Addendum to Environmental Impact Report

Addendum Date: April 12, 2017
Case No.: 2011.0123E
Project Title: Peninsula Pipelines Seismic Upgrade Project
EIR: 2011.0123E, certified October 17, 2013
Project Sponsor: San Francisco Public Utilities Commission
Lead Agency: San Francisco Planning Department
Staff Contact: Chelsea E. Fordham – (415) 575-9071
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REMARKS

Background

The San Francisco Planning Commission certified the Peninsula Pipelines Seismic Upgrade Project Final Environmental Impact Report (FEIR), Case No. 2011.0123E, on October 17, 2013. The project analyzed in the FEIR consisted of seismic upgrades to regional water facilities at five locations on the San Francisco Peninsula, including in the Town of Colma, and the cities of South San Francisco, San Bruno, and Millbrae in San Mateo County. Following certification of the FEIR, the San Francisco Public Utilities Commission (SFPUC) approved the project on October 22, 2013.

SFPUC previously identified areas on the San Francisco Peninsula that are susceptible to liquefaction, ground shaking, and landslides. As a result of these studies, the SFPUC identified five water pipeline segments in need of seismic improvements, which will be referred to as the Adopted 2013 Project (adopted project). These five sites included projects at the following project sites: Colma site; South San Francisco Site; San Bruno North site; San Bruno South site; and the Millbrae site. These pipelines, part of the regional water system owned and operated by the City and County of San Francisco, are the San Andreas Pipeline No. 2 (SAPL2), San Andreas Pipeline No. 3 (SAPL3), and Sunset Supply Branch Pipeline (SSBPL). The project construction activities consisted of replacement and stabilization of pipeline segments, injection of grouting to fill voids under pipeline segments, the installation of pipe supports, and tree removal. Both open trench and jack-and-bore construction techniques were used to construct the water pipeline segments. In San Bruno, two segments of SAPL2 were replaced.

The SFPUC awarded a contract for the Adopted 2013 Project and construction began in April 2014. Construction was completed in February, 2016 for the entirety of the Adopted 2013 Project.

In July 2015, a portion of SAPL2 in San Bruno that had not been replaced burst, resulting in the loss of millions of gallons of water. Upon inspection of the line, it was discovered that four additional segments of the original line in San Bruno had deteriorated, and SAPL2 was subsequently taken out of service. The replacement of these four additional segments of SAPL2 is the focus of this environmental review.
PROPOSED PROJECT MODIFICATIONS

The project modifications proposed by the SFPUC and addressed in this addendum are to replace and/or slipline (installing a smaller pipe into an existing larger pipe) four discontinuous segments of 54-inch-diameter water pipeline segments (segments 1, 2, 3, and 4) of SAPL2 within San Bruno that were not identified in the Peninsula Pipelines FEIR, as described further below. The project modifications proposed under this addendum are referred to as the Modified 2017 Project (modified project). The pipeline occupies a partially-undeveloped right-of-way corridor 40 to 60 feet wide. The pipeline would be replaced with a new pipeline of the same size, in the same alignment and at the same depths as the existing pipeline. The four segments would be located from the Harry Tracy Water Treatment Plant, near the intersection of I-280 and Crystal Springs Road, to Sneath Lane, near the southern boundary of the Golden Gate National Cemetery. The locations of these segments are shown in the Attachment A: Location and Vicinity Map. The proposed new segments are located in the vicinity of the San Bruno North site and San Bruno South sites analyzed in the FEIR. The Adopted 2013 Project analyzed seismic upgrades to SAPL2 and SAPL3 within the City of San Bruno and the Modified 2017 Project would construct upgrades to just SAPL2. The Adopted 2013 Project included the construction and seismic upgrades of 4,680 linear feet and included a total construction area of 11.48 acres. The Modified 2017 Project would total an additional 7,307 linear feet of pipeline replacement and include a total construction area of 9.04 acres. Table 1 below compares the Modified 2017 Project to the Adopted 2013 Project. Additionally, further discussion of the Modified 2017 Project and the individual segments is provided below.

Project Construction

Pipeline Replacement and Stabilization

The Modified 2017 Project would include replacement of the existing SAPL2 pipeline alignment on segments 1-4 by using shored open trench construction methods. This would include removing the existing 54-inch “lock bar” steel pipe and replacing it with new 54-inch welded steel pipe. A portion of segment 1 would involve using a trenchless jack-and-bore technique, where a smaller welded steel pipe would be sliplined within the existing SAPL2 pipe. Additionally, excavation pits, approximately 12 feet deep, 10 feet wide, and 30 feet long, would be required at both ends of each portion to be sliplined. Trench excavation, removal of existing pipes, and installation of new pipes would be similar to the activities identified in the FEIR for construction of the Adopted 2013 Project. These construction techniques are consistent with the Adopted 2013 Project (FEIR, page 3-23, Common Construction Elements for Pipeline Replacement.)

In addition, construction of segments 3 and 4 would cross underneath three roadways, which would utilize trenchless jack-and-bore technique sliplining and require two excavation pits at each side of the roadway: at San Bruno Avenue, Cherry Avenue, and Sneath Lane. Depth of excavation for construction of the Modified Project would be approximately 10 feet deep, with the exception of the Crystal Springs Road crossing for construction of segment 1 and the adjacent area where excavation would reach a maximum depth of approximately 16 feet deep.

