

San Francisco Bay Conservation and Development Commission

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TO: Design Review Board Members

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SUBJECT: Doolittle Drive San Francisco Bay Trail Extension; First Pre-Application Review
(For Design Review Board consideration on August 7, 2017)

Project Summary

Project Proponents & Property Owners. East Bay Regional Park District (EBRPD)

Project Representatives. Toby Perry (EBRPD), Project Manager; Ren Bates (EBRPD), Capital Program Manager; Tom Balbierz (GHD), Project Manager; Kristine Gaspar (GHD), Environmental Lead.

Project Site. The site is located east of the Oakland International Airport and State Highway Route 61 ("Route 61") and in the San Leandro Bay, in the City of Oakland, Alameda County. The Commission's *San Francisco Bay Plan* ("Bay Plan") identifies the project site as a Waterfront Park/Beach Priority Use Area and the adjacent Route 61 as a scenic drive.

Existing Conditions. The site is located within the 741-acre Martin Luther King Jr. Shoreline Park ("MLK Jr. Park") created in 1977, which includes: Garreston Point (south of Damon Slough) with parking, public restroom, and picnic area; Elmhurst staging area (north of the San Leandro Creek) staging area with parking and a non-motorized boat launch; the adjacent Arrowhead Marsh staging area with parking, public restroom, picnic area, and a fishing dock; MLK Jr. Grove (at the south end of Airport Channel) with a beach, parking, and picnic area; Doolittle Pond (mouth of the San Leandro Bay), a wildlife sanctuary; Doolittle staging area with two parking lots, a non-motorized boat launch and ramp, picnic areas, the 780-square-foot Shoreline Center, and two public restrooms; and the Tidewater Boating Center, a designated San Francisco Bay Water Trail site, (north of project site at the confluence of the Oakland Estuary and San Leandro Bay) with a boat launch, parking, public restroom, and picnic area. (Figure 2)¹ The MLK Jr. Park was originally authorized in BCDC Permit No. 1977.013.00. The following existing amenities are included within the project scope currently under review: Doolittle staging area parking lot and boat launch ramp, pump Station with dock (informally used as fishing pier), boat launch along Doolittle Drive, fishing pier with benches, and Bay Trail segments with a bench overlooking the water. In segments where the Bay Trail ends, the bike lanes on Doolittle Drive serve as the primary connection for cyclists.

¹ The Doolittle Drive section at the MLK Jr. Park is a planned Water Trail site.

There are no pedestrian facilities along this segment of Doolittle Drive which has a posted speed limit of 50 miles per hour.

The shoreline at the site contains discrete patches of tidal marsh and also rock riprap. Where riprap is deteriorated, the shoreline is eroded. In 1998, nearby 71-acre Arrowhead Marsh was restored to tidal and seasonal wetlands. The adjacent Airport Channel is used for motorized and non-motorized recreational boating.

Doolittle Drive is a state highway (Route 61) operated by the Department of Transportation (“Caltrans”). The 0.75-mile-long section of Doolittle Drive located adjacent to the proposed Bay Trail Extension facility (described below) includes two 12-foot-wide northbound lanes that narrow to one lane, one 12-foot-wide southbound lane, and two eight-foot-wide Class 2 bicycle lanes in both directions. An existing bicycle/pedestrian bridge connects Doolittle Drive (north of the project site) to Fernside Boulevard in the City of Alameda. Three Bay Trail gaps located at MLK Jr. Park include the project site.

Proposed Project. The proposed project is the first phase of the Bay Trail extension at Doolittle Drive in the MLK Jr. Park and includes the improvement of the southern trail area, a parking lot, a boat launch, and the construction of a pedestrian/cyclist bridge.² In May 2014, EBRPD prepared a feasibility study analyzing different trail alignments and construction options. The proposed project involves: the improvement of an existing 1,600-linear-foot section of an existing trail; the construction of an approximately 2,375-linear-foot, 27,880-square-foot pier-supported bridge section of the Bay Trail (the gap closure) located mostly in Airport Channel; the improvement of a public parking lot; and the replacement of the boat ramp and facilities to better align the Bay Trail crossing at the boat launch. It is anticipated that the trail improvements would result in approximately 156 million bicycle and pedestrian trips by 2041. (Figure 3)

The project would be located in a Bay Plan-designated Waterfront Park/Beach Priority Use Area, partly within the Commission’s 100-foot shoreline band jurisdiction and mostly in the Commission’s Bay jurisdiction.³ All proposed improvements would be maintained by EBRPD. Broken into three parts, the project elements include:

1. **Parking Lot and Boat Launch Ramp** (northern project boundary to east of the intersection with Langley Street) (Figures 6-8):
 - a. In the Bay: Replace floating docks (a total of 600 square feet), including an ADA-compliant dock; replace a portion of a 30-foot-wide boat ramp; and place approximately 765 cubic yards of riprap within a 13,760-square-foot area; and
 - b. Within the 100-foot shoreline band: Widen (to 12 feet) and improve an existing 950-linear-foot Bay Trail and include three-foot-wide Class II aggregate shoulders (at an elevation of 10 feet NAVD88); construct a 304-square-foot kayak layout area; replace a portion of a 30-foot-wide boat ramp; and repave a an approximately 39,120-square-foot parking lot to include for 18 vehicle spaces, including three ADA spaces, and 29 boat spaces. Directional trail signage and ramp crossing signage will be installed.

² Phase 2, not under consideration at this time, would involve, among other things, another Bay Trail gap closure project.

³ The project proponents have yet to provide complete information as to whether an upland alternative would be feasible; upon receiving the necessary information, the Commission staff will consider as a part of its project analysis.

2. **Elevated/Bridge Bay Trail** (from the pump station and fishing pier (east of Langley St.) to an existing fishing pier (west of Swan Way) (Figures 9-20):
 - a. In the Bay: Construct an approximately 2,375-foot-long, 12-foot-wide pier-supported Bay Trail bridge with 45-inch-high railings with a deck elevation of approximately 12.2 feet NAVD88 (and a 1.5% cross-slope for drainage), and four 10-foot-wide (186.7-square-foot) overlooks with benches. The bridge would be located 0-to-52 feet away from the road. Walking travel time across the bridge would be about 6.4 minutes and 2 minutes for bikes.
 - b. Within the 100-foot shoreline band: Construct an approximately 60-foot-long, 12-foot-wide Bay Trail section with 45-inch-high railings, a 10-foot-long settlement slab where the trail meets the shoreline at the north end, a 20-foot-long settlement slab where the trail meets the shoreline at the south end at the pump station and fishing pier, a 41-foot-long portion of trail flush with the southern fishing pier, and an approximately 303-foot-long, 31-inch-high section of railing at the bayward side of Doolittle Drive.
3. **Southern Trail Enhancement** (southern fishing pier to MLK Jr. Grove) (Figure 21):
 - a. Partially within the 100-foot shoreline band: Pave an existing 10-foot-wide trail extending to Swan Way; realign trail connections to MLK Jr. Grove; lengthen a trail connector by approximately 50 feet creating an approximately 80-foot-long, 10-foot wide connector trail.

The proposed project is scheduled to begin construction in the Spring of 2019. The environmental assessments and review (pursuant to the California Environmental Quality Act) are not yet complete and are planned to be circulated in the Fall 2017.

Resilience and Adaptation to Rising Sea Level. According to the Federal Emergency Management Agency (“FEMA”), the 100-year-flood elevation (BFE) for the site is 10 feet NAVD88. The EBRPD is anticipating a 50-year project life and is referencing a sea level rise projection of 24 inches by 2070, referencing the BFE in 2070 at 12 feet. The mid-century sea level rise projection is 14 inches, however, the 2070 projection is more relevant for this design since it corresponds to the end of the project life.

The finished elevation of the **Parking Lot and Boat Launch Ramp** and the **Southern Bay Trail sections** would both be approximately 10.1 feet NAVD88, and would therefore flood at the projected BFE of 12 at 2070, at which time adaptation would be necessary. For the purposes of resiliency, Mean Higher High Water (MHHW) elevations in combination with sea level rise provide a snapshot of flood frequency which may be more informative for adaptation triggers. At 2070, the anticipated MHHW would be 8.53 feet NAVD88, which suggests the trail and boat launch would not flood from regular tidal fluctuation. However, this portion of the Bay Trail would be partially flooded (with one inch of standing water) during a 2-year extreme-tide event in 2070. The 1.5% cross slope of the trail surface would allow the trail to drain after these flood events. These trail segments would be permanently inundated by the end of the century (2100), disconnecting the bridge section from land.

The proposed **Elevated/Bridge Bay Trail** would have a finished elevation of 12.2 feet NAVD88 and, thus, be located above the base flood elevation in 2070, including the anticipated 24 inches of sea level rise. However, the trail would flood during a 2-year extreme-tide event in 2100.

