge the Conservancy's support of the project, the Conservancy's name and logo shall be included in the final report in a prominent location. Consultant and District shall mention the Conservancy's support in its project-related press releases, contacts with the media, and social media postings, and on its website.

3. **Early Termination and Suspension.** Before Project is complete, the Conservancy may terminate or suspend its funding agreement with the District for any reason by providing District with seven days notice in writing. On or before the date of termination, Consultant shall provide the District and Conservancy with all work, material, data, information, and written, graphic or other work produced, developed or acquired under this MSA (whether completed or partial), in appropriate, readily useable form. Consultant, District and Conservancy expressly agree to waive, release and relinquish the recovery of any consequential damages that may arise out of the termination or suspension of this MSA.

4. **Nondiscrimination.** During the performance of this MSA, Consultant shall not deny the MSA's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. Consultant shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination. Consultant shall also comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12900 et seq.), the regulations

promulgated thereunder (Cal. Code Regs., tit. 2, §11000 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Gov. Code §§11135-11139.5), and the regulations or standards adopted by the Conservancy to implement such article. Consultant shall permit access by representatives of the Department of Fair Employment and Housing and the Conservancy upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, and all other sources of information and its facilities as said Department or the Conservancy shall require to ascertain compliance with this clause. Consultant shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. (See Cal. Code Regs., tit. 2, §11105.)

5. Prevailing Wage. Work done under this MSA may be subject to the prevailing wage and other related requirements of the California Labor Code, Division 2, Part 7, Chapter 1, sections 1720-1861. If required by law to do so, Consultant shall pay prevailing wage to all persons employed in the performance of any part of the Project and otherwise comply with all associated requirements and obligations. Consultant is responsible for determining whether the Project is subject to prevailing wage laws, and for complying with all labor laws applicable to the Project. Consultant may also review the Conservancy publication, Information on Current Status of Prevailing Wage Laws for State Coastal Conservancy Grantees (May 2018), available from the Conservancy on request; provided, that this publication is for Consultant's informational purposes only, and shall not be construed as legal advice to Consultant on whether the Project is subject to prevailing wage laws.

**San Mateo County Flood and Sea Level Rise Resiliency District
Agenda Report**

Date: March 28, 2022
To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors
From: Len Materman, Chief Executive Officer (CEO)
Subject: Authorize the CEO to execute Task Order Number 1 to the Master Service Agreement with Schaaf & Wheeler to complete data collection, 30% design, and a Draft Environmental Impact Report for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project

Recommendation:

That the San Mateo County Flood and Sea Level Rise Resiliency District (District) Board of Directors (Board) authorize the District CEO to execute Task Order Number 1 to the Master Service Agreement (MSA) with Schaaf & Wheeler Consulting Civil Engineers (S&W) for planning, design, and environmental review of the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project (Project).

Background and Discussion:

Project work conducted under the MSA is described in the staff report for the previous Agenda Item (4A). The tasks in the MSA are separated into the general categories of project management; data collection; completion of design plans, specifications, and cost estimates; and completion of environmental documentation and permit applications. The MSA will be undertaken in multiple task orders, starting with Task Order Number 1, which includes all work needed to:

- Complete 30% design, and
- Complete a Draft Environmental Impact Report required by California Environmental Quality Act (CEQA)

The tasks involved in completing these milestones, including substantial data collection, engagement with key stakeholders (Project partners, benefitting property owners, and State and federal environmental regulatory agencies), support for public outreach, and many other items are described in detail in the Scope of Services and Fee Schedule within the attached Task Order 1.

Until a future Task Order is approved by the Board, S&W and their subconsultants are only authorized to work on tasks within Task Order 1, which has a not-to-exceed amount of \$3,665,000. The District CEO will provide regular updates to the Board on the progress of work under this Task Order and will return to the Board for authorization to execute subsequent Task Orders.

Fiscal Impact on District Resources:

The Task Order Number 1 not-to-exceed amount of \$3,665,000 falls under the \$4 million in State Coastal Conservancy (SCC) funding that the Board authorized for this Project at its January 24, 2022 meeting. Task Order Number 1 satisfies the requirements of the SCC grant agreement, except for the further development of designs and potentially the development of permit applications. The remainder of District funds already allocated to this project, future grants, and contributions from Millbrae, Burlingame, SFO, and other agencies and asset owners benefitting from the Project, will be used to fund future Task Orders to complete the requirements of the SCC grant and other tasks within the MSA.

In addition to costs associated with Project consultants, the Project will demand substantial District staff time. The financial costs associated with District staff are budgeted in the approved FY 2021-22 Budget and will be included in future fiscal year budgets, including the FY 2022-23 Budget that will be brought to the Board for approval in June 2022.

Attachment:

Draft Task Order Number 1 to the Master Service Agreement with Schaaf & Wheeler Consulting Civil Engineers for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project

**DRAFT TASK ORDER NO. 1
TO MASTER SERVICE AGREEMENT FOR THE
MILLBRAE AND BURLINGAME SHORELINE AREA
PROTECTION AND ENHANCEMENT PROJECT**

This Task Order No. 1 (“Task Order”) is made and entered into by and between the San Mateo County Flood and Sea Level Rise Resiliency District, an independent special district (“District”), and Schaaf & Wheeler Consulting Civil Engineers (“Consultant”) (together, the “Parties”) on April 1, 2022.

Recital

A. District and Consultant entered into an agreement entitled Master Service Agreement for the Millbrae and Burlingame Shoreline Area Protection and Enhancement Project (“Project”) on April 1, 2022 (“MSA”), by which the Consultant agreed to perform services in accordance with Task Orders issued by District.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. **Exhibits.** The following exhibits are attached to this Task Order and incorporated by this reference:

- Exhibit A—Task Order No. 1 Scope of Services
- Exhibit B—Payments and Rates
- Exhibit C—Schedule

2. **Incorporation by Reference.** This Task Order hereby incorporates by reference all terms and conditions set forth in the MSA.

3. **Scope of Task Order.** Consultant shall perform the services described in Exhibit A, attached hereto and incorporated herein by reference, in accordance with the terms and conditions of the MSA.

4. **Payment.** For services performed by Consultant in accordance with the fee schedule, Exhibit B, attached hereto and incorporated herein by reference, District will compensate Consultant in accordance with the terms and conditions of the MSA, in an amount not to exceed \$3,665,000.

5. **SIGNATURES.** The individuals executing this Task Order represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Task Order on behalf of the respective legal entities of the Consultant and the District.

In witness whereof, the Parties, by their duly authorized representatives, affix their respective signatures:

DISTRICT

CONSULTANT

By: Len Materman

By: Charles D. Anderson, P.E.

Title: Chief Executive Officer

Title: President

Date:

Date:

Exhibit A – Task Order No. 1 Scope of Services

In consideration of the payments set forth in Exhibit B, Consultant shall provide the services described below. Additional services outside of those described herein must be authorized by the District's representative in writing prior to the commencement of that work.

Task Order No. 1 Scope of Services (or "Scope of Work")

The following listed tasks will be completed as part of this Task Order.

Task 1: Project Management

Consultant will provide project management services during the term of the MSA. This subtask includes managing subconsultants, managing the Consultant team, monitoring project budgets and schedules, providing status updates to relevant steering groups, and maintaining a document tracking system to the satisfaction of the District. Key project staff will be available for telephone consultation and team meetings (including virtual, in person, or field review meetings) throughout the duration of the MSA on significant issues (or potential deviations) related to the project schedule, work plan, or fees.

Task 1.1: Prepare Schedule and Work Plan

Consultant will prepare a draft and final project work plan, including a QA/QC developed using widely accessible scheduling software. Consultant will refine the work plan and schedule based on District comments. Consultant will meet with the District Project Manager to finalize the scope of services, budget and baseline for the project schedule.

Consultant will update the project schedule monthly and e-mail the update to the District Project Manager. Throughout the project, Consultant will coordinate with the District Project Manager and staff on all aspects of the work.

Consultant will develop a master list of project deliverables, in collaboration with the District Project Manager. This list will map out the timing of each deliverable, including submittals, review, finalization, and identify critical paths.

Deliverables

1. Detailed Project Work Plan, Schedule, and Scope in an electronic format approved by District.
2. Master List of Deliverables

Task 1.2: Prepare Invoices, Progress Reports and Scheduling Revisions

Consultant will submit monthly invoices with activities and milestones, progress reports, and project schedule reports. These documents and their content will be prepared in an agreed-upon format between Consultant and District.

