# FLOODWALL IMPROVEMENTS ALONG ZONE 3A LINE D: PHASE 2, BETWEEN HUNTWOOD AVENUE AND BART, HAYWARD, CALIFORNIA

Alameda County Flood Control & Water Conservation District 399 Elmhurst St.

Hayward, CA 94544

April 2014

## DRAFT MITIGATED NEGATIVE DECLARATION

#### ALAMEDA COUNTY

Alameda County Flood Control & Water Conservation District (Lead Agency)

**Project Name:** Floodwall Improvements along Zone 3A Line D Phase II, between Huntwood Avenue and BART, Hayward, Alameda County, California

Description and Location The Alameda County Flood Control and Water Conservation District (District) is proposing to install floodwalls along approximately 1,630 linear feet of the Zone 3A, Line D channel (Ward Creek) between Huntwood Avenue and the Union Pacific Railroad tracks, and parallel to Industrial Parkway West, in Hayward, California. The proposed project is Phase II of a multi-phase plan to improve channel capacity and to remove the residential area between the I-880 freeway downstream and the BART tracks upstream from FEMA flood risk designation and mapping. The proposed work is similar to the 3500-linear foot wall downstream of Huntwood Avenue crossing constructed in 2011 (Phase I). The concrete masonry unit floodwalls would be constructed at the top of both banks. Minor work within the channel would consist of reconstruction of four outfall structures to install flap gates and construction of a maintenance access low flow ramp adjacent to Huntwood Avenue. An asphalt concrete pedestrian/bike path along the southwest top of bank would be removed and replaced in approximately the same location.

1. **Responsible Agency:** Alameda County Flood Control & Water Conservation District 399 Elmhurst Street, Hayward, California 94544

2.	<b>Findings:</b>
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Based on the attached Initial Study, the Lead Agency has found that:
☐ The project will not have significant effect on the environment.
The significant effects of the project noted in the attached Initial Study have been eliminated or mitigated by revisions to the project so that the potential adverse effects are reduced to a point where no significant effects would occur.

#### 3. Mitigation Measures (Noise):

Mitigation Measure 12-1: The following measures shall be incorporated into the construction documents to be implemented by the project contractor:

- Provide enclosures and noise mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy activity areas on the site.
- Use quietest type of construction equipment whenever possible, particularly air compressors.
- Provide sound-control devices on equipment no less effective than those provided by the manufacturer.
- Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptors.

- Prohibit unnecessary idling of internal combustion engines.
- Require applicable construction-related vehicles and equipment to use designated truck routes when entering/leaving the site.
- Limit project construction activity to the weekday hours of seven a.m. to seven p.m. and the Saturday or holiday hours of nine a.m. to six p.m., with Sunday construction not allowed.

4. Date of Public Notice of Negative Declaration: April	1 21, 2014
5. End of Review Period: May 21, 2014	
**************************************	Signature
MITIGATED NEGATIVE DECLARATION DOES NOT IMPLY APPROVAL OF THE PROJECT	Environmental Services Manager
*******	Date

#### **Environmental Checklist Form**

- 1. Project Title: Floodwall Improvements along Zone 3A Line D Phase II, between Huntwood Avenue and BART, Hayward, Alameda County, California
- 2. Lead agency name and address:

Alameda County Flood Control and Water Conservation District 399 Elmhurst Street Hayward, CA 94544

3. Contact person and phone number:

Jim Browne

Phone: (510) 670-5796

4. Project location:

The proposed project is located on Zone 3A, Line D between the Union Pacific railroad right-of-way and Huntwood Avenue in the City of Hayward, Alameda County, California (see Figure 1).

5. Project sponsor's name and address:

COUNTY OF
ALAMEDA
399 Elmhurst Street
Hayward, CA 94544

ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT 399 Elmhurst Street Hayward, CA 94544 OTHER:

6. General plan designation: Mixed Industrial/Industrial Corridor

7. Zoning: Industrial

8. Description of project:

#### **Project Overview**

The Alameda County Flood Control and Water Conservation District (District) is proposing to install floodwalls along the Zone 3A, Line D channel (Ward Creek) between Huntwood Avenue and the Union Pacific Railroad tracks, and parallel to Industrial Parkway West, in Hayward, California (Figure 1: Project Vicinity Map; Figure 2: Project Location). Line D is a man-made flood control channel.

The concrete masonry unit floodwalls would be constructed at the top of both banks. Minor work within the channel flow line would consist of the reconstruction of four outfall structures within the channel banks to install flap gates and construction of a low flow ramp adjacent to Huntwood Avenue to allow access to the channel for maintenance. An asphalt concrete pedestrian/bike path along the southwest bank would be removed and replaced in approximately the same location at the top of the bank.



Figure 1. Project Site Location Map Zone 3A Line D Phase II Project, Hayward, Alameda County, California

FIGURE 2: Project Site and Action Area Zone 3A Line D Phase II Project 1,000 0.25 0.5 Miles Project Site 0.125 Scale 1:3,900

The proposed project involves approximately 1,630 linear feet along the channel where the floodwalls would be constructed. It is Phase II of a multi-phase plan to improve channel capacity between the I-880 freeway downstream and the BART tracks upstream. The purpose of the multi-phase plan is to increase the capacity of the channel to contain the 100-year flood or higher flows. Currently, floods overtop the banks at the flow volume anticipated for a 15-year recurrence interval storm (Macintire 2013a, 2013b). Phase I consisted of the construction of floodwalls constructed downstream of Huntwood Avenue along 3500 linear feet of channel, and was completed in 2011. The currently proposed floodwalls would be similar to those in the Phase I project (Photos 1 and 2 show the Phase I floodwalls).

The channel is approximately 80 to 100 feet wide, which allows a meandering low-flow watercourse with wetland vegetation in the streambed and ruderal vegetation on the slopes and top of bank (Photographs 3-6). Grading within the channel hinge points would be minimal and consist primarily of work required for construction of a low-flow ramp. From the channel, a total of approximately 171 cubic yards of soil, 27 cubic yards of concrete, and 30 cubic yards of treated lumber would be removed to construct the low flow ramp, reconstruct outfall structures and remove abandoned wood abutments (Table 1 - Grading Summary). An additional 650 cubic yards of asphalt concrete would be removed from the existing pedestrian/bike path. Approximately 104 cubic yards of soil fill that is being used as a temporary access ramp, would be removed from the channel bank near Huntwood Avenue to construct a concrete access ramp. Thirty one (31) cubic yards of concrete fill would be placed along the channel bank to add a low flow access ramp and to reconstruct four (4) outfall structures. Asphalt concrete paving would be replaced to reconstruct the pedestrian/bike path. The remaining excavated soil and concrete would be disposed of at licensed disposal sites.

**Table 1: Grading Summary** 

Structure	Cut (cubic yards) - Soil	Cut (cubic yards) – Concrete or Wood	Fill (cubic yards) All Concrete
Low flow ramp	104	4	18
Concrete Outfall	67	23	13
structures (4)			
Wood abutments	0	30	0
Pedestrian/bike	0	650	650
path			
TOTAL	171	677 concrete/30 wood	31

Source: Macintire 2013; Alameda County Public Works Agency 2012.

The proposed project involves demolition of existing facilities and construction of the new floodwalls. These phases are described below.

#### **Demolition Plan**

The demolition plan for the proposed project includes removal of outfall structures, fences, wooden abutments, and vegetation (Figure 3: Demolition Plan). Four outfall structures in the left bank (northeast side) would be removed. A six-foot wooden fence near Huntwood Avenue would be removed. A wrought iron fence along the entire top of the left bank would be removed and delivered to a Hayward metal salvage company. Abandoned wood abutments in the right and left banks would be removed and disposed of at a facility that accepts creosote-treated lumber. Soils removed for the ramp,



Photo 1: Phase I floodwall looking northeast (upstream) towards Huntwood Avenue.



Photo 2: Close-up of Existing (Phase I) floodwall.



Photo 3: Phase II, proposed project site, looking southwest (downstream) towards Huntwood Avenue.



Photo 4: Phase II, proposed project site, looking northeast (upstream) towards Union Pacific railroad crossing.

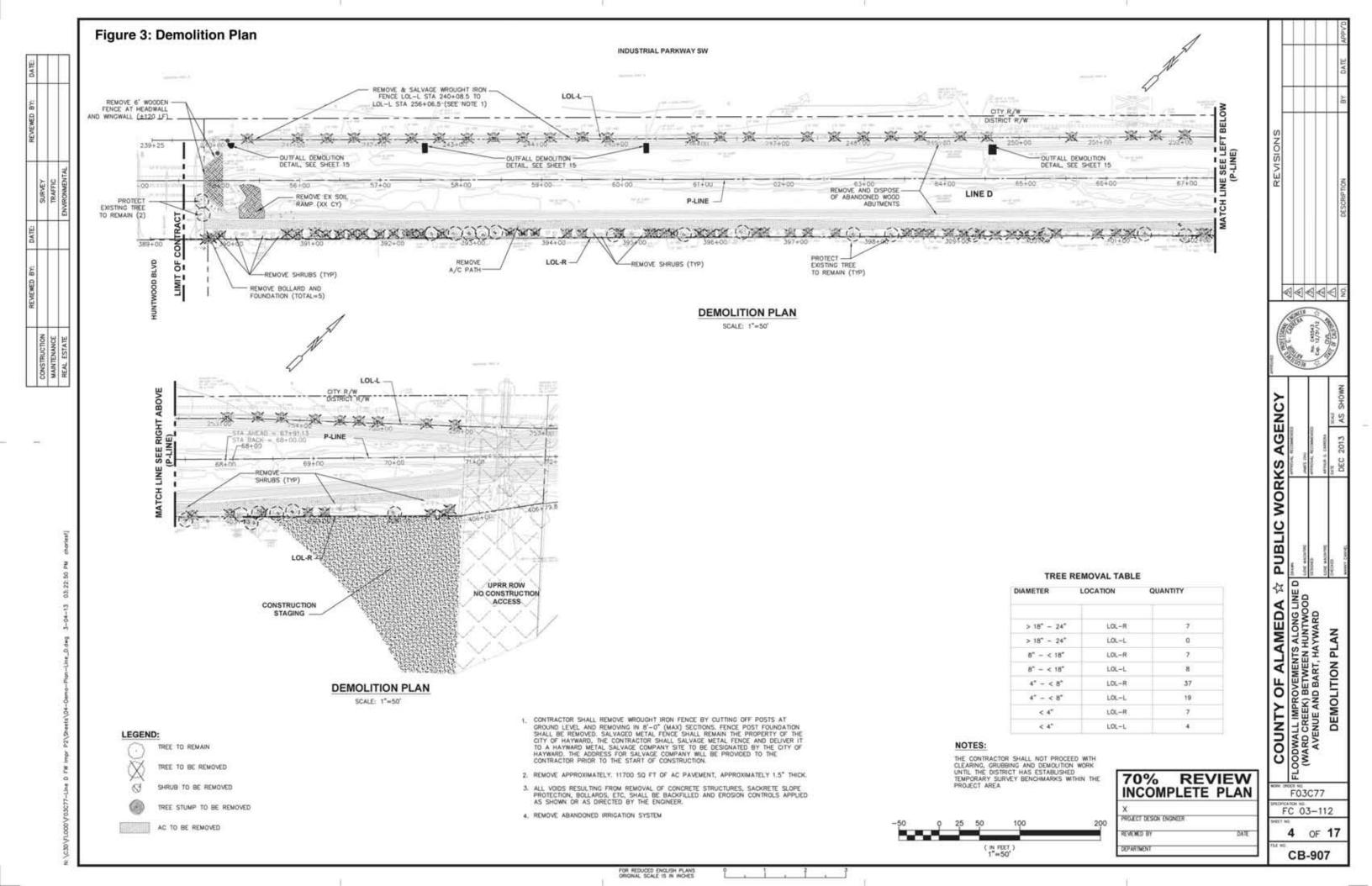


Photo 5: Phase II, proposed project site, looking east towards Industrial Parkway.



Photo 6: Phase II, proposed project site, looking southwest from northern (upstream) portion of the site.

Photographs of Zone 3A, Line D, Phases I and II



out-fall structures, and wood abutments totals 171 cubic yards. Approximately 650 cubic yards of asphalt concrete of the pedestrian walkway on the right bank would be removed.

Eighty-five (85) trees along the top of the right (southeast) bank were evaluated. Although thirty-three (33) trees were determined to be healthy, eight of these conflict with the project and will be removed along with the 52 trees recommended to be removed (Browne 2012). The proposed work would also require the removal of 35 ornamental trees from the northwest side of the channel. In total, 95 trees would be removed.