Proposed pipe appurtenance replacements would include discharge valves, release valves, and manholes at the same locations as the existing SAPL2. For unpaved areas, the concrete risers housing the valves are approximately seven feet in diameter and up to 2.5 feet above grade. In

1 A “lock bar” steel pipe is a type of rivetless steel pipe.
paved areas, the concrete riser is flush with the existing paved surface. There are two small cathodic protection enclosures within segment 1 that would be relocated in the same vicinity.

**Construction Staging, Spoils Areas, and Vegetation Removal**

Construction staging would occur within the SAPL2 right-of-way (ROW), as well as various locations off of the ROW as described below for construction of segments 1-4.

Trees and other vegetation would be removed within the ROW to avoid damage from roots to the proposed pipeline, consistent with the SFPUC Integrated Vegetation Management Policy. In addition, trees would be removed within some staging areas, as described below. In total, 40 trees would be required to be removed for construction of the Modified 2017 Project. The tree species to be removed would consist of a range of species including silver wattle, coastal live oak, bay laurel, toyon, and one Monterey Pine. Following construction of the modified project, all construction staging areas would be revegetated, as described further below.

Construction is estimated to begin in 2017 and end in 2019, with a total duration of approximately 24 months, assuming each segment is constructed in separate phases, and construction of each segment would occur subsequent to the completion of each phase. The duration of construction activities at each segment would range from approximately four to six months. Additionally, construction activities could occur simultaneously at segments 1-4, similar to construction activities described in the FEIR (page FEIR 3-35) for the Adopted 2013 Project, which would shorten the construction duration to a total of 6 months. Construction would progress at up to 50 feet per day in segment 1, and as much as 200 feet per day in segments 2, 3, and 4. Construction of segments 1-4 would in some locations require portions of the sidewalk/trails to be temporarily closed for construction access. In all of these occasions, SFPUC would construct alternative pedestrian access parallel to the route as part of the modified project.

Construction hours would be the same as described in the FEIR (8 a.m. to approximately 4:30 p.m. Monday through Friday, with potential limited weekend work). Nighttime construction could be required for construction of segment 1 at jack-and-bore technique slipline locations and at the crossing of Crystal Springs Road. Nighttime activities could also include limited 24-hour pumping for dewatering of the pipelines at segments 1-4, as described in the FEIR. Similar to the adopted project, the modified project would include project construction activities adjacent to sensitive receptors (i.e. residences). The nearest sensitive receptors to the modified project would be approximately 10 feet away in segment 3. This distance from sensitive receptors is similar to the San Bruno South site under the adopted project. Typical construction equipment and crew size would be the same as described in the FEIR (page 3-35) with a workforce at each site of up to 20 personnel per site for a total of 80 personnel to construct all four segments. Construction of segments 1-4 of the Modified 2017 Project are described in further detail below.

**SFPUC Standard Construction Measures**

The SFPUC has established standard construction measures for all Water System Improvement Project (WSIP) projects that would be implemented as part of the proposed project. The main objectives of these measures are to:

- Reduce impacts on existing resources to the extent feasible;

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3 SFPUC, Standard Construction Measures, July 1 2015.
- Include activities such as early identification of sensitive environmental resources in the WSIP project area; and
- Notify businesses, owners, and residents of adjacent areas potentially affected by the WSIP projects about the nature, extent, and duration of construction activities.

The SFPUC would ensure that the proposed project’s contract specifications contain uniform minimum provisions to address these issues.

SEGMENT 1

Segment 1 would include the replacement and construction of a 2,370 foot-long portion of SAPL2 extending northward from SFPUC’s Harry Tracy Treatment Plant near I-280, along the east side of Crystal Springs Road in San Bruno, primarily within the Harry Tracy Treatment Plant (HTWTP) and Junipero Serra County Park (see Figure 1). Sliplining would be used between two pipeline vaults at the HTWTP while open-trench construction would also used for the remainder of the segment. Excavation pits, approximately 12 feet deep, 10 feet wide, and 30 feet long, would be required at both ends of each sliplined portion. Replacement along the remainder of the alignment would be by open cut trenching, generally about 10-feet-deep, but as deep as 16 feet in the Crystal Springs Road vicinity, where the existing pipeline is deeper. Construction of segment 1 is estimated to take approximately 6 months.

Two proposed staging areas outside of the SAPL2 ROW would be required to construct segment 1. One would be located at the Junipero Serra Park parking lot off of Crystal Springs Road, and the second staging area would be on park land within Junipero Serra Park. Construction staging would temporarily displace 54 parking spaces at the Junipero Serra Park parking lot.
### Table 1- Comparison of Modified 2017 project to the Adopted 2013 project