Deliverables

1. Monthly invoices, status reports, and project schedule updates.

Task 1.3: Attend Project Management Meetings

Consultant will attend monthly project management meetings with District. Consultant will prepare the meeting agendas and action items in consultation with the District Project Manager. These meetings will be conducted remotely until circumstances allow for in-person meetings at the District office in San Mateo.

Deliverables

1. Monthly Project Management meeting preparation materials
2. Monthly Project Management meeting agendas
3. Summary of meeting action items

Task 1.4: Attend Meetings with Project Partners

Relevant project partners will be engaged throughout the project planning and design process, including city managers, public works directors, and city staff from the Cities of Millbrae and Burlingame. These partners will convene quarterly to receive updates and give input on key project milestones. Consultant will attend these meetings and will prepare the meeting agendas and action items in consultation with the District Project Manager. These meetings will be conducted remotely until circumstances allow for in-person meetings at the District office in San Mateo.

Deliverables

1. Quarterly Project Partner meeting preparation materials
2. Meeting summary notes

Task 1.5: Presentation Support at Key Meetings (Optional)

Consultant will support District and the Cities of Millbrae and Burlingame on preparing materials for potential presentations on a quarterly basis, including City Council meetings, public workshops, or meetings with key property owners. A total of six such meetings is anticipated over the duration of Task Order No. 1. Additional meeting support can be provided as an optional service upon request.

Deliverable

1. Meeting Presentation Materials, as requested

Task 2: Data Gathering

Consultant will work with District, the Cities of Millbrae and Burlingame, and other project partners to identify and gather relevant and readily available existing information for the Project and Project sites. After existing work has been reviewed and synthesized, Consultant will collect information needed to close key data gaps and begin design and environmental clearances.

Task 2.1: Identify, Gather, and Review Existing Information

Consultant will work with District to identify, gather, and review relevant background information for the Project and Project sites. Such information may include, but is not limited to: existing engineering data/studies for the Project area, including elevation and land surveys, hydrologic and hydraulic studies, groundwater studies, and geotechnical data; biological or cultural resource studies, as well as mapping, reports and documentation of special status species in the vicinity of the Project site; planning documents by the affected jurisdiction(s), including relevant General Plans, Project Plans and/or Master Plans; additional hazards and hazardous materials assessments for the Project area; and CEQA documents for similar projects and/or geographies.

Consultant will gather data that analyzes environmental conditions, focusing on relevant environmental statutes and regulations that include, but are not limited to: CEQA, NEPA, the Migratory Bird Treaty Act, state and federal Endangered Species Acts, Clean Air Act, Clean Water Act, Porter-Cologne Act, California Fish and Game Code, cultural and archaeological statutes, noise ordinances, and traffic laws.

Deliverable

1. Digital folder with an organized file structure of all background information identified

Task 2.2: Field and Desktop Investigations

Consultant will conduct field and desktop investigations to fill key data gaps to develop basis of information for further detailed study and design.

Task 2.2.1: Elevation Surveys

Consultant will complete an aerial survey of the Project area, including offshore and landward as necessary to encompass the limits of potential Project impact. This survey will be suitable for preparing construction document level planimetrics, ground elevations and contours, and offshore bathymetry. Consultant will:

- Provide horizontal and vertical control to State Plane Coordinate System and NAVD88, respectively
- Schedule flight(s) for low tide and best daylight hours
- Schedule flight(s) with San Francisco International Airport
- Furnish point cloud data set
- Reduce point cloud data set into digital mapping appropriate for plan sheets

Task 2.2.2: Transect Surveys

Consultant will complete field transects at approximately 1,000-foot-spacing immediately offshore from the Project reach. The transect surveys will be conducted to verify aerially derived bathymetry, identified eelgrass, and physical anomalies that may have cultural or historical attributes and potential hard

substrate habitat(s) such as 'debris piles' for biological communities other than mudflat/benthic that could provide habitat for a different suite of species and, if impacted, would require public disclosure and potential mitigation.

Task 2.2.3: Bridge Scans on Interior Creeks and Channels

Consultant will complete bridge geometry scans to define bridges and culverts three dimensionally as suitable for the hydraulic analyses to be completed as part of Task 2.4. Scanned data will be tied to the same horizontal and vertical control network used for the County's 2017 LiDAR data set and used for hydrologic and hydraulic analyses. The scans are also suitable as record data for the bridges and culverts.

Task 2.2.4: Utility Research

Consultant will obtain available record information from public agencies and private utilities at a level sufficient for planning and preliminary design. Depending upon the preferred Project alternative and discovery of interfering utilities, potholing may be recommended. Those costs are unknown and not included in the scope of services.

Deliverables

1. Digital version of aerial photography
2. Digital record of horizontal and vertical control networks
3. Point cloud data file
4. ACAD base mapping
5. Shoreline transects
6. Bridge scans and point data
7. Digital or scanned utility maps
8. GIS shapefiles of utility information
9. Printed materials upon request

Task 2.3: Coastal Protection Analyses

Consultant will complete coastal hazard and protection analyses for the defined shoreline protection reach. Coastal flood hazards will be evaluated using FEMA-approved methodologies to establish the maximum wave height and maximum wave runup associated with the 100-year storm surge, for each identified Project alternative. Coastal analyses will be based on published data, the transects obtained in Task 2.2.2, and FEMA's California Coastal Analysis and Mapping Project. The following conditions will be assessed:

1. Required top of flood protection elevations for Project alternatives under existing tidal conditions (quantitative analysis)
2. Required top of flood protection elevations for Project alternatives with future sea level rise (quantitative analysis)
3. Erosion protection for alternative coastal barriers (quantitative)
4. Sedimentation for Project alternatives under existing tidal conditions (qualitative)
5. Sedimentation for Project alternatives with future sea level rise (qualitative)
6. Preliminary design of alternative wave break

Deliverable

1. Coastal Protection Analysis Report

Task 2.4: Hydrologic and Hydraulic Studies

Consultant will complete hydrologic and hydraulic studies for the area tributary to the shoreline protection reach and the creeks and drainage channels within that tributary area. Local drainage facilities will be evaluated as necessary to establish the existing residual 100-year floodplain following NFIP mapping standards and FEMA criteria for interior drainage studies. Hydrologic and hydraulic studies will evaluate flood risks from San Francisco Bay, including future sea level rise, and the combination of coincident 100-year Bay and fluvial events. Future tributary discharges without hydraulic constrictions will be estimated using the State of California's Cal-Adapt climate adjustment tools.

These studies will be performed to be adequate as a basis for Project design and ultimate certification for FEMA accreditation, including FEMA's interior drainage and closed system requirements.

It is explicitly agreed that local storm water systems – except for those 18” in diameter and larger that outfall directly to San Francisco Bay or one of the tributary creeks or canals – are not part of the Project improvements. Because it is understood that these storm water systems already have deficiencies, one objective of these analyses will be to support the fact that the proposed Project will not adversely impact these systems. Another objective is to evaluate the systems to the extent required to understand residual interior flooding under existing and post-Project conditions for FEMA certification of improvements.

Each significant storm drain gravity outfall (assumed to be 18 inches in diameter or larger) or pumped outfall will be included in the hydraulic model.

There are five major interior drainage outfalls to the Bay:

1. Sanchez Creek watershed outfall (including all outfalls to lagoon) – Burlingame
2. Easton Creek watershed outfall – Burlingame
3. Mills Creek watershed outfall – Burlingame
4. El Portal Creek watershed outfall (Cowan Canal) – Burlingame
5. Highline Canal/Lomita Canal – Millbrae

Under existing conditions, some of these systems may have deficiencies that the two cities would address with their own improvements. Depending upon the ultimately preferred LEDPA Project, new flood control improvements to protect the lower areas from tidal flooding from the Bay could result in an increased barrier to gravity drainage to the Bay. Hydrologic and hydraulic studies will evaluate the mitigation measures that would be needed to offset impacts to the depth or extent of local 100-year flooding caused by identified Project alternatives.

Task 2.4.1 Coordination of Interior Studies

Consultant will coordinate the tributary interior hydrology and hydraulic studies described under this subtask with the coastal protection analyses completed under Task 2.3, design development identified in Task 3, and environmental documentation described in Task 4.

This coordination includes compiling statistically based coincident tide cycle boundary conditions for hydrologic and hydraulic modeling. Coincident tide cycles for impact analysis and design will be derived using available long-term tide data and streamflow data relevant to the San Francisco Peninsula.