Commission Findings, Policies & Guidelines

San Francisco Bay Plan Policies. The **Bay Plan Map No. 5** designates the project site as a Waterfront Park/Beach Priority Use Area and includes Policy No. 8 stating that the San Leandro Bay provides “[v]aluable wildlife habitat [and] great recreation potential” and that projects should “[d]evelop boating facilities and parks, but preserve wildlife habitat. Provide continuous public access to northern and southern shoreline. Some fill may be needed.” Additionally, Bay Plan Map Policy No. 9 for the Martin Luther King Jr. Regional Shoreline Park states that projects should: “Provide diverse wildlife compatible recreation opportunities, including picnicking, wildlife viewing, environmental education, boating, bicycling, and hiking. Preserve habitat areas and protect wildlife, including endangered species. Improve connections between park and inland neighborhoods.”

The proposed project includes enhanced boating facilities, a kayak layout area, improved parking for boats and vehicles, and the closure of a gap in the Bay Trail network. The four overlooks on the bayside of the proposed elevated bridge would facilitate additional wildlife viewing along the shoreline. As stated earlier, the biological assessment and CEQA analyses have not yet been completed so it is not understood at this time how the project would affect natural resources. The proposed project would involve filling the Bay—approximately 30,000 square feet. According to the project proponent, the fill is the minimum amount necessary to achieve the project purpose; it is uncertain, however, whether the fill associated with the proposed bridge has an upland alternative site.

The Bay Plan **Public Access** policies state, in part, that “[a] proposed fill project should increase public access to the Bay to the maximum extent feasible” and that “[a]ccess to and along the waterfront should be provided by walkways [and] trails...” Further, the policies state, in part, that improvements “... should be consistent with the project and the physical environment, including protection of Bay natural resources...and provide for the public’s safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier free access for persons with disabilities to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs.” Additionally, the policies provide “[p]ublic access should be sited, designed, managed, and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.” The policies also state, in part, that “[p]ublic access should be sited, designed and managed to prevent significant adverse effects on wildlife.” Furthermore, the policies state that “[i]n some areas, a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission’s public access requirement.”

The proposed project would improve existing public facilities and create new ones, including a Bay Trail extension that would be connected to the adjoining network. The improved route would provide an alternative for bicyclists and pedestrians who now use the Doolittle Drive roadway. The proposed facilities are designed to be barrier free. EBRPD would maintain the facilities. Signage would be installed at throughout the Bay Trail Extension. It is unknown whether the proposed design will avoid adverse effects on wildlife.

The proposed bridge would be designed to be above the 100-year flood for the life of the project, however the bridge settlement slabs conform to existing grades along the roadway. It is unclear at this time if the alignment of the trail would have an impact on the Caltrans right-of-way and the ability of Caltrans to address the adaptation of Doolittle Drive in the face of rising sea levels.

The Bay Plan **Appearance, Design, and Scenic Views** policies state, in part, that “all bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay” and that “[m]aximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas...” Furthermore, “[b]ridges over the Bay should be avoided, to the extent possible, to preserve the visual impact of the large expanse of the Bay... New and remodeled bridges should be designed to permit maximum viewing of the Bay and its surroundings by both motorist and pedestrians. Guardrails and bridge supports should be designed with views in mind.” Additionally, the policies partly state: “Views of the Bay from... roads should be maintained by appropriate arrangements and heights of all developments and landscaping between the view areas and the water. In this regard, particular attention should be given to all waterfront locations...and areas along roads that provide good views of the Bay for travelers...”

The proposed elevated bridge with 45-inch-high railings would provide users with views of the Bay and shoreline. The proposed bridge with a deck elevation of 12.2 feet and a 45-inch-tall guardrail would, however, obstruct views of users along Doolittle Drive where the elevation is between 10.5 feet and 11 feet NAVD88.

The Bay Plan **Recreation** policies state, in part, that “[d]iverse and accessible water-oriented recreational facilities...should be provided...” and that access to these features “should be clearly posted with signs and easily available from parking reserved for the public or from public streets or trails.” Additionally, improvements to boat ramps “should provide for use by a wide variety of boats” and “should include adequate car and trailer parking, restrooms, and public access.” Additionally, “where practicable, access facilities for non-motorized small boats should be incorporated into waterfront parks...” and “[s]ite improvements, such as landing and launching facilities, restrooms, rigging areas, equipment storage and concessions, and educational programs that address navigational safety, security, and wildlife compatibility and disturbance should be provided, consistent with use of the site.”