<table>
<thead>
<tr>
<th>Project Site</th>
<th>Approximate Distance of Pipe Upgrade¹ (feet)</th>
<th>Staging and Spoils Areas (acres)</th>
<th>Construction Zone (acres)</th>
<th>Total Construction Work Area² (acres)</th>
<th>Proposed Project Activities</th>
<th>Existing Uses – Site and Vicinity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Adopted 2013 project</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colma; South San Francisco; San Bruno North; San Bruno South; Millbrae</td>
<td>4,680</td>
<td>5.3 acres</td>
<td>6.18</td>
<td>11.48</td>
<td>Pipeline segment replacement and Stabilization of pipe segment in tunnel</td>
<td><strong>Adjacent Uses:</strong> Residential and recreational</td>
</tr>
<tr>
<td>Colma</td>
<td>700</td>
<td>0.77</td>
<td>1.47</td>
<td>2.24</td>
<td>Pipe segment replacement</td>
<td><strong>Site:</strong> Vacant SFPUC ROW and area within Kohl’s Department Store Parking Lot  <strong>Adjacent Uses:</strong> Commercial and cemetery</td>
</tr>
<tr>
<td>South San Francisco</td>
<td>720</td>
<td>0.05</td>
<td>1.29</td>
<td>1.34</td>
<td>Pipe segment replacement</td>
<td><strong>Site:</strong> Vacant SFPUC ROW, Westborough Boulevard and area within the Pacific Supermarket Parking Lot  <strong>Adjacent Uses:</strong> Commercial, residential, and recreational</td>
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<tr>
<td>San Bruno North</td>
<td>140³</td>
<td>0.14</td>
<td>0.76</td>
<td>0.90</td>
<td>Stabilization of pipe segment in tunnel</td>
<td><strong>Site:</strong> Vacant SFPUC ROW and area within Caltrans ROW; portion of right-hand eastbound lane on San Bruno Avenue West  <strong>Adjacent Uses:</strong> Commercial, residential, recreational</td>
</tr>
<tr>
<td>San Bruno South</td>
<td>(SAPL2) 1,170</td>
<td>2.31</td>
<td>1.59</td>
<td>3.90</td>
<td>Pipe segment replacement</td>
<td><strong>Site:</strong> Vacant SFPUC ROW, Whitman Way, and areas within parking lots for Peninsula High School and San Bruno Chinese Church  <strong>Adjacent Uses:</strong> Residential, church, school, open space, and recreational</td>
</tr>
<tr>
<td></td>
<td>(SAPL3) 1,050</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Site</td>
<td>Approximate Distance of Pipe Upgrade (feet)</td>
<td>Staging and Spoils Areas (acres)</td>
<td>Construction Zone (acres)</td>
<td>Total Construction Work Area (acres)</td>
<td>Proposed Project Activities</td>
<td>Existing Uses – Site and Vicinity</td>
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<tr>
<td>Millbrae</td>
<td>900</td>
<td>2.03</td>
<td>1.07</td>
<td>3.10</td>
<td>Pipe segment replacement</td>
<td>Site: Vacant SFPUC ROW, areas within a golf course, open space, and residential lots Adjacent Uses: Residential and recreational</td>
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</table>

**Modified 2017 Segments**

<table>
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<tr>
<th>Total Modified 2017 Segments</th>
<th>7,307</th>
<th>2.26</th>
<th>6.78</th>
<th>9.04</th>
<th>Pipeline Replacement</th>
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<tbody>
<tr>
<td>Segment 1</td>
<td>2,370</td>
<td>1.14</td>
<td>1.93</td>
<td>2.94</td>
<td>Pipe Replacement</td>
</tr>
<tr>
<td>Segment 2</td>
<td>807</td>
<td>0.62</td>
<td>1.54</td>
<td>2.16</td>
<td>Pipe Replacement</td>
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<tr>
<td>Segment 3</td>
<td>1,510</td>
<td>0.26</td>
<td>1.51</td>
<td>1.77</td>
<td>Pipe Replacement</td>
</tr>
<tr>
<td>Segment 4</td>
<td>2,620</td>
<td>0.37</td>
<td>1.8</td>
<td>2.17</td>
<td>Pipe Replacement</td>
</tr>
<tr>
<td>Total Combined (Modified 2017 project to the)</td>
<td>11,987</td>
<td>7.56</td>
<td>12.96</td>
<td>20.52</td>
<td>Pipeline segment replacement and N/A</td>
</tr>
<tr>
<td>Project Site</td>
<td>Approximate Distance of Pipe Upgrade&lt;sup&gt;1&lt;/sup&gt; (feet)</td>
<td>Staging and Spoils Areas (acres)</td>
<td>Construction Zone (acres)</td>
<td>Total Construction Work Area&lt;sup&gt;2&lt;/sup&gt; (acres)</td>
<td>Proposed Project Activities</td>
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<td>---------------------------------------------------------</td>
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<tr>
<td>Adopted 2013 project</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Stabilization of pipe segment in tunnel</td>
</tr>
</tbody>
</table>

Source: G&E Engineering Systems, Inc., 2012; PPSU project analysis, URS.

Notes:

<sup>1</sup> Approximate distance of pipe is measured as horizontal distance. Total length of pipe to be replaced may be longer, due to the vertical changes along the pipeline.

<sup>2</sup> Total Construction Work Area is the sum of Staging and Spoils Areas and the Construction Zone.

<sup>3</sup> Estimated length of work in tunnel.

ROW = right-of-way
Construction of segment 1 would require removal of approximately 40 trees and would require excavation of approximately 7,000 cubic yards of soil removal and total backfill of approximately 4,400 cubic yards. Construction access routes would be from within the HTWTP, Crystal Springs Road, and the SAPL2 ROW through the Junipero Serra Park. The Crystal Springs Road crossing would require temporary closure of one travel lane at a time for approximately two weeks, necessitating alternate one-way traffic operations for approximately 180 feet. Flaggers would direct traffic during lane closures.