Task 2.4.2: Identify Tributary Drainage Systems and Watersheds

Review, compile, and update available storm drain system information including collection pipes and pump station characteristics for Millbrae and Burlingame and obtain previously completed hydrologic/hydraulic models for the major interior drainage outfalls along the project reach. Interior drainage analyses will be based on ground information with an assumption that under extreme runoff events, local storm drain systems are surcharged. Therefore, detailed surveys to establish storm drain inverts – except for those 18” in diameter and larger that outfall directly to San Francisco Bay or one of the tributary creeks or canals – are not necessary and not included in this scope of work. Since the analyses will only reflect the hydrologic response of interior watersheds, limited storm drainage trunk data will need to be collected only. Local precipitation gage data and corresponding stream flow or stage gage data will also be collected.

Task 2.4.3: Develop Interior Drainage Criteria

Review existing Burlingame and Millbrae drainage criteria, San Mateo County drainage criteria, FEMA criteria, and criteria from other local Bay Area agencies and develop a clearly defined criteria to meet local, state, and federal requirements for the identification of level of service and deficiencies.

Task 2.4.4: Develop Hydrologic and Hydraulic Models of Existing Conditions

Complete hydrologic model(s) to provide design discharge hydrographs for each of the five outfall systems will be developed. The hydrologic models will include all the watersheds draining to each of the five outfalls. The hydrologic models will reflect the hydraulics impacts of the conveyance trunks for the watersheds upstream of approximately El Camino Real implicitly, as they will not be modeled explicitly in the hydraulic portion of the models.

Detailed hydraulic models of the five outfall systems and their tributaries from the Bay upstream to approximately El Camino Real, will be developed. The models will include the open channel trunks and storage areas behind outfalls into these open channels (approximately 2 square miles) only. The boundary condition for these models will be the Bay. Approximate hydraulic model quantities are tabulated below.

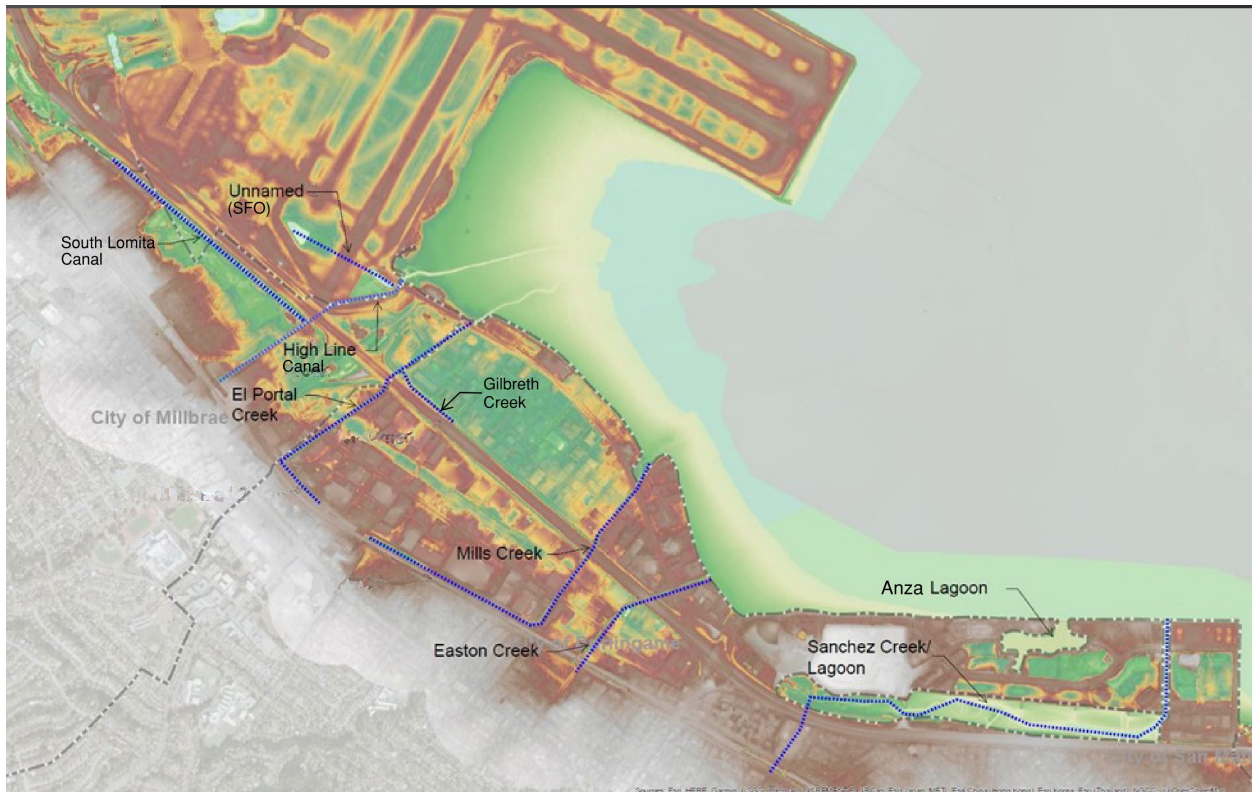
Stream/Channel	Beginning	End	Length (feet)	Bridge/Culvert Crossings
South Lomita Canal	BART	Highline Canal	5,100	1
Unnamed	SFO	Highline Canal	2,250	pipe
Highline Canal	BART/Caltrain	Bay	3,300	3
El Portal Creek	BART/Caltrain	Bay	4,750	5
Gilbreth Creek	Highway 101	El Portal Creek	1,100	0
Mills Creek	Caltrain	Bay	5,950	4
Easton Creek	Caltrain	Bay	2,400	6
Sanchez Creek	California Drive	Burlingame Lagoon	1,070	4
Burlingame Lagoon	Sanchez Creek	Bay	7,500	2
Anza Lagoon		Bay	1,300	1

The hydrology and hydraulics will be calibrated and validated using available information including regional rainfall and streamflow data. The calibration will consist of a review of the hydrology at the outfalls and a detailed refinement of the hydraulics in the low-lying areas near the outfalls.

The hydrology review will include the calibration and validation of rainfall/runoff transformation compared to available gage data, flood frequency analyses and calibration/validation of outfall water surface elevations near the outfalls compared to available gage data and anecdotal data.

These models will be used to as the basis for the FEMA-required interior drainage study and as the baseline condition for CEQA/NEPA impact analyses. The models will also be used to assess design alternative pump stations at each creek mouth or the alternative tidal lagoon facility and evaluate the interaction of fluvial flooding with coincident tides.

Limits of hydraulic study are indicated in the figure below.



Deliverable

1. Interior Drainage Study

Task 2.4.5: Analyze Impact of Sea Level Rise for Tidal Lagoon Improvement Alternatives

For the proposed conditions, the hydraulic model will be extended to the proposed tidal lagoon and the boundary conditions will be moved to outside of the proposed lagoon. Alternatives will be incorporated as directed by the design team.

Using the validated hydraulic model(s) of both existing and proposed conditions from Task 2.4.3 and statistically derived coincident tide cycles based on incremental sea level rise with randomized timing relative to peak discharge from Task 2.4.1, alternative Project impacts to coastal and riverine flooding within the five tributary creeks and channels will be analyzed using these boundary conditions:

- Existing tide cycle with expected value timing for FEMA certification and to establish the baseline condition for CEQA/NEPA analyses. This represents conditions for the No Project Alternative.
- A free discharge condition (no tidal backwater) with existing interior drainage systems to establish points of interior hydraulic control. This indicates the limits of potential project benefit and is applicable only to offshore alternatives.
- Tide cycle with sea level rise and expected value timing. This boundary condition is used to address project impacts from offshore alternatives.
- Tide cycle with sea level rise and level of confidence in the timing between peak riverine discharge and high tides acceptable to the District and its Partners. This more robust boundary condition would be used as the basis of design for offshore alternatives.

It is assumed that an alternative will be considered only if it can be shown that there is no impact or there is a beneficial impact to interior drainage. As discussed above, it is assumed that the interior systems – except for those 18” in diameter and larger that outfall directly to San Francisco Bay or one of the tributary creeks or canals – will not be improved. It is assumed that the project as proposed must not provide a detrimental impact to any interior system that outfall into the open channels or lagoons.

Recent local flood control improvement construction bids will be used to develop preliminary construction costs for each candidate alternative. From there, an alternative selection process that includes costs, benefits, constructability, resiliency, ability to permit, public perception and aesthetics, environmental and recreational benefits and so on will be used to formulate a selection of alternatives and a final preferred project alternative.