#### **Construction Plan**

#### **Construction Overview**

The project would construct floodwalls and a small channel access ramp, replace outfall structures with those that have flap gates, repave the pedestrian/bike path, install fencing and gates, and re-vegetate disturbed areas. The floodwalls would be two-feet seven-inches to five-feet seven-inches high and would be constructed on the top of both banks. The wall would be composed of blocks or concrete masonry units (CMUs) (Alameda County Flood Control and Water Conservation District 2012). The access ramp would be used to provide access to the channel for maintenance activities. Approximately 104 cubic yards of soil would be removed to create the ramp and 18 cubic yards of concrete would be poured along the right bank adjacent to Huntwood Avenue.

Public access infrastructure improvements for the proposed project consist of removal and replacement of the existing pedestrian/bike path along top of the right bank. The path continues along the channel upstream and downstream of the project site. The path would be closed to the public during the project construction period. There is a sidewalk along the west side of Industrial Parkway that could be used during the closure. There is no existing or proposed path along the left bank.

Following completion of construction activities, all disturbed areas would be revegetated. Exposed bank slopes would be hydroseeded. Along the tops of the banks trees, vines, and shrubs would be planted. Trees proposed to be planted include big leaf maple (*Acer macrophyllum*), box elder (*Acer negundo*), and coast live oak (*Quercus agrifolia*).

#### **Construction Access and Staging**

Construction access would be from two locations: Huntwood Avenue where the low-flow ramp would be constructed, and from Industrial Parkway across the Union Pacific Railroad to the staging area. The staging area for construction equipment for the proposed project would be located in an upland ruderal area at the northeastern portion of the site (Figure 4: Conceptual SWPPP – Pollution Prevention). A temporary construction easement has been requested from the Union Pacific Railroad for the upstream staging area (Macintire 2013c).

Potential construction equipment may include a skip loader, excavator, drill rig, concrete truck, and dump truck. Approximately six workers would be on-site each day for most activities during the duration of construction, and 14 workers would be at the site during construction of the floodwalls.

#### **Construction Schedule and Sequence**

Construction of the proposed project would occur between April 1 and October 30, 2014. It is estimated that construction would take place over 130 working days in a single season (Macintire 2013b). In general, construction would be sequenced as follows.

- 1. Install construction fencing (approximately mid-channel slope)
- 2. Install water pollution control best management practices (BMPs) and tree protection
- 3. Construction contractor mobilizes and prepares the staging area
- 4. Clear and Grub vegetation, remove trees, and remove existing concrete outfall structures and pedestrian path
- 5. Excavate for pile caps, spread footings, and outfall structures
- 6. Drill and construct piles (left bank, headwall, part of right bank) and pile caps
- 7. Construct CMU floodwalls
- 8. Construct low flow ramp
- 9. Construct tree wells, fill access road ramp, and finish grade
- 10. Pave pedestrian/bike path, install fencing and gates
- 11. Re-vegetation
- 12. Demobilize

No dewatering would be required for the proposed project.

#### **Construction Management Activities**

Table 2 lists the construction-related BMPs that would be implemented to minimize the introduction of dirt, debris and other construction waste into Line D and/or storm drains in the project area. A generalized plan for water pollution control measures, which includes perimeter and silt fences, staging area, inlet protection, at the project site is show in Figure 4: Conceptual SWPPP – Pollution Prevention. The table also includes BMPs to protect air quality during construction.

#### **Monitoring and Maintenance**

The District would be responsible for long-term maintenance of the improved flood conveyance facilities, including monitoring for erosion and vandalism and landscaping. In general, maintenance activities would be performed as needed and always prior to the rainy season.

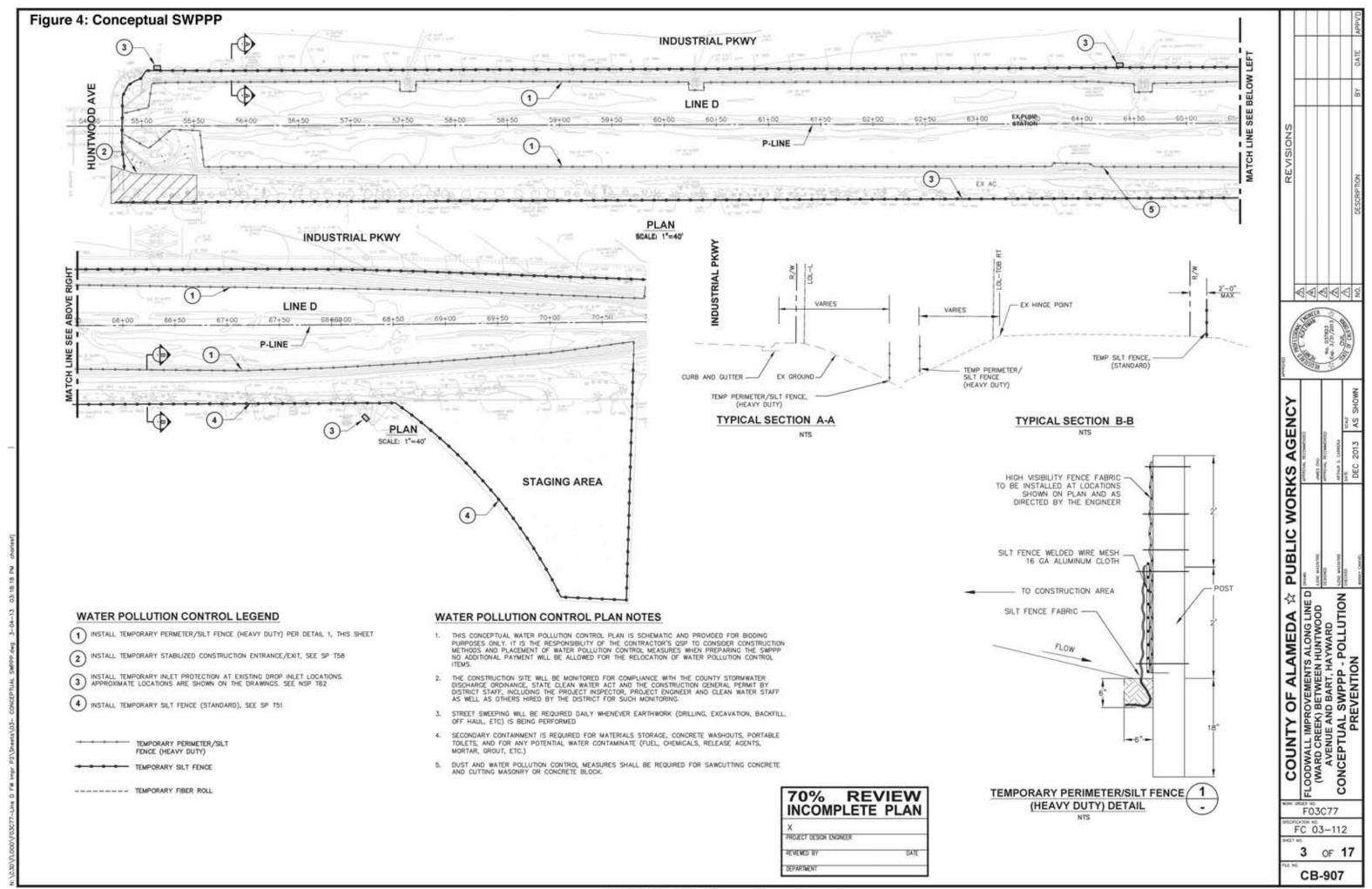
The City of Hayward would continue to maintain all public access infrastructure (i.e., pathways) after the proposed project is constructed.

#### 9. Surrounding land uses and setting:

The portion of Line D within the project area is bordered by commercial and industrial development to the south and Industrial Park to the north. Industrial Parkway is a busy connector street between Mission Boulevard and I-880 with freeway access. To the north side of Industrial Parkway is the Silver Star Veterans Park and residential development. Huntwood Avenue crosses over the channel at the downstream boundary of the site, and the Union Pacific Railroad crosses the channel approximately 50 feet northeast of the upstream site boundary.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement).

Not applicable



**Table 2: Construction-Related Best Management Practices** 

BMP ID	Name	ВМР
BMP -	Earthwork	Excavated soils will be kept on site where they will not collect in the street.
1	and Erosion	2. Transfers to dump trucks will take place onsite and not in the street.
	Control	3. Fiber rolls, silt fences, or other erosion control measures will be used to minimize the flow of silt offsite.
		4. Erosion of slopes disturbed during construction will be minimized by securing soil with erosion control fabric or seeding with fast-growing native grasses as soon as possible. Fiber rolls will be placed down-slope until the soil is secure.
		<ol> <li>Erosion control fabric will consist of natural fibers that will biodegrade over time.</li> <li>No plastic or other non-porous material will be used as part of a permanent erosion control approach.</li> </ol>
		6. Erosion control fabric will be anchored in place. Anchors can include U-shaped wire staples, metal geotextiles stake pins, or triangular wooden stakes.
		<ol> <li>Earth moving activities will only occur during dry weather, as approved by an Alameda County Inspector in the Field.</li> </ol>
		8. Disturbance to existing vegetation will be minimized where possible.
		9. The construction site will be monitored for compliance with the County Stormwater Discharge Ordinance, State Cleanwater Act, and the Construction General Permit by District staff, including the Project Inspector, Project Engineer, and Clean Water Staff as well as others hire by the District for such monitoring.
BMP -	Staging and Stockpiling of Materials	<ol> <li>All construction equipment will be staged in upland areas, away from sensitive natural communities or habitats.</li> </ol>
		<ol> <li>All construction-related items, including equipment, stockpiled material, temporary erosion control treatments, and trash will be removed within 72 hours of project completion. All residual soils and/or materials will be cleared from the project site.</li> </ol>
		<ol> <li>Secondary containment will be provided for building materials and other construction-related materials, including chemicals, and they will not be stockpiled or stored where they could spill into water bodies or storm drains, or where they could cover aquatic or riparian vegetation.</li> </ol>
BMP -	Stormwater Management	<ol> <li>Stormwater runoff from or onto the site will be effectively managed. All runoff will be directed away from disturbed areas. The project would be conducted during the dry season.</li> </ol>
BMP -	Non- Hazardous Materials Management	<ol> <li>Sand, dirt, and similar materials will be stored at least 10 feet from catch basins.         All construction material will be covered with a tarp and contained with a perimeter control during wet weather, when rain is forecast, or when they will not be actively used within 14 days.     </li> </ol>
	C	<ol><li>Reclaimed water will be used for dust control, irrigation, or another on-site purpose as needed and to the extent possible.</li></ol>
		<ol><li>Streets and paved areas will be swept or vacuumed daily. Water will not be used to wash streets or work areas.</li></ol>
		4. Concrete, grout, and mortar will be stored under cover, on pallets, and away from drainage areas. Any water from washing exposed aggregate concrete will be collected and removed for disposal offsite. Secondary containment will be provided for concrete washouts and any other potential water contaminant.
		<ol> <li>Asphalt, concrete, and aggregate base material removed during construction will be recycled in compliance with Alameda County ordinances for recycling construction materials.</li> </ol>
		<ol><li>Dumpsters will be checked regularly for leaks and to make sure they are not overfilled. Leaking dumpsters will be repaired or replaced promptly.</li></ol>

BMP ID	Name	ВМР
		7. All dumpsters will be covered with a tarp at the end of every work day or during wet weather.
BMP -	Hazardous Materials	<ol> <li>All hazardous materials and hazardous wastes will be labeled in accordance with city, county, state, and federal regulations.</li> </ol>
	Management	<ol><li>Hazardous materials and wastes will be stored in water tight containers within appropriate secondary containment structures and will be covered at the end of every work day or during wet weather when rain is forecast.</li></ol>
		3. Hazardous materials will be applied in accordance with the manufacturer's application instructions. No more than what is necessary will be used. Chemicals will not be applied outdoors when rain is forecast within 24 hours.
		4. All hazardous waste will be appropriately disposed of off-site.
		5. For stationary equipment that must be fueled on-site, secondary containment such as a drain pan or drop cloth shall be provided in a manner to prevent accidental spill of fuels to underlying soil, surface water, or the storm drainage system.
		<ol> <li>Secondary containment will be provided for sanitation facilities (e.g., portable toilets), such as surrounding them with a berm, and a direct connection to the storm drainage system or receiving water will be avoided.</li> </ol>
		<ol> <li>Sanitation facilities will be regularly cleaned and/or replaced, and inspected regularly for leaks and spills.</li> </ol>
BMP - 6	Spill Prevention and Control	A Spill Prevention and Response Plan will be developed prior to commencement of construction activities, and will summarize the measures described below. The work site will be routinely inspected to verify that the Spill Prevention and Response Plan is properly implemented and maintained. Contractors will be notified immediately if there is a noncompliance issue.
		<ol> <li>A stockpile of spill cleanup materials will be available at the construction site at all times.</li> </ol>
		2. Prior to entering the work site, all field personnel shall be trained in spill prevention, hazardous material control, and cleanup of accidental spills.
		3. When spills or leaks occur, they will be contained immediately. The contractor will take particular precautions to prevent leaks and spills from reaching the gutter, street, or storm drain. Spilled materials will not be washed into a gutter, street, storm drain, or creek.
		4. All containment and cleanup materials will be disposed of properly.
		<ol> <li>Hazardous material spills will be reported immediately to the Alameda County Public Works Agency at (510) 670-5500.</li> </ol>
BMP -	Vehicle and Equipment	1. Vehicles and equipment will be inspected for leaks frequently. Leaks will be repaired promptly, and drip pans will be used to catch leaks until repairs are made.
	Maintenance & Cleaning	2. In general, vehicles and equipment will not be washed on-site. If washing must occur on site, it will occur in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
		3. Only water will be used to clean equipment onsite (i.e., no soaps, solvents, degreasers, etc. will be used). For stationary equipment that must be fueled on-site, secondary containment such as a drain pan or drop cloth shall be provided to prevent accidental spills of fuels to underlying soil, surface water, or the storm drainage system.
BMP -	Construction Entrances & Perimeter	<ol> <li>Perimeter controls will be established and maintained during construction. All construction entrances and exits will be stabilized sufficiently to control erosion and sediment discharges from the construction site.</li> </ol>
		2. The construction contractor will sweep or vacuum any street tracking immediately and secure the sediment source to prevent further tracking.