Figure 1: Alignment of Segment 1 (shown in yellow)

SEGMENT 2

Segment 2 would include the replacement and construction of an 807 foot long portion of SAPL2. Segment 2 runs parallel from Courtland Drive adjacent to the San Bruno Chinese Church to the east and Peninsula Alternative High School across Courtland Drive to the west. Segment 2 is located directly south of the San Bruno South site, which was a part of the Adopted 2013 Project. Figure 2, below, shows the alignment of the existing SAPL2 segment to be replaced.

Open trench construction would be used for construction of segment 2, and would generally require excavation to depths of about 10-feet-deep. Construction of segment 2 is estimated to take approximately 4 months. Additionally, SFPUC’s Standard Construction Measures #7 – Biological Resources, which apply to all SFPUC projects, would ensure that biological resources are protected during construction activities of segment 2. Compliance with the SFPUC’s Standard Construction Measures #7 – would require that a qualified biologist will carry out a survey of segment 2, as appropriate, to note the general resources and identify whether habitat for special-status species are present, and if so protect such resources in accordance with local, State, and federal laws.

4 SFPUC, Standard Construction Measures #7-Biological Resources states; all project sites and the immediately surrounding area will be screened to determine whether biological resources may be affected by construction. A qualified biologist will also carry out a survey of the project site, as appropriate, to note the general resources and identify whether habitat for special-status species and/or migratory birds, are present. In the event further investigation is necessary, the SFPUC will comply with all local, State, and federal requirements for surveys, analysis, and protection of biological resources (e.g., Migratory Bird Treaty Act, federal and State Endangered Species Acts, etc.). If necessary, measures will be implemented to protect biological resources, such as installing wildlife exclusion fencing, establishing work buffer zones, installing bird deterrents, monitoring by a qualified biologist, and other such measures. If tree removal is required, the SFPUC would comply with any applicable tree protection ordinance. July 1 2015.
The proposed construction staging area for this segment would be located within the parking lot of the Peninsula Alternative High School and would temporarily displace 120 parking spaces during the four month construction period. Construction of segment 2 would require excavation of approximately 3,800 cubic yards of soil removal and total backfill of approximately 3,300 cubic yards. No trees are expected to be removed during construction of this segment.

Construction vehicles and equipment would access the site from Courtland Drive, and no lane closures are required for construction of segment 2.

**Figure 2: Alignment of Segment 2 (shown in yellow)**

### SEGMENT 3

Segment 3 would include the replacement and construction of a 1,510 foot-long portion of SAPL2. Segment 3 is located south of San Bruno Avenue, runs along a grassy area just west of the Bayhill Shopping Center and a parking garage to the north of Bayhill Drive, and ends just south of Highway 380. Segment 3 is located directly north of the San Bruno North site, which was a part of the Adopted 2013 Project. Figure 3, below, shows the alignment of the segment 3 to be replaced.

Open trench construction would be used for construction of segment 3, and would generally require excavation to depths of about 10 feet deep. In addition, construction of segment 3 would cross underneath San Bruno Avenue, which would utilize trenchless jack-and-bore technique sliplining and require two excavation pits measuring 10-feet wide by 30-feet long, and 12 feet deep, at each side of San Bruno Ave. Construction of segment 3 is estimated to take approximately 6 months.

The proposed staging areas in this segment include a strip of grassland west of the Bayhill Shopping Center, a grassy area to the west of the Bayhill Shopping Center parking garage, and a woody and grassy area south of San Bruno Avenue within Caltrans ROW. Construction of segment 3 would require excavation of approximately 5,250 cubic yards of soil removal and total backfill of approximately 3,400 cubic yards. No trees are expected to be removed during construction of this segment.

Construction access routes would be from the Interstate 280 north off-ramp to San Bruno Avenue and Bayhill Drive.
SEGMENT 4
Segment 4 would include the replacement and construction of a 2,620 foot-long portion of SAPL2. Segment 4 is located between Highway 380 and the Golden Gate National Cemetery. This segment starts within the Cherry Avenue Villas condominium complex just north of Highway 380, crosses Boardwalk Drive (a private drive owned by the condominium complex) and runs through the Peninsula Place Homeowners condominium complex (running underneath Boardwalk Place for the largest stretch), crosses Cherry Ave and Sneath Lane, and continues for approximately 43 feet within the Golden Gate National Cemetery. Open trench construction would be used for construction of segment 4, and would generally require excavation to depths of about 10 feet deep. In addition, construction of segment 4 would cross underneath Cherry Avenue and Sneath Lane, which would utilize trenchless jack-and-bore technique sliplining and would require two excavation pits measuring 10 feet wide by 30 feet long, and 12 feet deep, at each side of these roadways.