Task 2.4.6: Analyze Impact of Sea Level Rise for Interior Improvement Alternatives

If project constraints require an alternative that no longer includes the tidal lagoon and improvements must be constructed at the shoreline or inland, the model will be modified to reflect inland alternatives. The improvements could include some combination of floodwalls, bridge and culvert improvements, tide gate structures, and pumping facilities.

For each project alternative, establish scope of project improvements required to meet the interior drainage requirements established in Task 2.4.3. It is assumed that an alternative will be considered only if it can be shown that it can meet all interior drainage criteria at the outfall of the interior system (from the pipe systems into the open channels or lagoons).

Project impacts to coastal and riverine flooding within the five tributary creeks and channels will be analyzed using these boundary conditions:

- Existing tide cycle with expected value timing for FEMA certification and to establish the baseline condition for CEQA/NEPA analyses. This represents conditions for the No Project Alternative.
- Tide cycle with sea level rise and expected value timing. This boundary condition is used to address project impact from onshore and interior alternatives.
- Tide cycle with sea level rise and confidence value timing. This more robust boundary condition would be used as the basis of design for onshore and interior alternatives.

Task 2.4.7: Optimize Design and Operation of Selected Improvement Alternatives

The model reflecting the selected improvement alternative will be run using a selected long-term window (from 2 weeks to 2 months) to refine the understanding of the proposed tide gate/pump station operations to provide design parameters. The long-term simulation data will be developed from the data collected in Task 2.4.1. Alternative project designs will be evaluated using future 100-year discharges with interior capacity restrictions removed. Tidal lagoon alternatives will be further evaluated assuming a free discharge downstream boundary condition.

Task 2.5: Geotechnical Data and Subsurface Exploration

Consultant will work with the District and the Cities of Millbrae and Burlingame to identify, compile, and evaluate available geotechnical information for the project area and vicinity. The data sources will include the District's identified available information in their files, published geologic maps, and unpublished geotechnical reports for public facilities and from the cities' files for nearby private improvements.

Data will also be obtained from state sources such as Caltrans and the Department of Toxic Substances Control. The data will be collected, compiled, and stored in a project-specific GIS database. The extent and reliability of the data will be assessed and used to determine data gaps and inform the subsurface exploration and testing plans. Reliable data will be leveraged to the extent possible to control costs.

Task 2.5.1: Review Existing Data and Fill Subsurface Information Gaps

Consultant will identify data gaps and develop a field exploration to collect sufficient data to address the identified data gaps. A preliminary field exploration plan has been developed to conform with accepted FEMA/DWR guidelines.

The plan assumes one exploration point every 1,000 linear feet and additional points where levees may be used. It is further assumed that reliable and useable available subsurface information from previous investigations will cover one-third of the explorations.

Task 2.5.2: Field Investigations

Geotechnical field investigations within the project limits will include a mix of soil borings and Cone Penetration Tests (CPT), with a ratio of one boring for every three CPT probes. This subtask is based on

a combined total of 22 field exploration days are required to appropriately cover the 46,000 feet of flood barrier and potential pump stations. A similar level of geotechnical effort is anticipated for other flood barrier alternatives. All planned exploration locations will be initially located in the field using handheld GPS devices.

Consultant will conduct detailed site reconnaissance to identify and review logistical issues related to the implementation of the exploration work. Preliminary locations of borings and CPT soundings will be marked for clearance through Underground Service Alert (USA). For areas where it appears that private underground utilities (or other underground facilities not addressed by USA) are present, a subcontracted underground utility locating service will be retained to mark the locations of underground utilities. Underground utility locating may be needed for about 40% of the exploration locations.

The potential presence of buried rock and rubble under the perimeter of the filled ground will also require careful exploration planning. Consultant will apply for and obtain applicable permits (drilling or encroachment) from the local agencies (San Mateo County, Millbrae, Burlingame, Caltrans, if necessary) having jurisdiction for the boring locations. Many exploration locations will likely require access onto or through private property. Therefore, temporary access agreements will need to be obtained. For the exploration locations within the public right-of-way, it is anticipated that about half of the sites will require traffic control or closing parking spaces.

Borings will be drilled using a combination of hollow-stem and mud-rotary drilling methods to depths between 20 and 50 feet below existing grade, depending on the planned improvements and subsurface conditions that are encountered at a given location. Borings will generally be to a depth equivalent to two to three times the planned levee or floodwall height and extended in all cases to at least 10 feet below the invert of the adjacent channel. Soil samples will be collected at regular intervals so that sufficient laboratory testing can be performed to classify the soils encountered and develop engineering parameters for strength and compressibility.

Task 2.5.3: Laboratory Testing

Laboratory testing of samples will be programmed based on the anticipated temporary loading conditions during construction and long-term loading conditions and will index properties, strength, permeability, consolidation, and corrosion. The selection of laboratory tests will be determined based on conditions encountered and USACE guidelines.

Task 2.5.4: Geotechnical Analyses and Report

Consultant will complete geotechnical analysis of the subsurface conditions and laboratory test results to support design and construction recommendations and as the basis for discussions of construction constraints for the selected alternative. Analyses will be performed under the direction of a Registered Geotechnical Engineer to develop conclusions and geotechnical-related recommendations for the design and construction of the floodwalls, levees, and other project elements. The analyses will be completed in accordance with USACE, DWR, and other applicable standards and guidelines. Floodwall and levee seepage and stability analyses will be performed using SEEP/W and SLOPE/W for representative cross-sections based on observations, levee and floodwall geometry, and subsurface conditions.

Results of the geotechnical investigation, laboratory testing, and engineering analyses will be provided with recommendations in a project geotechnical report. The report will be prepared in draft form and then finalized after review at the 30% design level. Addenda to the final report will be prepared during subsequent phases of the project.

Deliverable

1. Geotechnical Report

Task 2.6: Corrosion Study

Consultant will complete a corrosion study to identify design rates of steel corrosion and provide recommendations to mitigate corrosion of concrete structures in a marine environment. This study will be used to inform Project alternatives and the costs thereof.

Consultant will establish corrosion rates for steel structures and elements intended that would be exposed to the Bay versus the area exposed along interior creeks and canals. Consultant will visit the site(s) and verify how existing structural elements are performing based on their exposure conditions. Consultant will examine other steel structures at SFO as allowed, in South San Francisco, San Mateo, Foster City, and Redwood City to estimate approximate corrosion rates for piles in the splash zone and other exposures. Consultant will compare the field data with the theoretical data from ISO Standards, NACE Standards, CalTrans, etc. to propose design corrosion rates. Corrosion rates are anticipated to be different in the areas exposed to the Bay versus interior areas.

Deliverable:

1. Corrosion Study Report

Task 2.7: Data Gathering for Environmental Documents and Permitting

Data gathering efforts will reflect the likelihood of preparing an expanded Environmental Impact Report (EIR) to streamline any potential NEPA documentation required for the Project, which will depend on whether federal funding is used to support the project and the requirements and expectations of federal regulatory agencies with authority over the project.

Task 2.7.1: Biological Resources Assessment

Consultant will prepare a Biological Resources Assessment (BRA) report to address the baseline marine and terrestrial biological conditions that could be affected by the project and will be of sufficient detail to support the CEQA and/or NEPA environmental review and regulatory permitting processes.

The focus of the BRA will be to inventory and assess the possible biological resources that could be affected by the project and identify measures to avoid, minimize, and/or compensate for potential effects to state and federally listed species and other regulated biological resources. The proposed work program involves review of existing literature sources (e.g., California Department of Fish and Wildlife [CDFW] California Natural Diversity Database [CNDDDB], United States Fish and Wildlife Service [USFWS] Critical Habitat Mapper), a reconnaissance-level site visit, and preparation of the BRA report to incorporate the findings of the detailed field investigation, assess potential impacts, and develop recommendations.

Work includes developing safety documents, reviewing background information, and conducting site surveys based on mapped critical habitat, Essential Fish Habitat, and submerged vegetation known to exist. Background review will include review of the base maps in CAD and/or GIS formats and preparation of preliminary desktop vegetation and habitat mapping.

Following the background review and desktop mapping, a reconnaissance-level field survey will be completed to document marine, estuarine and other aquatic resources, terrestrial vegetation and habitat types and other terrestrial resources (e.g., native trees), and assess the site for the capacity to support special status species and other regulated biological resources (e.g., Essential Fish Habitat). This will include a broad-based assessment of soft bottom communities (benthic infauna) conducted in locations of the proposed levee and/or breakwater to describe and quantify the intertidal and subtidal soft bottom communities. Soft bottom sampling will utilize a shallow draft motorized vessel outfitted with a davit or boom to support the deployment of a single or double Van Veen grab to take sediment collections to approximately 1.0-foot depth.