BMP ID	Name	ВМР
BMP - 9	Fire Prevention	<ol> <li>All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors.</li> <li>During the high fire danger period (April 1–December 1), work crews will have appropriate fire suppression equipment available at the work site.</li> <li>On days when the fire danger is high, flammable materials will be kept at least 10</li> </ol>
		feet away from any equipment that could produce a spark, fire, or flame.  4. On days when the fire danger is high, portable tools powered by gasoline-fueled internal combustion engines will not be used within 25 feet of any flammable materials unless at least one round-point shovel or fire extinguisher is within immediate reach of the work crew (no more 25 feet away from the work area).
BMP – 10	Air Quality Protection	<ol> <li>All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered at least two times per day.</li> <li>All haul trucks transporting soil, sand, or other loose material off-site will be covered.</li> <li>All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</li> <li>All vehicle speeds on unpaved roads will be limited to 15 mph.</li> <li>All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</li> <li>Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</li> <li>All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.</li> <li>A publicly visible sign will be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.</li> </ol>

#### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

the checklists and responses contai	ned on the following pa	ges:	
Aesthetics Biological Resources Greenhouse Gas Land Use & Planning Population & Housing Transportation & Traffic	Agriculture & Forest   Cultural Resources Hazards & Hazardous Mineral Resources Public Services Utilities & Services	Materials	☐ Air Quality ☐ Geology & Soils ☐ Hydrology & Water Quality ☐ Noise ☐ Recreation ☐ Mandatory Findings of Significance
DETERMINATION: (To be comp	pleted by the Lead Agen	icy)	
On the basis of this initial evaluation	on:		
☐ I find that the proposed proje NEGATIVE DECLARATION		a significant	effect on the environment, and a
_	ct in this case because r	revisions in tl	effect on the environment, there he project have been made by or ECLARATION will be prepared.
☐ I find that the proposed pro ENVIRONMENTAL IMPAC	_		ect on the environment, and an
significant unless mitigated' adequately analyzed in an ear addressed by mitigation meas	impact on the environal riter document pursuant sures based on the earlie	onment, but to applicable or analysis as	gnificant impact" or "potentially at least one effect 1) has been be legal standards, and 2) has been described on attached sheets. An analyze only the effects that remain
all potentially significant effective DECLARATION pursuant to	cts (a) have been analyze applicable standards, ar TVE DECLARATION,	ed adequately nd (b) have be including rev	ffect on the environment, because y in an earlier EIR or NEGATIVE een avoided or mitigated pursuant isions or mitigation measures that l.
Signature 3rows	ne I	4-17 Date	7-14
Jim Browne Printed name		Environmenta	al Compliance Specialist

The environmental factors checked below would be potentially affected by this project as indicated by

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<u>I. AESTHETICS</u> – Would the project:				
a) Have a substantial adverse effect on a scenic vista?				$\boxtimes$
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				

Impact	Incorporation	Impact	Impact
Significant	Mitigation	Significant	No
Potentially	With	Less Than	
	Significant		
	Less Than		

#### **II. AGRICULTURE AND FOREST RESOURCES:**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CalFire) regarding the state's inventory of forest land, including the Forest Range Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program on the California Resources Agency, to non-agricultural use?		
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?		
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zone Timberland Production (as defined by Government Code Section 51104(g))?		
d)	Result in the loss of forest land or conversion of forest land to non-forest use?		
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?		

	Less Than		
	Significant		
Potentially	With	Less Than	
Significant	Mitigation	Significant	No
Impact	Incorporation	Impact	Impact

### **III. AIR QUALITY:**

	here available, the significance criteria established by the llution control district may be relied upon to make the follo	* *	 _	
a)	Conflict with or obstruct implementation of the applicable air quality plan?			
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			
d)	Expose sensitive receptors to substantial pollutant concentrations?			
e)	Create objectionable odors affecting a substantial number of people?			

		Potentially Significant Impact	Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
_	. BIOLOGICAL RESOURCES – Would the oject:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				
g)	Results in a conversation of Oak Woodlands that will have a significant effect on the environment				

**Less Than** 

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	Cultural Resources – Would the project: Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				
d)	Disturb any human remains, including those interred outside of formal cemeteries?				

_	. GEOLOGY AND SOILS – Would the project:  Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
	ii) Strong seismic ground shaking?			$\boxtimes$	
	iii) Seismic-related ground failure, including liquefaction?			$\boxtimes$	
	iv) Landslides?				$\boxtimes$
b)	Result in substantial soil erosion or the loss of topsoil?			$\boxtimes$	
c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral				
d)	spreading, subsidence, liquefaction, or collapse? Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating				
e)	substantial risks to life or property? Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				

VII. GREENHOUSE GAS EN	MISSIONS – Would the	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<ul><li>project:</li><li>a) Generate greenhouse gas em</li></ul>	nissions either directly or			$\boxtimes$	
indirectly, that may have a					
<ul><li>environment?</li><li>b) Conflict with an applicable properties.</li></ul>	nlan policy or regulation			$\square$	
adopted for the purpose of r greenhouse gases?					

VIII. HAZARDS AND HAZARDOUS MATERIALS – would the project:	Potentially Significant Impact	Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or				
disposal of hazardous materials?  b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				
e) For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				

**Less Than** 

IX	. HYDROLOGY AND WATER QUALITY – Would the	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	oject:				
a)	Violate any water quality standards or waste discharge			$\boxtimes$	
b)	requirements? Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been				
c)	granted)? Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?				
f)	Otherwise substantially degrade water quality?				$\boxtimes$
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				$\boxtimes$
i)	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				
j)	Inundation by seiche, tsunami, or mudflow?				

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
<u>X.</u>	<b>LAND USE AND PLANNING</b> – Would the project:				
a)	Physically divide an established community?				$\boxtimes$
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				
XI	. MINERAL RESOURCES – Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI	I. NOISE Would the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b)	Exposure of persons to or generation of excessive ground-born vibration or ground-born noise levels?				
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	II. POPULATION AND HOUSING – Would the oject:				
þr,	ojeci.				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				
XI	V. PUBLIC SERVICES:				
a)	Would the project result in substantial adverse physical in or physically altered governmental facilities? The consenvironmental impacts in order to maintain acceptable performance objectives for any of the public services:	truction of	which could	l cause sig	nificant
	i) Fire protection?				$\boxtimes$
	ii) Police protection?				
	iii) Schools?				$\boxtimes$
	iv) Parks?				
	v) Other public facilities?				

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV	V. RECREATION:				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				
XVI. TRANSPORTATION AND TRAFFIC – Would the project:					
a)	Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				
b)	Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways?				
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
e)	Result in inadequate emergency access?				
f)	Result in inadequate parking capacity?				
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	VII. UTILITIES AND SERVICE SYSTEMS – Would e project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				$\boxtimes$
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; the construction of which could cause significant environmental effects?				
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities; the construction of which could cause significant environmental effects?				
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				
g)	Comply with federal, state, and local statutes and regulations related to solid waste?				

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV	VIII. MANDATORY FINDINGS OF SIGNIFICANCE:				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?				

#### **ENVIRONMENTAL EVALUATION**

An explanation of the basis for the response to each item in Sections I through XVII and of ways to mitigate any identified significant impacts are provided below <u>unless</u> the item has been checked "NO" Impact <u>and</u> one or more of the references in Section 18 has been cited in the parenthesis following the item.

#### I. AESTHETICS

- a) **No Impact.** The project would not adversely affect a scenic vista. No scenic vistas exist within the project area, no view-affecting structures would be erected, and equipment would not be of a size that would affect views beyond the duration of construction (Alameda County 1966; Alameda County 1977).
- b) **No Impact.** There are no state designated scenic routes or highways with views of the project site (California Department of Transportation 2007).
- c) Less Than Significant Impact. Floodwalls would be constructed on both banks of the channel. The floodwalls would be between two and a half feet high to five and half feet high. The walls would impede views of the channel from some parts of the pedestrian path, but not from the Huntwood Avenue overcrossing. The pedestrian path would be removed and replaced with a pathway in approximately the same location. Trees that are unhealthy or have poor form would be replaced and both banks would be re-vegetated.
- d) **No Impact.** No new permanent structures or sources of lighting are proposed as part of this project. Construction would occur during daylight hours and would not introduce a new source of light. Construction equipment would not create any discernible glare.

#### II. AGRICULTURAL AND FOREST RESOURCES

- a) **No Impact.** No farmland designated Prime, Unique, or of Statewide Importance occurs within or immediately adjacent to the project site nor would be considered part of the project impact area (Alameda County Assessor 2006; California Department of Conservation 2012; City of Hayward 2012).
- b) **No Impact.** The proposed project would not change the zoning or current land use of the project area, including agricultural lands. The project is not within Williamson Act land. On the Alameda County map of Williamson Act lands, FY 2012-2013, the project site is within an area identified as non-Williamson Act land/urban and built-up land (California Department of Conservation 2012). No conflict with existing agricultural zoning or with a Williamson Act contract would result from project construction (Alameda County Assessor 2006).
- c) **No Impact.** The project is limited to construction of floodwalls and associated activities within existing disturbed areas and does not propose any activity that directly or indirectly would change the existing environment or conflict with existing zoning for, or cause rezoning of, forest land, or timberland (City of Hayward 2013).
- d) **No Impact.** The project would neither result in the loss of forest land nor convert forest land to non-forest use. The project is limited to the riparian corridor and not connected to a forest environment.

e) **No Impact.** No part of the project is considered farmland; therefore, no farmland would be converted to non-farmland.

#### III. AIR QUALITY

The project site lies in the City of Hayward, in the Southwestern Alameda climatological sub-region of the Bay Area. The air pollution potential of this sub-region is relatively high in the summer and fall when regional winds can transport pollutants from other areas and where the confining terrain of the East Bay hills can concentrate them locally. Hayward contains a variety of stationary industrial/commercial air pollution sources, most being concentrated in the industrially or commercially zoned western (i.e., west of Industrial Boulevard) and southern (i.e., south of Industrial Parkway West) areas of the City. Traffic on I-880, State Route 92 and State Route 238 (Mission Boulevard) are also major sources of air pollution; Mission Boulevard passed about half a mile to the northeast of the project site. The only listed stationary air pollutant sources within 1,000 feet of the project site are Parkway Auto Body (877 Industrial Parkway West) and Accurate Body & Paint (727 Industrial Parkway West).

The Bay Area Air Quality Management District (BAAQMD) maintains a number of air quality monitoring stations and continually measures the ambient concentrations of major air pollutants throughout the Bay Area. The closest such monitoring station is at 3466 La Mesa Drive, about two miles northeast of the project site. Only ozone (which is formed from precursors - reactive organic gases [ROG] and nitrogen oxides [NOx]) is monitored there. Ozone is one of the primary air pollutants of concern when evaluating the air quality impacts on and by development projects (the others being suspended fine particulate matter, both the  $PM_{10}$  and  $PM_{2.5}$  varieties, but they are not monitored in Hayward). Other toxic air contaminants (TACs) are also of concern regionally. In the Bay Area, the majority of the estimated carcinogenic/chronic health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (DPM). The BAAQMD has identified DPM as being responsible for about 80 percent of the cancer risk from airborne TAC exposures.