Golden Gate National Cemetery is considered a historic resource under CEQA. The SFPUC’s Standard Construction Measure # 9 – Cultural Resources⁵, which apply to all SFPUC projects, would ensure that for projects within the City that include activities with the potential for direct or indirect effects to historic buildings or structures, initial CEQA screening will include a review, for the project footprint and up to one parcel surrounding the footprint of City and County of San Francisco’s (CCSF’s) online planning map, all relevant survey data, preservation address files, and other pertinent sources for previously-identified, historically significant buildings and building and structures more than 45 years old that have not been previously evaluated. For projects outside of the City, initial CEQA screening will include a records search of EP’s CCSF historical resources data, California Historical Resources Information System (CHRIS), and other pertinent sources for historically significant or potentially significant buildings and structures older than 45 years. For projects that would modify an existing building or structure that has been determined by EP as being a significant historical resource (i.e., appears eligible to qualify for the California Register of Historic Resources (CRHR)), or that would introduce new aboveground facilities in the vicinity of a significant historical resource, or that would affect previously unevaluated buildings or structures more than 45 years old, the SFPUC will retain a qualified architectural historian (defined as meeting the Secretary of the Interior’s Professional Qualification standards and, if a consultant, also selected in consultation with the ERO) to conduct a historical resource evaluation (HRE). The SFPUC will submit the project description and the HRE to the CCSF Planning Department Preservation Planner or to the ERO’s-designated qualified architectural historian to assess potential effects. Where the potential for the project to have adverse effects on historic buildings or structures is identified, the CCSF Planning Department Preservation Planner or the ERO’s designee will consult with SFPUC to determine if the project can be conducted as planned or if the project design can be revised to avoid the significant impact, and will comply with applicable procedures set forth in Historic Architectural Resource Measure I. If these options are not feasible, the project will need to undergo further review with Environmental Planning (EP) and mitigation may be required. If so, the project would not qualify for a Categorical Exemption from CEQA review. Where construction will take place in proximity to a building or structure identified as a significant historical resource but would not otherwise directly affect it, the SFPUC will implement protective measures, such as but not limited to, the erection of temporary construction barriers to ensure that inadvertent impacts to such buildings or structures are avoided. July 1 2015.

⁵ SFPUC, Standard Construction Measure # 9, Cultural Resources - Historic (Built Environment) Resources states; For projects within the City that include activities with the potential for direct or indirect effects to historic buildings or structures, initial CEQA screening will include a review, for the project footprint and up to one parcel surrounding the footprint of City and County of San Francisco’s (CCSF’s) online planning map, all relevant survey data, preservation address files, and other pertinent sources for previously-identified, historically significant buildings and building and structures more than 45 years old that have not been previously evaluated.
any potential historic resources are protected during construction activities, including the requirement that a protection plan for the contributing features of the cemetery is prepared and approved by the Environmental Review Officer (ERO) prior to the start of construction. In compliance with the Standard Construction Measure # 9 – Cultural Resources, the project would implement the following procedures under the historic resources protection plan:

- Grass and any other landscaping that is removed or damaged during construction shall be replaced according to Secretary of the Interior’s Standards (SOI) for the Treatment of Historic Properties. This means that replacement grass and landscaping needs to match the extant material, or be of replacement material approved by the Department of Veterans Affairs.6

- Any inadvertent damage to headstones, wrought iron fencing, and/or fence posts caused during construction shall be repaired according to Secretary of the Interior’s Standards for the Treatment of Historic Properties.

- Protection and stabilization measures would be developed before project construction for any contributing elements of the Golden Gate National Cemetery that may require protection for features such as fencing, landscape, and headstones. Such measures could include physical barriers to protect contributing elements from construction activities (e.g., excavation, grading, construction equipment, or laydown areas).

- Construction workers would undergo training regarding the historical significance of the Golden Gate National Cemetery and the contributing elements that may be potentially impacted by the project. Training materials would be prepared or reviewed by a historic architect or architectural historian who meets the SOI Professional Qualification Standards and the contractor shall verify that the historical resource training was conducted.7

Construction of segment 4, within the Cemetery would also include supporting the existing fence in place while the existing pipe is removed and a new pipe is slipped under the fence. Additionally, all landscaping that is impacted by the project in the cemetery will be replaced in kind. Figure 4, below, shows the alignment of the existing SAPL2 segment to be replaced.

Construction activities associated with the pipeline replacement would temporarily displace 151 parking spaces within both the Cherry Avenue Villas and Peninsula Place Homeowners condominium complex, as well as parking spaces along Cherry Avenue. Construction of segment 4 would require excavation of approximately 4,000 cubic yards of soil removal and total backfill of approximately 2,500 cubic yards. No trees are expected to be removed for construction of this segment. Construction of segment 4 is estimated to take approximately 6 months.

Construction access routes would be from Cherry Avenue, the private Boardwalk Drive and Boardwalk Place, Sneath Lane, and internal roads within the Golden Gate National Cemetery. While sections of Boardwalk Place and Boardwalk Drive would be closed during construction, emergency access would be maintained.

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7 36 CFR Part 61, Appendix A.
PREVIOUS PROJECT MODIFICATIONS

The SFPUC has proposed various minor refinements of the Peninsula Pipelines Seismic Upgrade Project during the course of project construction. The San Francisco Planning Department reviewed each of these project modifications, concurred that they were minor, and determined that the project as modified would not deviate from the adopted project such that it would result in any new significant impacts beyond those identified in the FEIR or substantially increase the severity of a significant impact, and that no new mitigation measures would be required. Table 1 summarizes the minor project modification (MPMs) that the Planning Department has reviewed for the project.