The collected samples will be analyzed for physical grain size then rinsed through a 1.0 mm sieve and remaining material placed in laboratory containers for eventual sorting and species identification. Additionally, the site visit will include scuba diving or drop camera validation surveys of observed acoustic anomalies detected during sonar surveys to assess presence/absence of eelgrass (*Zostera spp.*) and document existing subtidal habitat(s).

The results of the research and field survey will be documented in the BRA report, including lists of observed species and potential for special status species to occur at the project site. The BRA report will be accompanied by maps depicting location(s) of special status species and/or other regulated biological resources, if any, in relation to the project site and related facilities, CNDDDB and other database query results, and surveyed areas.

The analysis will include an evaluation of regulated biological resources that may occur or are known to occur within a 5-mile buffer of the project site. The BRA will also include vegetation/habitat maps and site photographs as figures or attachments. Where potential impacts are identified, recommended measures will be developed to avoid, minimize, and/or compensate for identified impacts.

Measures, and any monitoring strategies, will be developed based on previous experience with projects in this region of San Mateo County and regulatory agency requirements for coastal/bay projects. They will be of sufficient detail for use in the subsequent environmental review and regulatory permitting processes, including those with the USACE, San Francisco Bay Conservation and Development Commission, State Lands Commission, Regional Water Quality Control Board, and/or CDFW. It is assumed USACE would initiate consultation with the National Marine Fisheries Service (NMFS) and/or USFWS pursuant to Section 7 of the Federal Endangered Species Act. Therefore, Consultant's BRA report will provide the level of analysis necessary to assist with USACE's consultation with NMFS and/or USFWS.

A stand-alone Biological Assessment will be prepared that will serve as the focused consultation document. Consultant will coordinate with all involved parties to determine the level of potential effects and to develop/refine measures to avoid and minimize impacts to federally and/or state listed species.

Deliverable

1. Biological Resources Assessment Report

Task 2.7.2: Cultural and Historic Resources Assessment

The project's location on the periphery of the San Francisco Bay and in an area of rapid development has the potential to encounter historical and prehistoric resources that could be potentially impacted by project activities. The cultural resources report will address archaeological resources, historic built resources, and the potential for previously unrecorded resources that could be encountered because of the Project alternatives.

The following tasks are included in this work effort to meet the CEQA and National Historic Preservation Act (Section 106) requirements regarding cultural resources. The Cultural Resources Technical Report prepared under this subtask will present findings, recommendations, and impact assessments including:

- California Historical Resources Information System (CHRIS) records search
- Historical map examination
- National Register of Historic Places listings
- State Lands Commission Shipwreck Database listings
- California Register of Historical Resources
- Built Environment Resources Directory
- Archaeological Determinations of Eligibility list
- California Historical Landmarks
- Native American Heritage Commission (NAHC) / Sacred Lands File (SLF) search
- Pedestrian survey with 10-meter transects
- Geoarchaeological review
- Paleontological inventories

If cultural resources are identified that could meet the definition of historic properties or historical resources are identified, additional documentation and study beyond that proposed in this scope of work would be required to address environmental review requirements. If an adverse effect to a historic property (or a significant impact to a historical or unique archaeological resource, or Tribal Cultural Resource) would occur, additional consultation among the consulting parties would be required, and would ultimately require the execution of a Memorandum of Agreement to resolve such an effect.

Deliverable

1. Cultural and Historic Resources Assessment

Task 2.7.3: Hazardous Material Investigations

Due the filling of the tideland areas in the 1950s, 1960s, 1970s, and current and/or historical land uses (e.g., municipal landfill, gasoline stations, rental car facilities, airport operations), there is the potential to encounter contaminated soil and/or groundwater during subsurface construction activities. It is anticipated the following environmental concerns may be present in the Project area:

- known soil and/or groundwater release sites such as Cortese sites
- landfills
- PFAS releases
- underground storage tank sites
- lead based paint
- asbestos containing materials
- aerial deposited lead (highway)
- aerial deposited fuel (airport)
- common railroad corridor contaminants
- artificial fill
- open water/bay concerns (sediment disturbance, dewatering)

Task 2.7.3.1 Phase I Study. A desktop *Hazardous Materials Evaluation* will identify potential impacts from hazardous materials and wastes associated with the proposed project. The project area for the *Hazardous Materials Evaluation* report includes the project footprint plus 100 feet. The evaluation will include a preliminary review of potential hazards associated with the existing project area that may affect the environment and construction/operation of the proposed project.

Task 2.7.3.2 Phase II Study (Optional). A Phase II Environmental Site Assessment (ESA) will be performed along the shoreline (landside) and in the offshore areas (waterside) completed by advancing soil borings on a linear basis along the potential construction alignment and in areas identified in areas of concern identified in the Hazardous Materials Evaluation. The scope of work of the Phase II ESA is intended to support the preparation of the CEQA document and also obtain data that may be required to satisfy permitting requirements. For the landside assessment activities, up to 18 soil borings will be advanced on a linear basis along the shoreline (one boring every approximately 1,000 feet). The borings will be advanced to a depth of 5 feet below ground surface (bgs) using a direct-push drilling rig.

Soil samples will be collected at depths of 1, 3, and 5 feet bgs and one grab groundwater sample will be collected per boring, if encountered. For the waterside assessment activities, sediment samples will be collected from 18 locations at depths of 1, 3, and 5 feet bgs from geotechnical cores/grab samples. Quality assurance/quality control (QA/QC) samples (i.e., duplicate and equipment blank samples) will also be collected.

Soil, groundwater, and sediment samples will be collected and analyzed for total petroleum hydrocarbons in the gasoline, diesel, and oil ranges by United States Environmental Protection Agency (EPA) test method 8015B; Title 22 metals by EPA method 6010B/7471A; volatile organic compounds by EPA method 8260B with EPA method 5035 preservation; semi-volatile organic compounds by EPA method 8270C; polychlorinated biphenyls by EPA method 8082, organochlorine pesticides by EPA method 8081A, and per- and polyfluoroalkyl substances (PFAS) by EPA method 537.

A Phase II ESA report will be prepared that includes a summary of field sampling activities and laboratory analytical testing results and provides conclusions and recommendations regarding potentially impacted soil, sediment, and/or groundwater that may be encountered during subsurface construction activities. Since the project involves providing a shovel ready project, the Phase II ESA will be performed prior to beginning the EIR.

The following assumptions were utilized during the development of the cost estimate for the Phase II ESA:

- A boring permit will be required from San Mateo County Health, Environmental Health Services for the landside soil borings because groundwater may be encountered. One permit will be sufficient for the 18 proposed boring locations.
- If encroachment permits or access agreements for borings on private property are required, these will be obtained by others.

- Waterside cores/grab samples will be collected by the project geotechnical engineering firm. Consultant will collect sub-samples from the cores/grab samples and place the samples into laboratory supplied containers.
- The boring/core logs for the sediment cores/grab samples will be prepared by the geotechnical engineering firm.
- Up to 4 days on site for landside assessment activities.
- Up to 10 days of sampling for the waterside assessment activities.
- Up to 63 soil samples, 70 sediment samples, and 23 groundwater samples (including QA/QC samples) will be analyzed on a standard 10 business day turnaround time except for PFAS analysis, which will be analyzed on a standard 15 business day turnaround time.
- One 55-gallon drum of investigative derived waste will be generated as part of landside assessment activities and disposed of as non-hazardous waste.

Deliverables

1. Phase I Hazardous Materials Evaluation Report
2. Phase II Environmental Site Assessment Report

Task 2.8: Jurisdictional Wetland Delineation

Consultant will conduct a field investigation within the potential Project limits to collect data necessary to identify and delineate the geographic extent of potential jurisdictional waters in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the Corps' 1987 Wetlands Delineation Manual, the Corps' 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) and supporting guidance documents based on current and historic land use conditions.

The location of each jurisdictional water potentially subject to Corps and RWQCB jurisdiction will be field located using a Trimble Pathfinder XRS GPS unit (accuracy <50cm). Field data taken regarding vegetation, soil, and hydrology conditions observed during the delineation process will be digitally formatted by Consultant and data linked for use in ARC/INFO during data analysis. As some areas within potential Project limits are currently tidal wetlands, field data studies will concentrate on defining the wetland/upland interface.