The project site lies adjacent to and south of Industrial Parkway West, between Huntwood Avenue and the Union Pacific Railroad (UPRR) tracks. Immediately north of this section of Industrial Parkway West is a single-family residential area, which would be considered a sensitive receptor subject to potential air quality impacts during project construction.

The BAAQMD's *CEQA Air Quality Guidelines* (May 2011) were used to assess the regional significance of the project's construction-related emissions of criteria pollutants and the exposure of local sensitive receptors to toxic air contaminants in the construction equipment exhaust. The *Guidelines* specify that a project generating more than 54 pounds per day of ROG, NOx or PM<sub>2.5</sub>, or more than 82 pounds per day of PM<sub>10</sub>, is deemed to have a significant impact on the Bay Area's regional air quality, whether these emissions are from construction equipment or operational sources (e.g., motor vehicles trips after project completion)(BAAQMD 2011).<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> This analysis of air quality impacts relies on CEQA Thresholds of Significance from the May 2011 *Guidelines*. While the Alameda Superior Court ordered the BAAQMD to set aside these Thresholds and not disseminate them as officially sanctioned air quality thresholds until a CEQA review is conducted, the Court did not rule that the Thresholds lacked

substantial evidence to support them or that they were substantively flawed or scientifically unsound. Rather, it simply held that BAAQMD is required to conduct further environmental review of the Thresholds before it can readopt them. Accordingly, the basis for using the Thresholds remains valid in the view of the Lead Agency and use of the threshold is supported by substantial evidence.

The *Guidelines* also specify that project emissions of TACs or  $PM_{2.5}$  affecting sensitive receptors within 1,000 feet of the project site are considered significant if they exceed any of the following thresholds:

- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e. chronic or acute) hazard index greater than 1.0; or
- An incremental increase of greater than 0.3 micrograms per cubic meter (μg/m3) annual average PM<sub>2.5</sub>
- a) Less Than Significant Impact. The proposed project would improve local flood protection and, therefore, is not a regionally significant project that would warrant Intergovernmental Review by the Metropolitan Transportation Commission (MTC). The proposed project does not have the potential to substantially affect housing, employment, and population projections within the region, which are the basis of the BAAQMD's Clean Air Plan (CAP). Furthermore, emissions generated during construction of the proposed project would be less than BAAQMD emission thresholds (see discussion in Item c below) and, therefore, not a regionally significant air pollutant source. Thus, the proposed project would not conflict with or obstruct implementation of the CAP.
- b) **Less Than Significant Impact.** In order to limit the generation of fugitive dust with consequent exposure of local sensitive receptors to elevated PM<sub>10</sub> and PM<sub>2.5</sub> levels during construction, best management practices (BMP's) shall be implemented consistent with BAAQMD recommendations of basic construction mitigation measures (see BMP-10 in the project description).
- c) Less Than Significant Impact. Project construction activities would produce air pollutant emissions from the following sources: 1) exhaust from diesel-powered construction equipment; 2) fugitive dust (which includes PM<sub>10</sub> and PM<sub>2.5</sub>) generated by earthmoving, excavation, grading and other construction activities; and 3) exhaust from debris-removal and construction-material delivery trucks, and from construction worker commute vehicles. Such emissions from construction activities on-site and off-site would vary daily as equipment use and activity levels change over the six-month construction phase. A detailed estimate of the proposed project's emissions from construction equipment, haul trucks and worker vehicles was produced based on project construction data provided by the lead agency, as summarized in the table below. No BAAQMD emission thresholds would be exceeded. The amount of fugitive dust produced by on-site construction activities was not quantified; this potential impact would be adequately mitigated by the application of the basic dust-suppression and pollutant-reduction measures recommended by the BAAQMD (as discussed in Item b above) (Bay Area Air Quality Management District 2011; California Air Resources Board 2007).

**Table 3: Construction Emissions** 

Maximum Average Daily Construction Emissions (lbs./day)

Construction Period	ROG	NOx	Exhaust PM <sub>10</sub>	Exhaust PM <sub>2.5</sub>
April 2014	0.9	6.3	0.3	0.3
May 2014	1.5	11.5	0.5	0.5
June 2014	1.5	11.5	0.5	0.5
July 2014	1.1	9.6	0.4	0.4
August 2014	0.4	3.4	0.1	0.1
September 2014	1.5	11.8	0.5	0.5
October 2014	0.5	4.2	0.2	0.2
BAAQMD Daily Threshold	54	54	82	54
Exceeds Threshold	No	No	No	No

Source: Based on project construction phasing, equipment use, and soil/material transport provided by the lead agency, the construction equipment pollutant emission rates provided by the CARB's OFFROAD model, and motor vehicle pollutant emission rates provided by the CARB's EMFAC2007 model.

d) Less Than Significant Impact. Exposures to TACs from project construction activities were evaluated for the closest off-site sensitive receptors to the site, specifically the residential uses just north of Industrial Parkway. Using the SCREEN3 air dispersion model, receptor concentrations were estimated and excess lifetime cancer risks, non-cancer hazard indexes and PM<sub>2.5</sub> concentrations were calculated using the TAC emission rates associated with project construction. These risks were then compared to the significance thresholds identified in the BAAQMD *CEQA Guidelines*. Results of the health risk assessment indicate that the highest incremental cancer risks for residents closest to the project site based on the maximum ground-level TAC concentrations for the six-month, eight-hour work-day outdoor exposure during construction are less than one per million and, therefore, less than the significance threshold of 10 per million. For non-carcinogenic effects, the hazard indices are less than one and, therefore, within acceptable limits, and the PM<sub>2.5</sub> annual concentrations would be below the BAAQMD 0.3 μg/m3 significance thresholds. The results are summarized in the table below (Lakes Environmental, no date; Office of Environmental Health Hazard Assessment [OEHHA], 2003).

Table 4: Potential Exposure to Toxic Air Contaminants (TACs) During Construction

Receptor	Cancer Risk	Chronic /Acute Hazard Index	PM <sub>2.5</sub>
Closest Residential	0.34E-06	0.02/0.39	$0.10~\mathrm{ug/m^3}$
BAAQMD Project-Level Threshold	10.0E-06	1.0	0.30 ug/m <sup>3</sup>
Exceeds Threshold	No	No	No

Sources: Screen View, Lakes Environmental, Version 3.5.0 of the EPA's SCREEN3 air dispersion model. BAAQMD, *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2011; OEHHA, *Air Toxics Hot Spots Program Risk Assessment Guidelines*. August 2003.

e) **Less Than Significant Impact.** The project would not generate objectionable odors nor be located in an area frequently subject to objectionable odors.

#### IV. BIOLOGICAL RESOURCES

a) Less Than Significant Impact. The District commissioned the preparation of the Biological Assessment Report for the Zone 3A, Line D Phase II Project (Pacific Biology 2013). The report provides a detailed discussion of the biological resources present on the project site and evaluates potential impacts to these resources from the implementation of the proposed project. The relevant discussions are summarized and incorporated into the below analysis.

### **Special-Status Wildlife Species**

No special-status wildlife species are expected to occur on the site due to the absence of suitable habitat and/or because the project site is not accessible to areas providing suitable habitat. The project site is effectively isolated from areas containing suitable habitat for special-status species. The project site is within a flood control channel in an industrial area, is approximately six miles upstream of San Francisco Bay, there are downstream obstacles to fish migration (i.e., tide gate), and the channel enters an underground closed conduit system upstream of the site.

### Green Sturgeon and Steelhead

It was concluded by NMFS during a consultation in 2010 for the Zone 3A, Line A (Old Alameda Creek) Sediment Removal Project that the downstream tidal gate structure effectively prevents the movement of fish from San Francisco Bay into Old Alameda Creek and structures at the upstream end of the flood control channel prevent the movement of fish between Old Alameda Creek and the Alameda Creek flood control channel (National Marine Fisheries Service 2010). Therefore, it was concluded by NMFS (2010) that it is unlikely that steelhead, other salmonids, or green sturgeon would occur in Zone 3A, Line A (Old Alameda Creek). As Zone 3A, Line D feeds directly into Zone 3A, Line A (Old Alameda Creek) and does not have any other unobstructed connection to the bay, these fish species also would not be able to access the project site.

California red-legged frog

California red-legged frog has been documented at multiple locations in the undeveloped hills east of the project site. The closest of these occurrences is located approximately two miles to the northeast of the project site (CNDDB Occurrence #34). Based on the CNDDB, the species has not been documented in Zone 3A, Line D or other locations with a hydrologic or unobstructed over-land connection to the project site. The reach of Zone 3A, Line D on the project site contains very marginal habitat for California red-legged frog. While there is perennial water on the project site, the habitat is considered very low quality and it is not expected that the habitat could sustain a California red-legged frog population or that California red-legged frogs could access the site for the following reasons:

- (1) There is no emergent vegetation or other vegetative cover along the channel that could provide cover/refuge habitat for California red-legged frogs, and therefore, individual frogs would be susceptible to predation.
- (2) Water on the site is perennial and predatory fish are likely present.
- (3) The flood control channel is bordered by development and suitable upland habitat in which frogs could escape high flows is absent. Therefore, it is likely that any frogs present would be washed downstream during storm events.
- (4) The project site is isolated from areas providing suitable habitat and/or supporting known red-legged frog populations. Upstream of the project site, Zone 3A Line D enters the District's underground closed conduit storm drain system. Downstream of the project site, the channel continues through heavily developed areas and becomes brackish. Due to these factors, it is not expected that individual California red-legged frogs could disperse onto the site.

Given the above, California red-legged frogs are not expected to occur on the project site.

### Salt Marsh Associated Wildlife Species

The project site is not tidally influenced and does not contain salt marsh habitat. Salt marsh-associated wildlife species such as California clapper rail and saltmarsh harvest mouse are known to occur in locations downstream of the project site. However, suitable habitat does not occur within two miles of the project site and Best Management Practices (BMPs) would be implemented to prevent sedimentation into downstream tidal marsh areas. Therefore, salt marsh associated wildlife species would not be impacted by the proposed project.

### Burrowing owl

Burrowing owl is a federal Bird of Conservation Concern and a California Species of Special Concern. This small ground-dwelling owl lives in open, dry grasslands, agricultural and range lands, and desert habitats associated with burrowing mammals. Burrowing owls nest and shelter in ground squirrel and other suitable small mammal burrows or artificial structures. The presence of developed grassland habitat on the project site is limited to the proposed staging area. While burrowing owls do occupy grasslands with small mammal burrows (which do occur on the project site), the vegetation in the staging area is too tall (3-4 feet in height) and too dense to be used by burrowing owls; burrowing owls typically occur in areas with low-growing or sparse vegetation. Additionally, the small size of the staging area further limits its suitability for burrowing owls. Therefore, this species is not expected to occur on the project site.

Other Nesting Birds

Given the absence of riparian habitat, the project site's industrial location, and the absence of adjacent foraging habitat, it is unlikely that any special-status bird species would nest on the project site. However, the active nests of most native bird species are protected by the Migratory Bird Treaty Act (16 U.S.C. 704) and the California Fish and Game Code (Section 3503). Common bird species nest on the project site, including black phoebe (*Sayornis nigricans*), which was observed nesting under the Huntwood Avenue bridge. Depending on the timing of the proposed tree removal and other construction activities, it is possible that a protected bird nest could be directly removed or adversely affected by construction-related noise. The implementation of the Avoidance and Mitigation Measures outlined below would ensure that nesting birds are not harmed.

**Avoidance Measure 4-1:** If tree removal or construction activities would commence anytime during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the project region), a pre-construction survey for nesting birds would be conducted by a qualified biologist within two weeks of the commencement of construction activities.

If active nests are found in areas that could be directly affected or are within 300 feet of construction and would be subject to prolonged construction-related noise, a no-disturbance buffer zone should be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them should be determined by taking into account factors such as the following:

- Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;
- Distance and amount of vegetation or other screening between the construction site and the nest; and
- Sensitivity of individual nesting species and behaviors of the nesting birds.