Table 1: Minor Project Modifications

<table>
<thead>
<tr>
<th>Minor project modification</th>
<th>Approval Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>07/24/14</td>
<td>Expand staging area at the Baden Valve Lot in South San Francisco</td>
</tr>
<tr>
<td>2</td>
<td>09/08/14</td>
<td>Additional tree removal and trimming in South San Francisco</td>
</tr>
<tr>
<td>3</td>
<td>12/04/14</td>
<td>Additional tree removal in San Bruno</td>
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APPROVALS REQUIRED

The following project approvals by federal, State, and local agencies would be required for implementation of the Modified 2017 Project:

Federal
- U.S. Army Corps of Engineers Section 404 Clean Water Act permit;

State
- California Regional Water Quality Control Board Section 401 water quality certification;
- Caltrans - Encroachment permit and Memorandum of Agreement for use of the Caltrans ROW for construction staging;

Local
- City of San Bruno - Encroachment permits; temporary construction easements; tree removal permits for trees outside of the SFPUC (ROW) right-of-way, grading permits, sewer district approvals, and leases or other agreements as needed;
- San Mateo County Parks Department - Memorandum of Agreement for construction within Junipero Serra Park; and
- SFPUC - Final EIR and Addendum; approval of the modified project, and the mitigation and monitoring program.

CHANGES TO APPROACH TO ANALYSIS

This addendum uses an updated approach to analysis from the 2013 FEIR for transportation impacts in accordance with guidance from the State Office of Planning and Research (OPR) adopted by the San Francisco Planning Commission in March 2016. These regulatory and statutory changes are discussed below.

CEQA Section 21099

CEQA Section 21099(b)(1) requires that OPR develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that promote the “reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that upon certification of the revised CEQA Guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA8 (proposed transportation impact guidelines) recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric. VMT measures the amount and distance that a project might cause people to drive, accounting for the number of passengers within a vehicle. OPR’s proposed transportation impact guidelines provide substantial evidence that VMT is an appropriate standard to use in analyzing impacts to protect environmental quality and a better indicator of greenhouse gas, air quality, and energy impacts than

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8 This document is available online at: https://www.opr.ca.gov/s_sb743.php.
automobile delay. Acknowledging this, San Francisco Planning Commission Resolution 19579\(^9\) adopted on March 3, 2016:

- Found that automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment pursuant to CEQA, because it does not measure environmental impacts and therefore it does not protect environmental quality.

- Directed the Environmental Review Officer to remove automobile delay as a factor in determining significant impacts pursuant to CEQA for all guidelines, criteria, and list of exemptions, and to update the Transportation Impact Analysis Guidelines for Environmental Review and Categorical Exemptions from CEQA to reflect this change.

- Directed the Environmental Planning Division and Environmental Review Officer to replace automobile delay with VMT criteria which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses; and is consistent with proposed and forthcoming changes to the CEQA Guidelines by OPR.

Planning Commission Resolution 19579 became effective immediately for all projects that have not received a CEQA determination and all projects that have previously received CEQA determinations, but require additional environmental analysis. Accordingly, this Addendum provides a VMT impact analysis of the transportation effects of the Modified 2017 Project in the Transportation section below. Therefore, the Addendum does not provide a discussion of automobile delay. Automobile delay may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project.

ANALYSIS OF POTENTIAL ENVIRONMENTAL EFFECTS

Section 31.19(c)(1) of the San Francisco Administrative Code states that a modified project must be reevaluated and that, “If, on the basis of such reevaluation, the Environmental Review Officer determines, based on the requirements of CEQA, that no additional environmental review is necessary, this determination and the reasons therefore shall be noted in writing in the case record, and no further evaluation shall be required by this Chapter.”

California Environmental Quality Act (CEQA) Guidelines Section 15164 provides for the use of an addendum to document the basis for a lead agency’s decision not to require a subsequent FEIR for a project that is already adequately covered in a previously certified FEIR. The lead agency’s decision to use an addendum must be supported by substantial evidence that the conditions that would trigger the preparation of a subsequent FEIR, as provided in CEQA Guidelines Section 15162, are not present.

This section evaluates the potential environmental effects of the proposed modifications, herein referred to as the “modified project”, relative to the impacts of the “adopted project” as disclosed in the FEIR. The FEIR for the adopted project found that implementation of the project would result in significant unavoidable impacts during construction from construction noise and vibration impacts. Since certification, other than as explained and discussed in this addendum, no changes have occurred in the project or in the circumstances under which the adopted project would be undertaken, and no new information has emerged that would materially change any of the analyses or conclusions of the FEIR. For the reasons discussed below, the modified project would not result in any substantial changes that would require major revisions to the FEIR, nor would new significant environmental effects or a substantial increase in the severity of previously identified significant effects occur.

Plans and Policies

The FEIR discusses plans and policies relevant to the adopted project and provides an evaluation of the project’s consistency with various San Francisco and applicable local plans and policies. Plans and policies relevant to the modified project are similar to those for the adopted project, and the consistency with those applicable plans and policies is the same to that described in FEIR. Particularly, the applicable City of San Bruno General Plan policies for the Adopted 2013 project are similar for the Modified 2017 Project. The analysis concludes that the adopted project would not conflict with these plans and policies.

As the modified project is the replacement of additional segments that are located in the same planning area (in this case, the City of San Bruno), and the proposed modifications would not change the characteristics of the adopted project or alter the project’s overall consistency with applicable land use plans and policies, the Modified 2017 Project would not result in any inconsistencies with applicable plans and policies that were not identified in the FEIR.