All areas identified as potential jurisdictional waters of the United States and / or State will be mapped on to a 100-scale base map. The base map will consist of a color orthorectified aerial photograph and engineer level topographic mapping. All potential jurisdictional areas identified during data analysis and mapping will be reviewed with respect to possible exemption from Corps and RWQCB jurisdiction.

Task 2.8.1: Jurisdictional Determination Report

Consultant will prepare a jurisdictional determination report in accordance with Corps guidelines and upon client review and approval will submit the report to the Corps for verification under the Corps Preliminary Jurisdictional Determination procedure. This procedure assumes that a connection to navigable waterways is present and precludes the need for more detailed report documentation and review by the Corps under the Corps/USEPA Rapanos evaluation guidelines. The rationale for the use of the Preliminary Jurisdictional Determination procedure is: (1) the jurisdictional waters potentially impacted by the project are tidal and as such there is no argument that there is a lack of connection with traditionally navigable water, (2) the delineation can be completed and verified by the Corps in a shorter time frame, and (3) the approach is less costly than obtaining a verified jurisdictional determination from the Corps.

This task also includes investigations allowing a determination of jurisdictional boundaries pursuant to regulatory requirements of the RWQCB (wetlands/water jurisdiction of RWQCB is not always consistent with that of the Corps and may include areas not considered jurisdictional by the Corps), the California Department of Fish and Wildlife, BCDC and the State Lands Commission.

It is assumed that access to potential jurisdictional waters will be granted to Consultant staff for sampling, including hand digging shallow pits in both City and private properties.

Task 2.8.2: Verification of Corps Jurisdictional Determination

Consultant will coordinate with the Corps, as necessary, during the jurisdictional determination process which may include a site visit with Corps staff, phone calls, emails, meetings, and preparation of additional information or documents (i.e., maps, watershed data, functional analysis methods, etc.). Consultant will coordinate all aspects of the jurisdictional determination process with the client and/or designated representative. Consultant will keep the client informed of the jurisdictional determination progress with a monthly phone call or email. Note that verification of regulatory jurisdictional boundaries of RWQCB, CDFW, BCDC and State Lands is typically accomplished as part of the regulatory permit process. Once delineations are verified, Consultant will transfer a final digital version of the jurisdictional boundaries to the Project Lead who will direct the information transfer for inclusion on project plans.

If a more accurate survey is required at various locations along the project levee, Consultant will accompany the project surveyor subcontractor as necessary to assure that the jurisdictional boundary is accurately surveyed to an engineer scale level of accuracy.

Task 2.8.3: Surveys for Listed Species

Locations along the Bay shoreline may be considered potential habitat for federally listed and state-listed threatened species. Protocol surveys will be conducted within the potential API. Surveys will be conducted by species experts specifically permitted to work with the listed species by the USFWS. Surveys will follow established agency protocol in term of timing of surveys and spacing of sampling stations. At the end of the survey, Consultant will map location of listening stations, all pairs or individual species located during the surveys, information on disturbances (e.g., dogs, air traffic) and weather information. Once the protocol surveys are complete, Consultant will generate a letter report that will include data sheets, a map showing the location of the listening stations, location of listed species detected during the surveys, and survey results and information from other protocol surveys that have been conducted within proximity to the Project site. The letter report will be submitted to the USFWS for review and comment. Consultant will coordinate with the USFWS regarding survey results and to establish any conservation measures that may be required such as work windows and buffer limits.

Deliverable

1. Jurisdictional Wetland Determination Report

Task 3: Design Plans, Specifications, and Cost Estimates

Table 1 lists the design plan sheet types expected at various submittal stages. Task Order No. 1 includes only the 30% submittal package. Not all project elements will necessarily be part of the construction document package depending upon the preferred Project alternative selected for detailed design. Project plans will be produced on 22-inch by 34-inch sheets for true half-scale 11-inch by 17-inch companion plans, in electronic and printed formats. Specifications will be compiled in Microsoft Word with final camera-ready documents in a pdf format.

Prior to submittal for District review, the 30% PS&E submittal will be reviewed by construction professionals – not contractors – under contract to Consultant. This will include constructability review of the plans, specifications, construction sequencing simulations, product lead time information, site logistics, costs, contingencies, and scheduling.

Deliverables

1. 30% Plans
2. Preliminary Table of Contents for Specifications
3. Preliminary Estimate of Probable Construction Value
4. Constructability Review Report

Table 1: Design and Construction Document Submittals

Sheet Type	30% PS&E (Task 3.1)	60% PS&E	90% PS&E	Final PS&E
Cover Sheet	•	•	•	•
Drawing List	•	•	•	•
Sheet Index	•	•	•	•
Notes, Abbreviations, and Legend	•	•	•	•
Site Access and Haul Routes	•	•	•	•
Pre-Approved Storage and Stockpile Areas	•	•	•	•
Traffic Detour Plans	•	•	•	•
Survey Control Layout and Rights of Way		•	•	•
Demolition and Utility Relocations		•	•	•
Grading Plans		•	•	•
Sheet Pile Installation Plans	•	•	•	•
Floodwall Plans and Profiles	•	•	•	•
Shoreline and Trail Access Plans	•	•	•	•
Construction Details			•	•
Paving and Striping			•	•
Typical Cross Sections	•	•	•	•
Cross Sections		•	•	•
Structural Plans		•	•	•
Structural Details			•	•
Architectural Plans			•	•
Architectural Details			•	•
Landscaping and Irrigation		•	•	•
Site Furnishings		•	•	•
Wayfinding and Interpretive Elements			•	•
Electrical Plans		•	•	•
Electrical Details			•	•
Corrosion Protection Plans and Details			•	•

Task 4: Environmental Documents and Permitting

Consultant will complete a Draft Environmental Impact Report (EIR) as required by the California Environmental Quality Act (CEQA). The appropriate level of CEQA documentation for the project is an EIR since it is reasonably anticipated the project could result in a significant unavoidable impact. The federal lead agency and District may partner together as joint lead agencies for the preparation of a joint CEQA-NEPA document (EIR-EIS or EIR-EA). Alternatively, the federal lead agency may choose to prepare a separate, stand-alone NEPA document, either concurrently with or following completion of the CEQA process. Given these possibilities, Consultant will prepare an expanded EIR as the most streamlined and cost-efficient approach to environmental compliance.

Task 4.1: Environmental Scoping

Consultant will complete environmental scoping tasks in advance of preparing CEQA/NEPA documents under subsequent task order(s).

Task 4.1.1: Project Description

Consultant will develop alternative descriptions so that input from agencies and the public received during the public scoping period may be used to inform the alternatives.

Task 4.1.2: Initial Study and NOP

An Initial Study will be prepared to identify and characterize potential impacts of the project, based upon the project description developed under Task 4.1 and approved by the District. The Initial Study will address each of the environmental issues areas from the 2022 CEQA Guidelines Appendix G Environmental Checklist and identify issue areas where the project may have potentially significant impacts.

Consultant will prepare a Notice of Preparation (NOP), including an overview of the proposed project and guidance for the public on how to submit comments. The District will publish the NOP on its website and distribute it to its mailing list for the project; the NOP is filed electronically with the State Clearinghouse (SCH), as well as with the San Mateo County Clerk Recorder to initiate the project's 30-day public scoping period.

During this stage, Consultant will help the District conduct Native American government-to-government consultation in accordance with Assembly Bill (AB) 52. The purpose of AB 52 consultation is to identify any Tribal Cultural Resources (TCRs) within the project site that may be impacted by the proposed Project. Consultant will draft letters and a map of the project site for the District to send to Native American tribal government contacts, as well as provide District with a tracking table and instructions for successful AB 52 consultation. The results of the AB 52 consultation will be included in the appropriate sections of the EIR. Consultant will also help the District with Tribal Consultation under Executive Order 12898 for NEPA purposes.

Task 4.1.3: Public Scoping and Development of Alternatives

During the public scoping period, Consultant will assist District staff in planning and conducting a meeting for the public, during which Consultant will provide a presentation with an overview the CEQA process and timeline, the proposed project purpose, need, and preliminary design, and the procedures to submit comments on the project. Comments will be summarized into general themes to be addressed in the EIR and inform the development of project alternatives. Alternatives to the project will also draw from the data collected under Task 2, the 30 percent design conducted under Task 3, and the alternatives identified in previous studies. Alternatives will be aligned with the District's goals and objectives to provide environmental and recreational improvements concurrent with the reduction of climate change-related flood hazards.