# **Special-Status Plant Species**

The project site consists entirely of a highly disturbed flood control channel, a paved path, and adjacent highly disturbed ruderal habitats. Given these characteristics, suitable habitat for special-status plant species is not present in the project's disturbance area. Most beautiful jewel-flower (*Streptanthus albidus* ssp. *peramoenus*) and Diablo helianthella (*Helianthella castanea*) have been documented in the undeveloped hills northeast of the project site. Most beautiful jewel-flower is associated with serpentinite habitat and Diablo helianthella generally occurs along the outer margins of broadleafed upland forests. As these habitat conditions do not occur on the project site, and because these species would have been identifiable at the time of the April 2013 field survey but were not observed, they are not expected to occur on the project site. Therefore, no special-status plant species would be impacted by the proposed project and related impacts are less than significant.

b) **Less Than Significant Impact.** The flood control channel does not support developed riparian vegetation. Additionally, there are no sensitive plant communities on the project site. Therefore, related impacts would be less than significant.

- c) Less than Significant Impact. A wetland delineation was conducted on March 25, 2013 by the Huffman-Broadway Group. A total of 2.43 acres of wetlands were identified in the flood control channel, as well as an additional 0.21-acre of "other waters" within the channel's unvegetated thalweg. Construction of the low-flow ramp would temporarily disturb 271 square feet of jurisdiction wetlands in the flood plain, but these areas would be re-vegetated and there would be no permanent wetland impact. Given the disturbed condition and small area of wetlands to be affected, and that impacts would be temporary, the project would not have a substantial adverse effect on a jurisdictional wetland. impacts are not based on permitting
- d) Less Than Significant Impact. Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or manmade obstacles such as urbanization. The flood control channel enters an underground stormwater system upstream of the project site and passes through heavily developed areas downstream of the project site. Therefore, the project site is not considered to be part of an established wildlife movement corridor. Additionally, the proposed project does not include the placement of any structures that would obstruct wildlife movement. Therefore, related impacts would be less than significant.
- e) **Less Than Significant Impact.** The arborist assessed 85 trees along the top of the right (southeast) bank and determined that 33 trees were healthy enough to warrant preservation and that 52 trees should be removed. Of the 33 "healthy" trees, 25 would be preserved while eight must be removed to accommodate floodwall construction. The proposed project would also require the removal of 35 ornamental trees from the northwest side of the channel. In total, 91 trees would be removed.

The trees to be removed primarily include non-native trees, and all of the trees were planted on the site. The trees to be removed do not exceed a diameter at breast height (DBH) of 24 inches, but most of the trees have a DBH of eight inches or less. As part of the proposed project, trees, vines, and shrubs would be planted on the project site. Trees to be planted include big leaf maple (*Acer macrophyllum*), flamingo box elder (*Acer negundo*), and coast live oak (*Quercus agrifolia*).

The City of Hayward's tree removal policy requires that a tree removal permit be obtained prior to the removal of any trees with a DBH of eight inches or greater. The District would comply with the City's tree removal policy and would obtain a tree removal permit. Therefore, the proposed project would not conflict with a tree protection ordinance and related impacts would be less than significant.

- No Impact. The project site is not part of or near an existing Habitat Conservation Plan or Natural Communities Conservation Plan or any other local, regional, or state habitat conservation plan. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- g) **No Impact.** The proposed project does not include the removal or conversion of oak woodlands. Therefore, no related impacts would occur.

#### V. CULTURAL RESOURCES

a-c) **Less Than Significant Impact.** Within the entire project area, Line D (Ward Creek) is a modified and engineered flood control channel. Excavation of soil would be minimal (see Table

1) to develop the low flow ramp and remove four outfall structures. The soils removed for the ramp appear to have been either dumped at the site or washed downstream and accumulated adjacent to the Huntwood Avenue over-cross. Piles dug to support the floodwall would mostly be about 14 feet deep, with a few at 22 feet deep. Although it is unlikely that buried historic or archaeological resources would be discovered, construction personnel would be informed of the possibility.

**Standard Measure 5-1.** If any significant cultural materials are exposed or discovered during subsurface construction, operations within 25 feet of the find shall stop and a qualified archaeologist shall be retained to evaluate the materials and develop further recommendations.

d) **Less than Significant Impact.** The proposed project site is not located near a cemetery. Although it is unlikely that the site would have any buried human remains, construction personnel would be informed of the possibility.

**Standard Measure 5-2.** If any human skeletal remains are encountered during excavation, all activity in the immediate vicinity of the discovery shall be halted and appropriate measures, as required by the County of Alameda, shall be followed.

# VI. GEOLOGY AND SOILS

A Geotechnical Data and Design Report was prepared for the District for the Zone 3A Line D Floodwall Improvements (Alameda County Flood Control District [ACFCWCD] 2010). The report covered a 1.4-mile reach of Line D along Industrial Parkway between the culvert at Pacific Street and the confluence of Line A at Interstate 880. The report includes the proposed project area but extends upstream a short way and approximately one mile downstream.

- ai) **No Impact.** The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to prevent development of buildings intended for human occupation in active fault zones where there is a potential for fault rupture. The project area is not located within an Alquist-Priolo fault zone shown on the fault zone map of the area. The closest fault, the Hayward Fault, is approximately one mile to the northeast of the project site (Cal Engineering and Geology 2010). Therefore, the potential for rupture of an earthquake fault at the project site is low (Cal Engineering and Geology 2010), and this floodwall project would not include inhabitable structures.
- aii-aiii) Less Than Significant Impact. The project site is within the seismically active San Francisco Bay Area and is potentially subject to strong seismic ground shaking during an earthquake on one of the major active earthquake faults in the area. Ground movements may cause damage to the proposed floodwalls (Cal Engineering and Geology 2010). It is an area identified by the Seismic Hazards Zone map (California Department of Conservation 2004) where liquefaction has occurred or there is potential ground displacement. Exploratory drilling conducted for the project geotechnical study revealed that most of the soil profile is clayey sand and silty clays, which are not prone to liquefy during a seismic event, but there are some thin layers of sand and silt below the saturation level of the low flow channel that could be affected by liquefaction. The study indicates that potential damages to the floodwalls due to liquefaction would be low and limited to isolated areas, and remedial measure would not be necessary (Cal Engineering and Geology 2010). However, the proposed project would not result in any change that would increase the exposure of people or structures to ground shaking or liquefaction.

- aiv) **No Impact.** There are no landslides within the project area, and the closest are in the hills approximately three-quarters of a mile to the east (Cal Engineering and Geology 2010; City of Hayward 2001). Implementation of the project would neither expose people nor structures to landslides.
- b) Less Than Significant Impact. Soil erosion could occur during grading and construction of the floodwalls along the creek banks. A total of 171 cubic yards of fill would be cut from the entire project area and no soil would be used for fill. In addition, trees and other vegetation would be removed, increasing the potential for erosion. The site would be most susceptible to erosion during the construction stages, from the initial site grading through excavation, and during placement and compaction of fill. Because most of the work would be on the top of the banks and during the dry season, the channel would not be dewatered during construction. With implementation of construction-related best management practices (see BMP-1 and BMP-2), as listed in the project description, no substantial soil erosion would take occur. The site would be re-vegetated after construction is completed.
- c) **No Impact.** The project would not be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Cal Engineering and Geology 2010; City of Hayward 2001).
- No Impact. There would be no substantial risk to life or property associated with implementing this project due to expansive soils. According to Natural Resource Conservation Service maps, the project site is underlain by Clear Lake clay, Rincon clay loam, Sycamore silt loam, and Willows clay. These soils are all found in basin areas or flood plains of 0-2 percent slopes, are poorly drained, and surface runoff is very slow. Their erosion potential is non-existent or slow, except for the Sycamore soils, where the hazard of erosion is moderate to high. Soils observed in borings conducted for the floodwalls project were clayey sands and silty clays and sandy silty gravel. The soils in the project area have a low consolidation potential when surcharged, and a moderate to high shrink/swell potential (ACFCWCD 2010). No buildings would be constructed as a part of this floodwall project.
- e) **No Impact.** The project would not result in increased development in the area or a need for septic tanks or alternative water disposal systems. This project would improve flooding conditions for the existing occupancy within the watershed.

### VII. GREENHOUSE GAS EMISSIONS

a-b) Less Than Significant Impact. Although the BAAQMD has adopted 1,100 metric ton/year as a greenhouse gas (GHG) operational emissions significance criterion for development projects, there is no similar adopted threshold for project construction emissions. Construction of the proposed project would generate about 62 metric tons of GHG during its six-month construction phase. Because construction emissions would be short-term and would cease upon completion, GHG from construction activities would not substantially contribute to the global GHG emissions burden. Additionally, this is a routine capital improvement project that would not conflict with any County or State policy to reduce GHG emissions.

### VIII. HAZARDS AND HAZARDOUS MATERIALS

A hazardous material is a substance with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly transported, handled, disposed, or otherwise managed. State agencies most involved in enforcing public health and safety laws and regulations concerning designated hazardous waste or identified contaminated sites include the Department of Toxic Substance Control, the California Occupational Safety and Health Administration, the Office of Emergency Services, State Water Resources Control Board and the Regional Water Quality Control Board, the Air Resources Boards, and the California Integrated Waste Management Board. A hazardous material is defined and regulated by the Resource Conservation and Recovery Act (RCRA) and through the California Code of Regulations Title 22. If improperly handled, hazardous materials and waste can result in public health hazards including a release into the soil or groundwater, or through an airborne release in vapors, fumes, or dust.

- a-b) Less Than Significant Impact. Construction materials, which could be considered hazardous, may include fuels, motor oil, grease, various lubricants, and solvents. Hazardous materials from construction equipment would be transported, used, and disposed of in accordance with existing State and Federal regulations and requirements. These regulations stipulate appropriate vehicles and containers for transport, necessary transport procedures, worker training, and disposal requirements. By complying with regulations designed to protect human health and safety and the environment, normal construction and operations activities requiring routine transport, use, or disposal of hazardous materials would not pose a significant hazard to the public. With implementation of construction-related best management practices (see BMP-5), as listed in the project description, the proposed project would have a less than significant impact on the transport, use, and disposal of hazardous materials. There would be no transport, use, storage or potential for an accidental release of hazardous materials after completion of construction.
- c) Less Than Significant Impact. There are no schools within one-quarter mile of the project site. Treeview Elementary School is approximately one half mile to the west of the project site and Bidwell Elementary School is approximately three-quarters of a mile to the southeast. Hazardous substances would be used and transported during construction as described above in VIII (a-b). Implementation of construction-related best management practices (see BMP-5), as listed in the project description, would protect the students, faculty, and visitors who may come to the project vicinity from nearby schools from hazardous materials. Once the proposed floodwall project is completed, there would be no use, storage, or emission of hazardous materials, substances, or waste.
- d) **No Impact.** The project site is not identified by the State of California as a Hazardous Waste and Substances Site, and no substantial safety hazard to the public or the environment related to project implementation would occur at this site (California Environmental Protection Agency 2013).
- e) **No Impact.** There are no airports or an airport land use plan area within two miles of the project site. The nearest airport is Hayward Executive Airport, located approximately three miles west of the site (Google Earth 2012; City of Hayward 2002).
- f) **No Impact.** The project site is not located within the vicinity of a private airstrip (City of Hayward 2002).
- g) **No Impact.** The project would not conflict with the City of Hayward emergency response and evacuation plans (City of Hayward 2001). Emergency access would be maintained at all times. Construction would be within the creek area, and there would be designated staging areas for

storage of construction equipment, and vehicles would not block roadways. Construction access would be from Huntwood Avenue at the downstream end and from Industrial Parkway across the Pacific Railroad on to the staging area at the upstream end (Figure 3) (Alameda County Public Works Agency 2013).

h) **No Impact.** The proposed project is not located within a high severity fire zone (California Department of Forestry and Fire Protection 2007, 2008). In addition, BMP-9, listed in Table 2, addresses fire prevention during the construction period. The site would not be occupied with residences or other buildings. Therefore, there is no risk from wildland fires.

#### IX. HYDROLOGY AND WATER QUALITY

a) Less Than Significant Impact. The proposed project is not anticipated to violate any water quality standards or waste discharge requirements. As part of Section 402 of the Clean Water Act, the U.S. EPA has established regulations under the National Pollution Discharge Elimination System (NPDES) stormwater program to control stormwater discharges, including those associated with construction activities. The State Water Resource Control Board (SWRCB) implements the NPDES program in California.

The National Pollution Discharge Elimination System (NPDES)/Municipal Regional Permit (MRP) permit program regulates water pollution by regulating sources that discharge pollutants into waters of the US including construction sites. The State Construction General Permit (CGP) requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and the use of appropriate best management practices (BMPs) for erosion control and spill prevention during construction and permanent post-construction stormwater management measures following construction. Projects that disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the CGP (CGP Order 2009-0009-DWQ).