Land Use and Land Use Planning

The FEIR found that the adopted project has the potential to result in significant land use impacts that could be reduced to a less than significant with mitigation resulting from construction of the Millbrae site and less-than-significant impacts or no impacts resulting from construction of the Colma, San Bruno North and South San Francisco sites, and the Common Staging area. The land use impacts would not change under the Modified 2017 Project. Existing land uses include recreational, residential, and commercial uses in the vicinity of the modified project and are similar to those described for the adopted project. The Modified 2017 Project would be constructed within the same SAPL2 ROW as the Adopted 2013 project, which is adjacent to residential, commercial, and park lands.

Similar to construction of the San Bruno South site under the Adopted 2013 Project, construction of segment 2 under the Modified 2017 Project would have a proposed staging area at the Peninsula Alternative High School and would have similar less-than-significant land use impacts from temporary direct or indirect impacts on existing land uses or land use activities. Within segment 4, the ROW travels through the Cherry Avenue Villas and Peninsula Place Homeowners condominium complexes. Construction would temporarily displace parking currently available within the SFPUC ROW. Access would be maintained throughout construction for each complex by using other internal roadways or maintaining pedestrian and emergency vehicle access to condominiums when internal road closures do occur, and temporary parking displacement would result in a less-than-significant impact, similar to the FEIR. Additionally, no other buildings or other roadway or parking facilities for construction of segments 1-4 would be displaced by construction activities, and access to other adjacent land uses would not be disrupted.

Similar to the Adopted 2013 Project, the Modified 2017 Project would result in indirect impacts from construction activities (such as noise and increased traffic) and would also result in potentially significant impacts from temporary construction activities, which could change the character of the vicinity or disrupt adjacent land uses or land use activities. With implementation of Mitigation Measure M-LU-1a: Notice of Construction Activities, which requires advanced notice for affected land uses of construction activities associated with the Modified 2017 Project, impacts from the modified project would be less-than-significant. Additionally, construction in segment 3 would result in “significant and unavoidable with mitigation” noise impacts and, M-LU-1b Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts would be required. Both Mitigation Measures M-LU-1a: Notice of Construction Activities and M-LU-1b Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts have been revised to provide notice to affected land uses impacted under the modified project. The modified mitigation measure, would provide equal or
better mitigation for construction related land use impacts than that provided in the FEIR. The revised mitigation language is presented below and in the attached MMRP (Attachment C).

Mitigation Measure M-LU-1a: Notice of Construction Activities would address these indirect impacts by providing advance notice to affected land uses. Mitigation measures that address direct impacts of other resource topics but that relate to indirect land use impacts are described in Sections 5.3, Aesthetics; 5.6, Transportation and Circulation; 5.7, Noise; and 5.8, Air Quality.

M-LU-1a: Notice of Construction Activities

This mitigation measure applies to all the project sites. The SFPUC or its contractor will coordinate with the City of San Bruno to agree on a public notification process and notification boundaries in San Bruno. The following notification procedures shall be implemented prior to construction:

1. The SFPUC shall provide advance notification to businesses, property owners, facility managers, and residents of adjacent areas potentially affected by the Peninsula Pipelines Seismic Upgrade (PPSU) project about the nature, extent, and duration of construction activities, at least 1 week prior to construction. The SFPUC shall also provide interim updates to these parties during periods of active construction to inform them of the status of the construction activities and schedule. Notices shall be sent to sensitive receptors and affected adjacent properties identified below:

- **Colma Site** – Kohl’s Department Store; Home Sweet Home Assisted Living Facility, if occupied; Creekside Villas, residential units in front of Kohl’s Department Store to the East; and Cypress Lawn Memorial Cemetery;

- **South San Francisco Site** – Residences adjacent to the construction zone along Arroyo Drive; Clubview Apartments; and California Golf Club of San Francisco;

- **San Bruno Segments 1 through 4** – Residences adjacent to the construction zone along Crystal Springs Road, Courtland Road, the 280 North off-ramp to San Bruno Avenue, San Bruno Avenue and Cedarwood Court, and within the Peninsula Place Homeowners and Cherry Avenue Villas condominium complexes.

- **San Bruno North Site** – Residences adjacent to the construction zone along Cedarwood Court and Pepper Drive;

- **San Bruno South Site** – Park Plaza Apartments and Shelter Creek Condominiums; Residences adjacent to the construction zone along Courtland Drive; Peninsula High School and other uses at the former Crestmoor High School campus; Peninsula High School Athletic Fields; and San Bruno Chinese Church; and

- **Millbrae Site** – Green Hills Country Club; Meadows Elementary School; Residences adjacent to the construction zone along Ridgewood Drive, Hacienda Way, Helen Drive, Banbury Lane; Millwood Drive and Barcelona Drive; and Glen Oaks and Millbrae Montessori Schools;
2. The SFPUC shall coordinate with managers of facilities including, but not limited to, Kohl’s Department Store, San Bruno Chinese Church, Peninsula High School, and the Green Hills Country Club to minimize disruptions to facility operations and activities, to the extent feasible.

3. Should weekend work be necessary, the SFPUC shall notify adjacent properties, including reasonable advance notification to the businesses, owners, and residents of adjacent areas potentially affected by the proposed project, and interim updates shall be provided.

Nighttime construction activities, which may be required at the San Bruno North and Segments 1 through 4, would use lighting. They could result in substantial light and glare impacts (refer to Section 5.3, FEIR Aesthetics), and temporarily result in a significant indirect land use impact. The noticing requirements contained in Mitigation Measure M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts (described below), would alert residents to upcoming nighttime construction activities, and provide a toll-free number for reporting construction-related complaints, reducing impacts to a less-than-significant level.