Task 4.1.4: Support Regulatory Outreach during CEQA through DEIR

Consultant will support the District's outreach to regulatory agencies through the preparation of the Draft EIR (DEIR) with experiential and specific Project-related technical information. Consultant will identify the multiagency jurisdictional delineations and provide an assessment of permit feasibility for each project alternative. This assessment also includes early engagement of regulatory officials prior to the Notice of Preparation. Once the Draft EIR is published and comments are received, parallel design can progress to an adequate level for actionable review, and formal permit submittals will be made under subsequent task order(s). The following authorizations and concurrences are anticipated, and outreach efforts undertaken for this subtask will be concentrated on:

- U.S. Army Corps of Engineers (Clean Water Act (CWA) Section 10 and 404 Permits)
- National Marine Fisheries Service and U.S. Fish and Wildlife Service Biological (Endangered Species Act Section 7 Consultation Biological Opinions to the USACE)
- National Marine Fisheries Service (Essential Fish Habitat Consistency Determination)
- California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement and Possible Incidental Take Permit)
- San Francisco Bay Regional Water Quality Control Board (CWA 401 Water Quality Certification and Porter Cologne Act Waste Discharge Requirements)
- San Francisco Bay Conservation and Development Commission (Development Permit and Coastal Zone Management Act Consistency Determination)
- State Lands Commission (Lease)
- Caltrans
- County of San Mateo
- County of San Francisco
- City of Burlingame
- City of Millbrae
- United States Coast Guard (Authorization required for Bridge Spans over tidal waters including streams unless determined there is no significant impact to navigation which is likely for the project)

Task 4.2: Administrative Draft EIR and MMRP

Following District concurrence with the range of alternatives developed for the Project, an Administrative Draft EIR will be written to address an expanded list of environmental issue areas. For several of the key

environmental topics, the completed reports and evaluations, surveys, photographs, site visit notes, and other documentation from Task 2 will be included, including reports or data related to hydrology and water quality, geology and transportation, biological resources, cultural resources, and hazardous materials.

The expanded EIR requires more extensive analysis and documentation related to federal regulations and includes the preparation of technical reports including: Federal Clean Air Act (FCAA) Conformity Analysis; Paleontological Resources Assessment and a summary of Biological Resources Assessment; and Cultural Resources Technical Study. These technical studies will be prepared concurrently with the Administrative Draft EIR, addressing the identified alternatives, and informing the analysis of impacts and associated mitigation measures. Rincon will submit the Administrative Draft EIR with a Mitigation Monitoring and Reporting Plan (MMRP), for District's review and comment.

Task 4.2.1: Aesthetics

The aesthetics analysis will consider such issues as alteration of public views, changes in visual character, and increased light and glare. Particular attention is paid to the massing of structures using the engineering renderings and conceptual design. Given the potential to block views of the bay from public viewpoints, this issue will have heightened public scrutiny.

Task 4.2.2: Air Quality

This section will be prepared in accordance with Bay Area Air Quality Management District (BAAQMD) Guidelines by analyzing temporary construction effects from developing the preferred alternative and the operational impacts from potential back-up generators or pumping devices that may be required in emergencies. A construction Health Risk Analysis (HRA) for the project will evaluate the potential for localized concentrations of PM2.5 and other air toxics (TACs) associated with site construction that would impact nearby existing residents. Individual and cumulative health risk analysis associated with project construction will be conducted following methodologies outlined in BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards (May 2012).

Task 4.2.3: Greenhouse Gas Emissions

This analysis will consider the project's potential contribution to cumulative impacts related to greenhouse gas (GHG) emissions and climate change. An overview of the current regulatory framework regarding GHG emissions and climate change, including SB 32, AB 32, SB 97, and SB 375, as well as adopted amendments to the CEQA Guidelines, will be described.

Task 4.2.4: Environmental Justice

Due to the location of disadvantaged communities within the Project area, Consultant will prepare an assessment of the project's impacts on environmental justice issues under Executive Order 12898. This assessment considers the composition of the affected area to determine whether low-income, minority or tribal populations are present and whether there may be disproportionately high and adverse human health or environmental effects on these populations. It also considers relevant public health and industry data concerning the potential for multiple exposures or cumulative exposure to human health or environmental hazards in the affected population, as well as historical patterns of exposure to environmental hazards. Consultant will address the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed action.

Task 4.2.5: Land Use and Planning

This section of the EIR will examine land use policy issues. Consultant will prepare an objective discussion of whether and how the proposed project would be consistent with existing City of Burlingame and City of Millbrae policy documents, regional planning policies, and state regulations and policies. Particular attention will be paid to Burlingame's Zoning Ordinance Update to protect the shoreline.

Task 4.2.6: Noise

The noise analysis will examine both temporary construction noise and sporadic long-term operational noise associated with emergency generators. Construction noise will be estimated based on information from the U.S. Environmental Protection Agency, the Federal Transit Administration, and the Federal Highway Administration.

Traffic noise will be estimated based on estimated construction traffic volume data. In addition, the analysis will evaluate temporary construction and long-term vibration associated with the project, which will be estimated based on information from the Federal Highway Administration.

Task 4.2.7: Utilities and Service Systems

Using data collected in Task 2, Consultant will address the project's potential to impact utilities and service systems, including the need to protect, abandon or relocate existing utilities. PG&E has a major high voltage transmission line running through the project area that creek floodwalls would be under. The design and environmental team will work with utility and service providers to address these potential issues and develop strategies to reduce or avoid utility impacts to the extent feasible.

Task 4.3: Draft EIR and NOA

The Draft EIR will be based upon responses to comments from the District and associated revisions to the Administrative Draft EIR. In addition, Consultant will maintain the administrative record for their analyses and provide an electronic copy of all data sources used when transmitting the Draft EIR to the District. Rincon will upload the Draft EIR to the SCH with the required Notice of Availability (NOA) of the Draft EIR, which will also be filed with the San Mateo County Clerk.

It is assumed that District staff will distribute the NOA to responsible and trustee agencies and interested organizations and individuals. It is also assumed the District will be responsible for required newspaper ads and other public noticing of the document's availability, such as radius label mailing or on-site posting.

Given the project's regional significance, a longer Draft EIR public review period than the minimum required 45 days is recommended to allow for more meaningful public/community engagement. Environmental documents will be ADA compliant for reader accessibility.

Native American government-to-government consultation is included in the scope of services in accordance with AB 52. The purpose of AB 52 consultation is to identify any Tribal Cultural Resources (TCRs) within the project site that may be impacted by proposed development. Consultant will also assist the District with Tribal Consultation under Executive Order 12898 for NEPA purposes.

Deliverables

1. Electronic copies of Administrative Draft EIR, technical reports, and MMRP in MS Word and Adobe Acrobat (pdf)
2. Responses to District comments and Revised Administrative Draft EIR
3. Electronic copies of Screencheck Draft EIR in MS Word and Adobe Acrobat (pdf)
4. Public Review Draft EIR and associated appendices, including eight hard copies, eight copies on CDs, and one electronic version of each in pdf and MS Word
5. One pdf version of the NOA and NOC for SCH submittal

Exhibit B – Payments and Rates

In consideration of the services provided by Consultant described in Exhibit A and subject to the terms of the MSA, District shall pay Consultant based on the following fee schedule and terms.

Under no circumstances shall the amount paid by District to Consultant exceed \$3,665,000. Consultant shall provide District with a written itemized invoice that allows the District to reconcile the work performed. All invoices shall include the MSA number, project location, dates of services, and specified work completed.

Remit Invoices to:

San Mateo County Flood and Sea Level Rise Resiliency District

1700 South El Camino Real, Suite 502

San Mateo, CA 94402

Email: LDong@OneShoreline.org

Payment will be made within 45 days of invoice receipt.