Demolition and construction activities of the proposed project include removing and replacing four outfall structures in the bank and constructing floodwalls on the top of the banks. Development of the project would require excavation, grading, and construction near the creek and adjacent banks. Excavation and grading could result in sediment in the creek. Demolition and construction activities would include the use of gasoline and diesel-powered heavy equipment, such as bulldozers, excavators, dump trucks, backhoes, concrete trucks, pick-up trucks and a dust control water hog/tank. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, solvents, glues, and other substances could be utilized during construction. An accidental release of any of these substances could degrade the water quality of surface water runoff from the site and add pollution into local waterways. On-site portable toilets could leak or spill, releasing sanitary waste, bacteria, solids, nutrients, and pathogens.

Line D is within the western portion of the Ward Creek watershed (Oakland Museum 2008). Flows originate from creeks in the hills to the east, and then become channelized in the urban portion of the city, including the project area. At this point Line D (Zone 3A) is a flood-control channel that flows to the west into old Alameda Creek and other engineered channels emptying into the San Francisco Bay about six miles downstream from the project site. The Bay is on the list of impaired water bodies compiled by the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the federal Clean Water Act.

Because the State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these water bodies, uncontrolled discharge of pollutants into them would be particularly detrimental. Runoff from the site would enter directly into Line D. The most likely runoff pollutant that would be generated from the site would be sediment created by soil disturbance during or immediately after site grading.

Construction activity subject to the State CGP includes clearing, grading, and disturbances to the ground such as stockpiling, excavation or fill placement for projects that affect greater than one acre. If the proposed project area of disturbance is more than 1 acre, the District or its contractors would be required to file a Notice of Intent with the RWQCB indicating compliance with the General Permit or prepare a SWPPP. Potential release of sediment into the creek would be reduced by conducting all earth-moving activities during the summer dry months, as approved by an Alameda County Inspector in the field. Implementation of standard erosion control techniques prior to and during project construction activities, as described in the best management practices in Table 2 and show on the Conceptual SWPPP (Figure 4) would reduce the potential water quality impacts.

Requirements for new development and re-development are defined in Section C.3 of the Municipal Regional Permit (MRP). The City of Hayward is part of the Alameda Countywide Clean Water Program under the (December 2009) Municipal Regional Stormwater NPDES Permit (Order R2-2009-0074, NPDES Permit No. CAS612008). This permit requires post-construction controls to protect water quality for projects creating or replacing 10,000 square feet of impervious surface (Alameda Countywide Clean Water Program 2011). Approximately 11,700 square feet of pavement would be removed and replaced for the pedestrian path, but this component of the project may be considered maintenance instead of new construction. Any additional runoff would be negligible because most of the impervious surface is to replace existing pavement. There are no uses proposed at the project site that would require source control. Therefore, after construction the project would have no adverse impact on water quality.

- b) **No Impact.** No groundwater supplies would be required for restoration purposes; however, minor amounts of groundwater may be encountered and dewatered during construction.
- c) **Less Than Significant Impact.** The proposed project would improve the conveyance of runoff from upstream areas and prevent flooding in the project area. The low flow meanders would remain within the existing creek floodplain and would not change the course of the creek. However, the proposed project would not result in post-construction erosion or siltation or substantially alter the course of the creek.
- d) **No Impact.** The project would not alter drainage patterns or the rate at which runoff is generated. A minimal increase in additional impervious surfaces would lead to a negligible increase in surface water runoff. Therefore, the proposed project which would not cause flooding on-or off-site. Furthermore, the project is designed to increase flood conveyance in the channel, and thereby reduce flooding.
- e-f) **No Impact.** The project would not create or contribute runoff water that would exceed the capacity of planned stormwater drainage systems, provide substantial additional sources of polluted runoff, or otherwise degrade water quality. The project would enhance hydraulic functions.

- g) **No Impact.** The project does not include nor facilitate construction of housing within a 100-year flood hazard area.
- h) **No Impact.** The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide flood insurance to communities complying with FEMA regulations that limit development in floodplains. FEMA issues flood insurance rate maps for communities participating in the NFIP. These maps delineate flood hazard zones for each project site. Executive Order 11988 (Floodplain Management) addresses floodplain issues related to public safety, conservation, and economics. It requires:
  - Avoidance of incompatible floodplain development;
  - Consistency with the standards and criteria of the NFIP; and
  - Restoration and preservation of natural and beneficial floodplain values.

Within the project area the Line D bed and bank are within Zone AE on the FEMA Flood Insurance Rate Map (FIRM) (FEMA 2009) (Figure 5: Flood Insurance Rate Map). Zone AE is within the 100-year floodplain, which means that there is a one percent annual chance of flood discharge in the channel. The surrounding area of Industrial Parkway, and some commercial and residential development are in Zone AH or Zone X. In Zone AH there is also within the 100-year floodplain, but flooding is usually shallow areas of ponding where average depths are between one and three feet. Flood insurance is required for areas in Zones AE and AH. Zone X includes areas that have 1) a 0.2 percent annual chance of flood, 2) where the 100-year flood is less than one-foot depth, or 3) have a drainage area of less than one square mile. Flood insurance is available for areas within Zone X, but it is not mandatory.

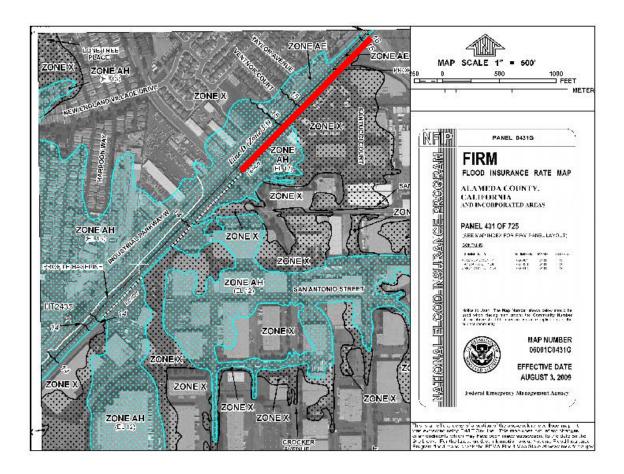


Figure 5: Flood Insurance Rate Map

Under existing conditions, a 15-year storm event would overtop the banks. After construction of the floodwalls, the 100-year flood would be contained within the channel (Macintire 2013a, 2013b). The purpose of the project is to increase flood conveyance in the flood control channel. The project would result in beneficial effects of containing storm flows.

- i) **No Impact.** The proposed flood control project would not expose people or structures to significant loss, injury, or death involving flooding. The inundation area for the Del Valle Dam is approximately two miles to the southwest of the project site are to the west of the project site, The inundation area from Lake Chabot is approximately six and a half miles to the north (City of Hayward 2001). Therefore, the proposed project is not located within a dam or levee failure zone, and as a flood control project it would not expose people or structures to associated hazards.
- j) **No Impact.** A seiche is a standing-wave oscillation of the surface of water in an enclosed or semi-enclosed basin (such as a lake, bay, or harbor) that is initiated by landslides, earthquakes, or other geologic phenomena, and continues after cessation of the originating force. The project site is approximately five miles east of the San Francisco Bay. A seiche is unlikely to affect the project area because it is too far from the bay.

A tsunami is a sea wave produced by any large scale, short duration disruption of the ocean floor, principally by a shallow submarine earthquake, but also by submarine earth movement, subsidence, or volcanic eruption. Tsunamis do not pose a risk at the project location at the south end of the San Francisco Bay because the effect of an ocean wave would be dissipated by the

time it reached the project area, and there would be no structures or other inhabited areas that would adversely affected by the proposed project.

The terrain immediately around the project area is generally flat. Thus, there is low risk of landslide, mudflow or liquefaction at the project site. The risk of inundation by seiche, tsunami or mudflow is insignificant because the project site is a considerable distance away from any large body of water. Risks associated with inundation by seiche, tsunami, or mudflow would not occur beyond existing conditions. The risk of seiche, tsunami or mudflow at the project site is considered remote.

#### X. LAND USE AND PLANNING

- a) **No Impact.** The proposed project involves flood control and restoration of a stream in the City of Hayward within the existing channel, banks and immediately adjacent area. The proposed project does not include new facilities that could divide an existing community.
- No Impact. The proposed project is within areas designated as Mixed Industrial/Industrial Corridor in the City of Hayward General Plan and is consistent with the policies of the General Plan (City of Hayward 2012; Ibid. 2001). Adjacent areas are designated Mixed Industrial/Industrial Corridor, Limited Medium Density, and Sustainable Mixed Use, and the proposed flood control project would help reduce flooding in these areas. The proposed project would not conflict with any plans or policies.
- c) **No Impact.** The project site is not located within an area subject to a known HCP or NCCP. Therefore, there would be no impact.

# XI. MINERAL RESOURCES

- a) **No Impact.** The proposed project involves installation of flood control features along Line D and only 171 cubic yards of soil would be removed from the site. No known mineral resources are present on the project site.
- b) **No Impact.** The project site is not a locally important resource recovery site.

### XII. NOISE

Noise is the term generally given to the "unwanted" aspects of intrusive sound. Many factors influence how a sound is perceived and whether it is considered disturbing to a listener, including the physical characteristics of sound (e.g., loudness, pitch, duration, etc.) and other factors relating to the situation of the listener (e.g., the acuity of a listener's hearing, the activity of the listener during exposure: sleeping, working, etc.). Environmental noise has a number of documented undesirable effects on human health and welfare, both psychological (e.g., annoyance and speech interference) and physiological (e.g., hearing impairment and sleep disturbance). The decibel (dB) is the standard measure of loudness relative to the human threshold of perception.

The City of Hayward General Plan, Conservation and Environmental Protection Element (Noise Mitigation section), and its Appendix M: Noise Measurement Survey Results and Contour Maps and Appendix N: Noise Guidelines for Review of New Developments, identifies motor vehicles, trains, industrial uses and mechanical equipment as the City's most significant noise sources (City of Hayward 2001). The project site lies adjacent to and south of Industrial Parkway West, between Huntwood Avenue

and the Union Pacific Railroad (UPRR) tracks. Industrial Parkway West forms a transitional boundary between the mostly residential neighborhoods to the north and the commercial/industrial areas to the south, and it is the most influential noise source in the site vicinity (Mission Boulevard, another major street in Hayward, passes about half a mile from the project site at its point of closest approach). Traffic noise contours presented in the *Environmental Protection Element* (Appendix M, *Existing Noise Contours* and *Future Noise Contours* maps, pages M-5 and M-6, respectively) show that daily average noise levels on and around the project site are presently at or above 70 dB L<sub>dn</sub><sup>2</sup> and are expected to remain near this level through the year 2025. Secondary local noise sources include the UPRR line, adjacent to the north end of the project site; the Bay Area Rapid Transit (BART) line, which passes about 400 feet to the northeast; and aircraft overflights associated with Hayward Executive Airport and Metropolitan Oakland International Airport flight operations.

The following policies taken from the *Environmental Protection Element* are relevant to assessing the noise impacts of the proposed project.

- "If the implementation of the General Plan would cause a substantial increase in noise levels at sensitive receptors along roadways in Hayward, this would be considered a significant impact. A 3 dB increase in the Ldn is considered substantial and would cause a significant noise impact along a roadway." (page 7-19)
- "[To] protect the noise environment in existing residential areas ... the impact of a proposed project on an existing land use should be evaluated in terms of the potential for adverse community response based on a significant increase in existing noise levels, regardless of the compatibility guidelines. Specific examples of these situations are described below:
  - 1. "The project has the potential to generate significant adverse community response due to the increased character of the noise it would generate.
  - 2. "Noise created by commercial or industrial sources associated with new project or developments shall be controlled so as not to exceed the noise level standards set forth in [the Noise and Land Use Compatibility Standards table, see below] as measured at any affected residential land use. The allowable noise level shall be adjusted up to the ambient noise level.
- "In general, the City will require the evaluation of mitigation measures for projects that would cause the Ldn to increase by 3 dB or more at an existing residential area." (Appendix N, page N-4)

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 $<sup>^2</sup>$  L<sub>dn</sub> is a 24-hour average noise level where noise occurring after 10 pm and before 6 am has a 10 dB "penalty" added to it before the average is taken. Thus, an L<sub>dn</sub> is always higher than the straight 24-hour average.