In Bay Plan-designated waterfront parks, projects should “emphasize hiking, bicycling, riding trails, picnic facilities, swimming, environmental, historical and cultural education and interpretation, viewpoints, beaches, and fishing facilities....” Furthermore, “[t]rails that can be used as components of the San Francisco Bay Trail...should be developed....San Francisco Bay Trail segments should be located near the shoreline unless that alignment would have significant adverse effects on Bay resources...”

As proposed, the project would improve an existing boat ramp, including the floats for non-motorized boats and provide a kayak layout area. An existing boat launch along Doolittle Drive, south of the intersection with Langely Street, would be rendered unusable due to the bridge structure. The project would close a large gap in the Bay Trail and would provide a direct connection across the waterfront at the boat launch. The existing parking lot would be repaved and restriped. Public restrooms and drinking fountains exist nearby. EBRPD has stated signs would be included, but has not proposed a signage program for the project. The proposed project would not eliminate, but would impact, access to both of the existing piers located within the project

site. Currently, the public unofficially parks between the southern fishing pier and Doolittle Drive while they are fishing. This area would be used as part of the new trail and would therefore be unavailable for parking. Access to the fishing pier at the pump station would be limited due to the placement of railings along that portion of the trail.

The Bay Plan **Transportation** Policy 4 states, in part, that “[t]ransportation projects on the Bay shoreline and bridges over the Bay... should include pedestrian and bicycle pathways... Transportation projects should be designed to maintain and enhance visual and physical access to the Bay and along the Bay shoreline.” Furthermore, “[i]f a route must be located across the Bay or a certain waterway... [t]he crossing should be placed on a bridge or a tunnel, not on solid fill” and that “[b]ridges should provide adequate clearance for vessels that normally navigate the waterway beneath the bridge.”

The proposed project would provide pedestrian, bicycle, and wheelchair access at the shoreline. The proposed project would improve boating facilities. The elevated bridge would be approximately 4.1 feet above the water level and therefore would allow for non-motorized boat passage under the facility at certain tides. Motorized boats would not be able to access the channel from along Doolittle Drive, except from the boat launch within the parking lot.

The Commission’s **Public Access Design Guidelines** state partly that “public access improvements should be designed for a wide range of users,” should “provide basic public amenities, such as trails, benches, play opportunities, trash containers, drinking fountains, lighting and restrooms that are designed for different ages, interests and physical abilities,” and should be designed for the weather of the site. The guidelines also state that viewing the Bay is the “most widely enjoyed ‘use’ and projects should be designed to “enhance and dramatize views of the Bay.”

The proposed project would provide more access for viewing the Bay via that trail and the overlooks with benches. EBRPD is not proposing to add public amenities besides benches along the trail.

Design Review Board Questions

The Board’s advice and recommendations are sought on the following issues regarding the design of the proposed public access:

1. Would the proposed Bay Trail extension, including the new elevated bridge and associated improvements (e.g., the facilities serving boaters and kayakers) provide ample, diverse and adequate opportunities for public use? Is the proposed elevated bridge trail of ample width to meet current and future uses?
2. Are the proposed public amenities adequate, distributed, and designed to balance the needs of visitors and natural resources in the project vicinity?
 - a. Are the proposed bridge overlooks with seating appropriately sized and located?
 - b. Would the project be enhanced by including waste receptacles, lighting, signage, landscaping, and additional seating opportunities?
3. Does the project encourage diverse recreational uses of the Bay and shoreline, including swimming, non-motorized boats, launching facilities, rigging areas, equipment storage, etc.?

4. Would public shoreline use be enhanced if the existing fishing piers and related access were improved?
5. Is the proposed bridge designed in a manner that is useable and safe? Do you have concerns about emergency evacuation access, emergency vehicle access, and/or other motor vehicles using this bridge?

The Board's advice and recommendations are sought on the following issues regarding the design of the proposed physical and visual connections:

6. Are the three trail segments designed in a consistent and cohesive manner? Does the trail design reinforce the identity of MLK Jr. Shoreline Park?
7. Does the trail adequately connect to the existing public facilities, including the two fishing piers and adjoining Bay Trail connections?
8. Would the proposed bridge and associated guardrail visually impact Bay and shoreline access of users along Doolittle Drive? If so, are there ways to minimize or reduce that effect? In certain areas, there are guardrails for both the road and the trail.

The Board's advice and recommendations are sought on the following issues regarding sea level rise:

9. Is the trail appropriately designed to be resilient and adaptive to sea level rise? Should the enhanced trail segments on land be raised to a higher elevation to address resiliency to sea level rise?
10. How can the bridge design facilitate future adaptation of the shoreline?