Millbrae and Burlingame Shoreline Area Protection and Enhancement Project Fee Schedule
Task Order Number 1

Task	Task Name	Hourly Rates								Subtotal	Cal Engineering & Geology	Kier & Wright	Rincon Consultants	Huffman Broadway Group	Wood Rodgers	Biggs Cardosa Associates	BFS Landscape Architects	JDH Corrosion Consultants	Tanner Pacific	Subconsultant Subtotal	Total
		\$250	\$250	\$250	\$215	\$175	\$175	\$150													
1.0	Project Management																				
1.1	Prepare Schedule and Work Plan	24	8	4				16	\$ 11,400	\$ 2,880		\$ 5,000	\$ 10,000							\$ 17,880	\$ 29,280
1.2	Prepare Invoices, Progress Reports, and Scheduling Revisions	120						32	\$ 34,800	\$ 10,000		\$ 13,500	\$ 6,000				\$ 6,000		\$ 3,000	\$ 38,500	\$ 73,300
1.3	Prepare for and Attend Project Management Meetings (15 meetings; Rincon more)	54	10	8		8		16	\$ 30,120	\$ 3,500		\$ 37,000	\$ 20,000			\$ 3,500		\$ 2,000	\$ 66,000	\$ 96,120	
1.4	Prepare for and Attend Meetings with Project Partners (5 meetings; Rincon more)	20		4		4			\$ 8,060				\$ 7,500							\$ 7,500	\$ 15,560
1.5	Presentation Support at Key Meetings (6 total) (Optional)	24				12			\$ 8,580											\$ -	\$ 8,580
		242	18	16	24	16	16	88	\$ 92,960	\$ 16,380	\$ -	\$ 55,500	\$ 43,500	\$ -	\$ -	\$ 9,500	\$ -	\$ 5,000	\$ 129,880	\$ 222,840	
2.0	Data Collection																				
2.1	Identify, Gather, and Review Existing Information	40	16	24		80			\$ 37,200											\$ -	\$ 37,200
2.2	Field and Desktop Investigations								\$ -											\$ -	\$ -
2.2.1	Elevation Surveys	8						40	\$ 9,000		\$ 164,000									\$ 164,000	\$ 173,000
2.2.2	Transect Surveys	8				24		4	\$ 7,860		\$ 40,000									\$ 40,000	\$ 47,860
2.2.3	Bridge Scans on Interior Creeks and Channels	8	8					40	\$ 29,000		\$ 70,000									\$ 70,000	\$ 99,000
2.2.4	Utility Research	8				40		80	\$ 62,600											\$ -	\$ 62,600
2.3	Coastal Protection Analyses	24	8	120				20	\$ 65,500											\$ -	\$ 65,500
2.4	Hydrologic and Hydraulic Studies								\$ -											\$ -	\$ -
2.4.1	Coordination of Interior Studies	40	8	40		120			\$ 65,800											\$ -	\$ 65,800
2.4.2	Identify Tributary Drainage Systems and Watersheds								\$ -				\$ 16,620							\$ 16,620	\$ 16,620
2.4.3	Develop Interior Drainage Criteria								\$ -				\$ 3,860							\$ 3,860	\$ 3,860
2.4.4	Develop Hydrologic and Hydraulic Models of Existing Conditions								\$ -				\$ 124,590							\$ 124,590	\$ 124,590
2.4.5	Analyze Impact of Sea Level Rise for Tidal Lagoon Boundary Conditions								\$ -				\$ 24,265							\$ 24,265	\$ 24,265
2.4.6	Analyze Impact of Sea Level Rise for Interior Improvement Alternatives								\$ -				\$ 54,980							\$ 54,980	\$ 54,980
2.4.7	Optimize Design and Operation of Selected Improvement Alternatives								\$ -				\$ 16,860							\$ 16,860	\$ 16,860
2.5	Geotechnical Data and Subsurface Exploration								\$ -											\$ -	\$ -
2.5.1	Review Existing Geotechnical Data and Fill Subsurface Information Gaps	24	8	16					\$ 12,000	\$ 17,480										\$ 17,480	\$ 29,480
2.5.2	Field Investigations								\$ -	\$ 264,830										\$ 264,830	\$ 264,830
2.5.3	Laboratory Testing	8							\$ 2,000	\$ 37,060										\$ 37,060	\$ 39,060
2.5.4	Geotechnical Analyses and Report	64	8					80	\$ 30,000	\$ 66,560										\$ 66,560	\$ 96,560
2.6	Corrosion Study					4			\$ 860									\$ 37,500		\$ 37,500	\$ 38,360
2.7	Data Gathering for Environmental Documents and Permitting								\$ -											\$ -	\$ -
2.7.1	Biological Resources Assessment	10				20		30	\$ 11,300		\$ 87,151	\$ 115,000								\$ 202,151	\$ 213,451
2.7.2	Cultural and Historic Resources Report	10				20		30	\$ 11,300		\$ 73,320	\$ 3,000								\$ 76,320	\$ 87,620
2.7.3.1	Phase I Hazardous Materials Study	10				20		30	\$ 11,300		\$ 28,925									\$ 28,925	\$ 40,225
2.7.3.2	Phase II Hazardous Materials Study (Optional)	10				20		30	\$ 11,300		\$ 232,440									\$ 232,440	\$ 243,740
2.8	Jurisdictional Wetland Delineation								\$ -											\$ -	\$ -
2.8.1	Jurisdictional Determination Report	40				80		120	\$ 45,200			\$ 36,000								\$ 36,000	\$ 81,200
2.8.2	Verification of USACE Jurisdictional Determination								\$ -			\$ 9,000								\$ 9,000	\$ 9,000
2.8.3	Surveys for Listed Species								\$ -			\$ 15,000								\$ 15,000	\$ 15,000
		312	56	200	428	144	120	880	\$ 412,220	\$ 385,930	\$ 274,000	\$ 421,836	\$ 178,000	\$ 241,175	\$ -	\$ -	\$ 37,500	\$ -	\$ 1,538,441	\$ 1,950,661	
3.0	Design Plans, Specifications, and Cost Estimates (PS&E)																				
3.1	30% PS&E	180	60	120		180		360	\$ 362,700	\$ 10,200		\$ 30,000			\$ 99,500	\$ 90,310	\$ 32,500	\$ 117,720	\$ 380,230	\$ 742,930	
		180	60	120	180	360	360	720	\$ 362,700	\$ 10,200	\$ -	\$ -	\$ 30,000	\$ -	\$ 99,500	\$ 90,310	\$ 32,500	\$ 117,720	\$ 380,230	\$ 742,930	
4.0	Environmental Documentation and Permits																				
4.1	Environmental Scoping								\$ -											\$ -	\$ -
4.1.1	Project Description	40						40	\$ 16,000		\$ 21,230	\$ 8,000								\$ 29,230	\$ 45,230
4.1.2	Initial Study and NOP	24		60		80			\$ 38,200	\$ 5,840		\$ 44,296								\$ 50,136	\$ 88,336
4.1.3	Public Scoping and Development of Alternatives	40						160	\$ 78,000		\$ 43,610	\$ 8,000						\$ 21,120	\$ 72,730	\$ 150,730	
4.1.4	Support Regulatory Outreach during CEQA through ADEIR					16			\$ 3,440		\$ 15,000	\$ 125,000								\$ 140,000	\$ 143,440
4.2	Administrative Draft EIR and MMRP	20				20		40	\$ 26,300		\$ 208,080	\$ 30,000								\$ 238,080	\$ 264,380
4.3	Draft EIR and NOA	20				10		20	\$ 15,650		\$ 38,886									\$ 38,886	\$ 54,536
		144	0	60	126	220	220	150	\$ 177,590	\$ 5,840	\$ -	\$ 371,102	\$ 171,000	\$ -	\$ -	\$ -	\$ -	\$ 21,120	\$ 569,062	\$ 746,652	
TOTAL		878	134	396	758	740	716	1838	\$ 1,045,470	\$ 418,350	\$ 274,000	\$ 848,438	\$ 422,500	\$ 241,175	\$ 99,500	\$ 99,810	\$ 70,000	\$ 143,840	\$ 2,617,613	\$ 3,663,083	

Exhibit C – Schedule

In consideration of the services provided by Consultant described in Exhibit A and subject to the terms of the MSA, Consultant shall perform services in accordance with the following milestone delivery schedule.

Task	Milestone Delivery	Milestone Completion Date
1.1	Detailed Work Plan, Schedule, and Scope	4/15/22
2.1	Digital folder with background information	4/30/22
2.2	Surveys complete and data reduced	7/31/22
2.3	Coastal Protection Analysis Report	9/30/22
2.4	Interior Drainage Study	12/31/22
2.5	Geotechnical Report	3/31/23
2.6	Corrosion Study Report	12/31/22
2.7.1	Biological Resources Assessment Report	6/30/23
2.7.2	Cultural and Historic Resources Report	3/31/23
2.7.3	Phase II Environmental Site Assessment Report	6/30/23
2.8	Jurisdictional Wetland Determination Report	6/30/23
3.1	30% Plans, Specifications, and Estimate	6/30/23
4.1	Initial Study and Notice of Preparation	6/30/23
4.2	Administrative Draft EIR and Mitigation Monitoring Reporting Plan	12/31/23
4.3	Draft EIR and Notice of Availability	3/31/24