Table 5: Noise and Land Use Compatibility Standards

Adjustments to Ambient Noise Levels for Periodic Noise Events

Maximum Cumulative	Residential Exterior Noise Level Standards dB(A) <sup>3</sup>			
Duration of Noise Event in Any One-Hour Period	Daytime (7 AM - 10PM)	Nighttime (10PM - 7AM)		
30 Minutes +	+5	0		
15 Minutes +	+10	+5		
5 Minutes +	+15	+10		
1 Minutes +	+20	+15		
0-1 Minutes	+25	+20		

Source: City of Hayward General Plan, Appendix N: Noise Guidelines for Review of New Developments (City of Hayward 2001; Adopted March 2002)

• If the primary noise source is aircraft or a railroad, noise levels in new residential development exposed to an exterior Ldn of 60 dB or greater should be limited to a maximum instantaneous noise level in bedrooms at night of 50 dB. Maximum instantaneous noise levels in bedrooms during the daytime and in other rooms should not exceed 55 dB. <sup>4</sup> (Appendix N, page N-3)

Vibrating objects in contact with the ground also radiate energy through the ground. If such an object is massive enough and/or close enough to an observer, the ground vibrations can be perceptible and, if the vibrations are strong enough (as measured in vibration decibels, abbreviated VdB) cause damage to existing buildings. Background ground vibration levels in most inhabited areas are usually 50 VdB or lower, well below the threshold of perception (i.e., typically about 65 VdB).

The Federal Transit Agency (FTA) has developed criteria for judging the significance of vibration produced by transportation sources and construction activity. Under FTA criteria, limiting vibration levels to 94 VdB or less would avoid structural damage to wood and masonry buildings (which are typical of residential uses), while limiting vibration levels to 80 VdB or less at residential locations would avoid significant annoyance to the occupants (FTA 2006).<sup>5</sup>

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<sup>&</sup>lt;sup>3</sup> These are the maximum permitted incremental levels, daytime or nighttime, produced by the intruding noise source relative to the existing one-hour-average noise levels in the residential area. For example, if the existing one-hour-average daytime noise background level in a residential area is 65 dB, a new noise source is acceptable if it does not increase this background level by 5 dB if it lasts for more than 30 minutes of the hour, by 10 dB if it lasts for more than 15 minutes of the hour, etc.

<sup>&</sup>lt;sup>4</sup> Although this policy strictly applies only to aircraft or railroad noise impacts on new residential developments, it offers some guidance on acceptable levels of instantaneous noise intrusions from any source, including construction activity, on interior spaces in existing residential areas.

<sup>&</sup>lt;sup>5</sup> The FTA vibration annoyance threshold is sensitive the number of daily vibration events affecting a receptor. If such events are 30 or fewer, the 80 VdB limit applies, but the limit drops to 72 VdB if the number of events is 70 or more.

a) Less Than Significant Impact. Project construction would occur over approximately six months. Construction activities would include fencing, site preparation, excavation, pile drilling, wall/ramp construction, paving, and replanting. Such activities would require the use of off-road heavy trucks, excavators, backhoes, a drilling rig, and trucks for debris removal and material/concrete delivery.

At present, the daily average noise background levels on and around the project site, including the closest residential area just north of Industrial Parkway, are between 70-74 dB L<sub>dn</sub> according to the existing noise contour map presented in the *Environmental Protection Element* (Appendix M); these levels are considered "normally unacceptable" for residential uses under the General Plan's *Land Use Compatibility Standards for Community Noise Environments* (Appendix N, Figure 1). However, an existing six-to-eight-foot-high sound wall screens the adjacent residential area from Industrial Parkway traffic noise and provides about eight dB of attenuation, as estimated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM). With this protection, traffic noise levels at the closest residence are reduced well into the "conditionally acceptable" range as defined by the General Plan (i.e., 55 to 70 dB L<sub>dn</sub>).

Project construction activities would increase daily average noise levels in the adjacent residential area during their six-month duration. The FHWA Roadway Construction Noise Model (RCNM) was used to estimate the maximum and average outdoor noise levels during the construction day that the closest residences would experience, as presented in Table 6 below (FHWA 2006). Since construction activity would go on for only eight hours during a workday and not occur at all during the remaining 16 evening, night and early morning hours, the construction L<sub>dn</sub> would be 67 dB at 100 feet, 5 dB less than the average construction daytime level.<sup>6</sup> Assuming a 3 dB attenuation of construction noise from the existing residential sound wall,<sup>7</sup> the construction L<sub>dn</sub> at the closest residence would be 64 dB. The total L<sub>dn</sub> during construction would be 67 dB L<sub>dn</sub> and remain in the "conditionally acceptable" range for the residences facing the construction site.<sup>8</sup> Thus, General Plan compatibility standards for residential areas would be maintained during project construction.

**Table 6: Noise Levels During Construction** 

Receptor	Average Distance	Maximum Construction	Average Construction
	from Construction	Daytime Noise Level	Daytime Noise Level
	(feet)	(dB)	(dB)
Closest Residential	100	75	72

Source: Federal Highway Administration, Roadway Construction Noise Model (RCNM).

<sup>&</sup>lt;sup>6</sup> By the rules of decibel addition and averaging,  $L_{dn} = log(10^{(average daytime noise level)/10} * 8/24) * 10$ ; where "8/24" is the ratio of daytime work hours to total hours in a day.

<sup>&</sup>lt;sup>7</sup> According to the RCNM Users Guide, Appendix A: Best Practices for Calculating Estimated Shielding for Use in the RCNM.

 $<sup>^8</sup>$  Assuming an existing 72 dB  $L_{dn}$  for the closest residential (according to the General Plan contour map) and subtracting the 8 dB attenuation provided by the sound wall gives 64 dB  $L_{dn}$ . By the rules of decibel addition, the total  $L_{dn}$  during construction would be 67 dB (i.e.,  $log(10^{6.4}+10^{6.4})$  \* 10), still in the "conditionally acceptable" range.

- b) **Less Than Significant Impact.** The construction equipment to be used for the proposed project with the maximum potential for causing vibration impacts are off-road trucks and excavators. According to FTA vibration screening methods, a 40-foot separation would be adequate between the locus of equipment activity and sensitive receptors to assure that the 80 VdB annoyance impact criterion would not be exceeded. As this is more than the case for project construction (i.e., the separation would be 100 feet or more), significant vibration impacts would be unlikely.
- c) **No Impact**. The proposed project's only purpose is the construction of flood-control improvements. Once the proposed project is complete, it would have no permanent operational noise or vibration impacts.
- d) Less Than Significant Impact with Mitigation Incorporation. Project construction could threaten General Plan residential exterior incremental noise standards, which limit increases in daily average noise levels to less than 3 dB L<sub>dn</sub> and increases in daytime hourly average noise level cause by an intruding noise source to no more than 5 dB over existing daytime background levels. The analysis has shown (see "Item a" discussion above) that project construction could raise outdoor L<sub>dn</sub> at the closest residence by 3 dB. Daytime hourly average construction noise increments could be even greater (i.e., in the 5 to 10 dB range). City policy would require a noise reduction plan to reduce project construction noise impacts to the maximum feasible extent; Mitigation Measure 12-1 is proposed below to this purpose.

Considering that the entire duration of project construction is about six months and that the purpose of the project is improved public safety (i.e., flood control), in most cases the proposed mitigation would either reduce outdoor noise levels in adjacent areas to avoid significant interference with normal activities, or temporary voluntary shifts by residents to less-affected outdoor spaces around the residences could be accommodated without substantial inconvenience to allow normal community activity to continue until project construction is complete. Moreover, project construction noise would not be high enough to exceed City standards for maximum instantaneous noise events in residential interiors (i.e., 55 dB in bedrooms during the daytime and in other rooms). Modeling estimates that maximum interior noise levels in the rooms of the closest residences facing the construction site would be less than 55 dB.<sup>10</sup> Thus, inclusion of Mitigation Measures 12-1 would assure that the proposed project's incremental noise impacts are less than significant.

**Mitigation Measure 12-1**: The following BMPs shall be incorporated into the construction documents to be implemented by the project contractor:

- Provide enclosures and noise mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy activity areas on the site.
- Use quietest type of construction equipment whenever possible, particularly air compressors.
- Provide sound-control devices on equipment no less effective than those provided by the manufacturer.

<sup>&</sup>lt;sup>9</sup> According to General Plan Noise and Land Use Compatibility Standards (City of Hayward 2001), a noise source operating for more than 30 minutes during a daytime hour (which would describe noise generated by project construction activity) would have a significant impact if it increased ambient noise levels during that hour by 5 dB or more.

<sup>&</sup>lt;sup>10</sup> RCNM estimates the maximum outdoor noise level from construction activity to be 75 dB (Table 5). This would be reduced by 3 dB by the existing sound wall, and by an additional 20 dB inside the residential structures with windows closed; the latter reduction is typical of homes built of wood and masonry.

- Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptors.
- Prohibit unnecessary idling of internal combustion engines.
- Require applicable construction-related vehicles and equipment to use designated truck routes when entering/leaving the site.
- Limit project construction activity to the weekday hours of seven a.m. to seven p.m. and the Saturday or holiday hours of nine a.m. to six p.m., with Sunday construction not allowed per City noise ordinance.
- e) **No Impact.** According to the *Hayward Executive Airport Land Use Compatibility Plan (Figure 3-2)*, the project site is outside the both the Hayward Executive Airport's Airport Influence Area (AIA) and the Metropolitan Oakland International Airport's AIA (the former extending no farther south than Tennyson Road, and the latter no farther south than State Route 92). Additionally, the project involves no changes that would result in exposure to new airport noise.
- f) **No Impact.** The proposed project is not located in the vicinity of a private airstrip.

# XIII. POPULATION AND HOUSING

a-c) **No Impact.** The proposed project involves construction of floodwalls along a channel to prevent flooding in an urban area. The project would not include the development of people-attracting elements, nor would it eliminate any current barriers to the development of people-attracting elements by others. The adjacent areas are already built-out with industrial and commercial development, residences, and a park. Therefore, the project would neither directly nor indirectly induce population growth. Ground disturbing activities of the project would occur within existing County right-of-way. A temporary construction easement has been requested from the Union Pacific Railroad for the upstream staging area (Macintire 2013c). Displacement of people, homes, or other structures would not occur. The flood control provisions in the proposed project would increase protection from flooding of adjacent development.

#### XIV. PUBLIC SERVICES

ai-av) **No Impact.** The proposed project involves construction of floodwalls to prevent flooding are adjacent areas. The project does not include provision of new or physically altered government facilities. The project would not induce population growth nor does it include population-attracting elements that could contribute to a need for new or altered government services necessary to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks and recreational facilities, or other government facilities.

### XV. RECREATION

a) **No Impact.** The proposed flood control project would neither directly nor indirectly induce population growth and does not otherwise propose activities or have facilities that could increase the use of existing recreational facilities. The pedestrian/bike path along the channel would be removed and replaced in the same location. The repaved path would be an improvement, but would not be expected to significantly increase use of the path. The project would have a less-than-significant impact on recreation.

b) **No Impact.** The project does not include nor require expansion or construction of new recreational facilities. The pedestrian/bike path along the channel would be removed and replaced in the same location. Therefore, no impact would occur.

## XVI. TRANSPORTATION AND TRAFFIC

The rate at which traffic moves through intersections (quickly or slowly) indicates how well the circulation network is functioning for vehicular traffic. It is standard practice to measure the performance of an intersection in terms of Level of Service (LOS), which is a system by which the level of congestion can be given a letter grade based on vehicle delay. LOS "A" indicates a facility with little congestion and LOS "F" indicates a highly congested facility. The Alameda County Congestion Management Agency (CMA) has a Congestion Management Program (CMP). The CMP includes operating standards for key roads and freeways. Most cities seek to maintain a level of service of "D" or better at peak times. Intersections approaching their capacity are at LOS "E". The City of Hayward General Plan, Circulation Element, identifies the LOS for key intersections and major roadways projected for 2005 and 2025 (City of Hayward 2001). The Circulation Element identifies projects that would improve traffic conditions in the City, including widening Industrial Parkway adjacent to the project site. In 2000, the segment of Industrial Parkway between Huntwood Avenue and the BART, adjacent to the project site, experienced 28,000 daily trips (City of Hayward 2001).

During construction, the proposed flood control project would require 171 cubic yards of soil to be cut from the bed and banks and no additional soil fill would be required at the site. The excavated soil would be placed into trucks and delivered to a designated disposal site, such as a landfill. Concrete and creosote-treated wood would also have to be removed and delivered to a disposal site that accepts these materials. Concrete blocks and other materials to construct with floodwalls and the new asphalt concrete pedestrian/bike path would also be transported by trucks.

- a) Less Than Significant Impact. The proposed flood control project would not generate any additional traffic after the completion of construction. During construction, traffic from construction vehicles would be minimal in relation to existing traffic. It is anticipated that there would be fewer than 10 trucks in any day, plus workers' cars. A haul period of seven hours or less would avoid the peak traffic periods of seven to nine a.m. and four to six p.m. Because there would be no increase in traffic during peak periods, the project would not result in a substantial increase in traffic relative to the existing traffic load and capacity of the local street system. The impact would be less than significant.
- b) Less Than Significant Impact. The Alameda County CMA has adopted criteria for evaluating potentially significant impacts to regional roadways in the County (Alameda County CMA 2009). The criteria in the Alameda County CMP states that any project that would generate 100 additional p.m. peak-hour trips could potentially impact the regional system; therefore, a LOS analysis for roadway segments within the project study area must be prepared. Trucks hauling materials to the disposal sites and returning to the project area and those hauling new materials to the site would not operate during peak traffic periods (seven to nine a.m. and four to six p.m.). The proposed project would not increase peak period traffic trips and would not exceed, either individually or cumulatively, an LOS standard established by CMA. The impact would be less than significant.

<sup>&</sup>lt;sup>11</sup> Twenty miles is the default assumption for haul truck trips in the BAAQMD CEQA Guidelines (BAAQMD 2011). The actual disposal site may be closer.

- c) **No Impact.** The project has no air traffic component and no change in air traffic patterns would occur.
- d) **No Impact.** The project has no traffic design features associated with construction of the project. There are no agricultural features associated with the area surrounding the project site where incompatible uses would be affected.
- e) **Less Than Significant Impact.** The proposed project would not block or alter emergency access. The County is aware of the mandate of first responders, and would contact area first responders to notify them of project startup prior to initiation of construction activities. The impact would be less than significant.
- f) **No Impact.** No parking would be removed under the proposed project, nor would additional parking demand be generated. Construction personnel would park within the designated access and staging area at the northeastern portion of the site (see Figure 4).
- g) Less than Significant. The project would not include physical elements or activities that could conflict with adopted policies, plans, or programs supporting alternative transportation. Accessibility to alternative transportation would not be altered by project haul activities during construction. During construction, the public pathway along the channel would be closed, and detours would be provided if possible.

### XVII. UTILITIES AND SERVICE SYSTEMS

- a-e) **No Impact.** Because the project is a flood control project, it would have no impact on utilities and service systems. The project would not induce population growth nor does it include people-attracting elements that could contribute to a need for new or altered utilities or service systems, including, but not limited to, wastewater transport and treatment, potable water transport and treatment, stormwater transport, and solid waste disposal.
- f-g) **Less Than Significant Impact.** Approximately 171 cubic yards of soil would be hauled to a landfill. These soils could be used as cover over materials that are disposed of at the landfill, and would not adversely affect landfill capacity. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. Other material, such as concrete from the path and creosote-treated lumber from the outlets, would be disposed of in compliance with applicable regulations.

### XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

- a) **No Impact.** The proposed flood control project in an urban environment does not have the potential to cause fish or wildlife populations to drop below self-sustaining levels or threaten to eliminate a plant or animal community. The proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, reduce the number or restrict the range of a rare or endangered plant or animal, or to eliminate important examples of the major periods of California history or prehistory.
- b) **No Impact.** The proposed project would not result in impacts that are individually limited, but cumulatively considerable. Impacts from the project are temporary and would occur during construction. Cumulative impacts during construction may include air quality, biological resources, hydrology and water quality, noise, and traffic. The proposed project is designed to address flooding from a 100-year flood, and therefore, would provide a beneficial cumulative effect for other projects proposed in the area.

The following projects are planned or anticipated by the District along Zone 3A, Line D:

- 1) **Phase III of the Zone 3A, Line D floodwall project** would extend from the downstream end of Phase I to the confluence with Line A, just upstream of Highway 880.
- 2) **Phase IV of the Zone 3A, Line D floodwall project** would continue from the point where Phase III ended, just upstream of Highway 880, and continue along Line B to Folsom Avenue.

The floodwall projects would not result in a significant cumulative effect on air quality, biological resources, hydrology and water quality, noise, and traffic because construction would be minimal.

There are no projects currently under environmental review in the City of Hayward that would result in cumulative impacts when combined with the proposed project. All of the projects are more than two miles from the project site. Three of the projects (Hayward Executive Airport Administrative Building, Greenwood Homes, and Weber Property are on the west side of Highway 880, so any traffic or other construction-related issues associated with development of these projects is unlikely result in compounding environmental impacts. The last project, Roof Garden Villas, is approximately 2.2 miles to the north, would use different feeder streets, and would not add to any environmental effects of the proposed project. The cumulative effect on air quality, biological resources, hydrology and water quality, noise, and traffic from these projects would not be incremental to the point of being cumulatively significant.

**c)** Less than Significant Impact. The proposed project would not result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. The project would have a positive effect on life and property by reducing potential flooding in the vicinity of the project.

#### REFERENCES CITED:

- XIX. These references provide adequate support for the "No Impact" response. References cited are available for review at the Alameda County Public Works Agency, 399 Elmhurst Street, Hayward, CA, unless otherwise noted.
- Alameda County. 1966, Amended 1994. *Scenic Route Element of the General Plan*. May 1966, Amended May 5, 1994. Retrieved on July 13, 2012 from <a href="http://www.acgov.org/cda/planning/generalplans/documents/Scenic\_Route\_Element\_General\_Plan\_1966.pdf">http://www.acgov.org/cda/planning/generalplans/documents/Scenic\_Route\_Element\_General\_Plan\_1966.pdf</a>.
- Alameda County. 1977. Specific Plan for Areas of Environmental Significance. May 1977.
- Alameda County Assessor. 2006. Alameda County Williamson Act Lands, 2006-2007. Retrieved on July 24, 2012 from ftp://ftp.consrv.ca.gov/pub/dlrp/WA/Map%20and%20PDF/Alameda/ala%20county%202006-2007.pdf
- Alameda County Congestion Management Agency. 2009. 2009 Congestion Management Program. Retrieved on January 3, 2012, from <a href="http://www.accma.ca.gov/pdf/reoccurring\_reports">http://www.accma.ca.gov/pdf/reoccurring\_reports</a> /congestion\_management\_program/2009\_congestion\_management\_program/2009\_CMP\_Chapter\_ 3.pdf.
- Alameda County Planning Department. April 1977. Alameda County Airport Land Use Policy Plan and Environmental Impact Report.
- Alameda County Public Works Agency. 2013. Seventy percent review incomplete plan for Floodwall Improvements Along Line D (Ward Creek) between Huntwood Avenue and BART, Hayward. December 2013.
- Association of Bay Area Governments (ABAG). 2003. *Bay Area Dam Failure Inundation Maps from ABAG*. Retrieved on April 22, 2013 from <a href="http://www.abag.ca.gov/bayarea/eqmaps/damfailure/dfpickc.html">http://www.abag.ca.gov/bayarea/eqmaps/damfailure/dfpickc.html</a>.
- California State Department of Conservation, Geological Survey. 2010. Retrieved on August 9, 2012, from http://www.quake.ca.gov/gmaps/ap/ap\_maps.htm.
- Bay Area Air Quality Management District (BAAQMD). 2011. *California Environmental Quality Act Air Quality Guidelines*. May 2011.
- Browne, Jim. 2012. Arborist Report of Zone 31, Line D, Phase II, ISA Certified Arborist #WE-0746, Alameda County Flood Control and Water Conservation District. November 12, 2012.
- Cal Engineering and Geology, Inc. 2010. Alameda County Flood Control District Zone 3A Line D Floodwall Improvements, Hayward, CA. Prepared for Alameda County Flood Control and Water Conservation District (ACFCWCD). September 3, 2010.
- California Air Resources Board (CARB). 2007. EMFAC2007 Users Guide Version 2.3.

- California Department of Conservation. 2012. Farmland Mapping and Monitoring Program. Retrieved on April 22, 2013 from <a href="http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx">http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx</a>.
- California Department of Conservation. 1982. "State of California Special Studies Zones," Hayward and Newark Quadrangles, Revised Official Map, Effective January 1, 1980.
- California Department of Conservation. 2004. "State of California Seismic Hazard Zones," Hayward and Newark Quadrangles, October 19, 2004.
- California Department of Transportation. 2007. California Scenic Highway System. Retrieved on May 3, 2013 from http://www.dot.ca.gov/hq/LandArch/scenic\_highways/index.htm.
- California Environmental Protection Agency. 2013. Cortese List: Section 65962.5. Retrieved on April 29, 2013 from http://www.calepa.ca.gov/sitecleanup/corteselist/SectionA.htm.
- California Department of Forestry and Fire Protection (CAL FIRE). 2007. Fire Hazard Severity Zones in State Responsibility Area, Alameda County. Retrieved on April 30, 2013 from <a href="http://www.fire.ca.gov/fire\_prevention/fhsz\_maps\_alameda.php">http://www.fire.ca.gov/fire\_prevention/fhsz\_maps\_alameda.php</a>.
- CAL FIRE. 2008. Fire Hazard Severity Zones in Local Responsibility Area, Alameda County. Retrieved on April 30, 2013 from <a href="http://www.fire.ca.gov/fire\_prevention/fhsz\_maps\_alameda.php">http://www.fire.ca.gov/fire\_prevention/fhsz\_maps\_alameda.php</a>.
- California Regional Water Quality Control Board, San Francisco Bay Region, 1995. Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan).
- CalRecycle. 2012. Questions and Answers: Construction and Demolition and Inert Debris
  Transfer/Processing Regulations. Last updated on February 23, 2012. Retrieved on April 30, 2013
  from <a href="http://www.calrecycle.ca.gov/LEA/regs/Implement/CDIQA.htm">http://www.calrecycle.ca.gov/LEA/regs/Implement/CDIQA.htm</a>
- City of Hayward. 2001. General Plan and Appendices.
- City of Hayward. 2012. *General Plan map*. Retrieved on April 21, 2013 from <a href="http://gis.hayward-ca.gov/pdf-maps/COH\_General\_Plan.pdf">http://gis.hayward-ca.gov/pdf-maps/COH\_General\_Plan.pdf</a>.
- City of Hayward. 2013. Access Hayward, Projects Under Environmental Review. Retrieved on May 5, 2013 from http://user.govoutreach.com/hayward/faq.php?cid=11037.
- City of Hayward. 2013. *Zoning Atlas*. Updated June 21, 2011, page 578-C-384. Retrieved on April 15, 2012 from <a href="http://www.fremont.gov/DocumentCenter/Home/View/1990">http://www.fremont.gov/DocumentCenter/Home/View/1990</a> and <a href="http://www.codepublishing.com/ca/fremont/">http://www.codepublishing.com/ca/fremont/</a>.
- Department of Conservation, Division of Land Resource Protection. 2000. *Alameda County Important Farmland 2000*.
- Federal Emergency Management Agency (FEMA). 2009. National Flood Insurance Program. Flood Insurance Rate Map, Alameda County, California and incorporated areas. Community-Panel Number 06001C0431G. August 3.

- Federal Highway Administration (FHWA). 2006. Roadway Construction Noise Model User's Guide, January 2006.
- Federal Transit Agency (FTA). 2006. Transit Noise and Vibration Impact Assessment, May 2006.
- Google Earth. 2013. Google Earth search of vicinity of Line D for airports. Retrieved on May 2, 2013.
- Lakes Environmental. No Date. CALRoads View User's Guide.
- Macintire, Ilene. 2013a. Email from Ilene Macintire, ACFCWCD, to Jim Browne, ACFCWCD, regarding Zone 3A, Line D Information for Permit Applications. March 5, 2013.
- Macintire, Ilene. 2013b. Email from Ilene Macintire, ACFCWCD, to Josh Phillips regarding Zone 3A Line D Information Request. April 15, 2013.
- Macintire, Ilene. 2013c. Memo from Ilene Macintire, ACFCWCD regarding Response to GECO Initial Study Data Request. April 3, 2013.
- National Marine Fisheries Service (NMFS). 2010. Section 7 Informal Consultation Letter, Removal of Accumulated Sediment from the Old Alameda Creek Flood Control Channel (Corps File #2009-001-0172S).
- National Oceanic Atmospheric Association, National Geophysical Data Center. 2001. Results of Tsunami Run-up Database Search for U.S. and Central American West Coast.
- Oakland Museum. 2013. Guide to Sand Francisco Bay Area Creeks, Ward and Dry Creek Watersheds map. Retrieved on April 30, 2013 from <a href="http://www.museumca.org/creeks/1320-OMWard.html">http://www.museumca.org/creeks/1320-OMWard.html</a>.
- Office of Environmental Health Hazard Assessment (OEHHA). 2003. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, August 2003.
- South Coast Air Quality Management District (SCAQMD). 2011. *California Emissions Estimator Model (CalEEMod) User's Guide*, Appendix D, Table 3.4 OFFROAD Equipment Emission Factors. February 2011.
- United States Department of Agriculture. 1981. Soil Survey of Alameda County, California, Western Part.