As detailed in FEIR Section 5.7, Noise, for certain homes located in very close proximity to the construction zones, or in certain locations where building heights or elevations make noise barriers infeasible or ineffective, noise and vibration impacts would remain significant and unavoidable, even with implementation of mitigation measures summarized under Noise. In these cases, the speech or sleep interference thresholds could be exceeded for greater than 2 weeks. This aggravating new source of noise could be compounded by a sense of loss of privacy on decks or in backyards associated with these homes, especially if residents are at home during daytime construction hours. This would be a potentially significant land use impact. These affected homes are listed below in Mitigation Measure M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts, which would reduce temporary land use conflicts associated with the project by requiring advance notification to adjacent residences of construction activities.

M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts

This mitigation measure applies to the South San Francisco, Segments 1 through 4, San Bruno North, San Bruno South, and Millbrae sites only. The SFPUC or its contractor shall provide 14-day advance notice by mail or hand delivery to all residents, tenants, and/or property owners in those homes listed below as being potentially subject to significant and unavoidable noise impacts, even after administrative and source controls are implemented.

- **South San Francisco Site** – Arroyo Drive (address numbers 105, 107 and 108);

- **San Bruno Segments 1 through 4** – Residences adjacent to the construction zone along Boardwalk Place and Boardwalk Drive within the Peninsula Place Homeowners condominium complex and adjacent to the unnamed roadway within the Cherry Avenue Villas;
• **San Bruno North Site** – Cedarwood Court (address numbers 1790, 1791, 1800, 1801, 1820, 1821, 1840, and 1841); and Pepper Drive (address numbers 763, 769, 773, 779, 783, 789, 793, and 795);

• **San Bruno South Site** – Courtland Drive (address numbers 300, 306, 310, 316, 320, 326, 330, 336, 340, 350, 360, and 370); Shelter Creek Condominiums Buildings 4A, 4B, and 4D; and Park Plaza Apartments; and

• **Millbrae Site** – Hacienda Way (address numbers 859, 869, 873, 877, 881, 885, 889, 913, and 917); Ridgewood Drive (address numbers 1078, 1086, 1094, 1100, 1101, 1106, 1110, 1116, 1120, 1126, and 1130); and Banbury Lane (address number 971).

The notice will state the construction location, anticipated activities, and schedule, including whether nighttime construction is proposed. The notice will provide information about anticipated construction-related noise impacts and provide suggestions for avoiding or reducing exposure to such impacts (e.g., planning alternative schedules, closing windows facing the planned construction sites). The SFPUC shall identify and provide a public liaison person before and during construction to respond to the concerns of neighboring property owners. Procedures for contacting the public liaison officer via a toll-free telephone number, email, or in person will be included in the notices. Prior to construction, the SFPUC communications manager, resident engineer, and construction manager shall develop and review procedures for receiving and responding to questions and complaints.

The modified mitigation measures would not substantially alter the analysis or impacts of the FEIR; therefore, this change would not result substantial new information. The proposed project modifications would not result in any new significant effects on land use or land use planning beyond those identified in the FEIR or an increase in the severity of a significant impact, and no new mitigation measures would be required.

**Aesthetics**

The existing visual resource conditions, visual character, and scenic resources for the modified project are similar to those described for the adopted project. The modified project is located within the City of San Bruno, with similar structures, neighborhoods, roadways, and vegetation as the San Bruno North and South sites analyzed in the FEIR.

Construction associated with the modified project would entail similar construction activities and tree loss (40 trees within segment 1). In regards to the tree loss required for construction of segment 1 in accordance with the SFPUC’s Right-of-Way Integrated Vegetation Management Policy, the tree loss would occur within the SFPUC ROW for segment 1. The tree removal would consist of the removal of trees ranging in height from 15 to 45 feet. The tree species to be removed would consist of a range of species including silver wattle, coastal live oak, bay laurel, toyon, and one Monterey pine. The primary public vantage point where the tree loss would be visible is Crystal Springs Road; however, the tree loss would be largely obscured by other trees which would not be removed. Therefore, a significant impact on the existing visual character would not result from the tree removal activities and this impact would be less than significant.

Similar to the adopted project, the modified project could require nighttime lighting (staging areas, areas where the pipeline would be sliplined, and at the Crystal Springs Road crossing.) **M-AE-2 Site-Specific Construction Lighting Plan** would be required to be implemented for construction of segments 1-4 of the
Implementation of the modified project would thus not result in any new significant effects on visual resources beyond those identified in the FEIR or a substantial increase in the severity of a significant impact, and no new mitigation measures would be required.

**Cultural and Paleontological Resources**

The FEIR found that the adopted project would result in potentially significant impacts to archeological resources, paleontological resources, and human remains. The FEIR also identified that the adopted Project would result in less-than-significant effects to historic resources.

**Historic Resources**

The FEIR determined that the adopted project would result in less-than-significant impacts on historic resources. The only identified historic resource under the adopted project was the Green Hills Country Club.

A historic resources evaluation was prepared by JRP for the modified project, and determined that the only historic resource that has the potential to be affected by the modified project is the Golden Gate National Cemetery in segment 4. The Cemetery is a historic district listed in the National Register of Historic Resources (NRHP) and California Register of Historic Resources (CRHR). A Planning Department Preservation Team Review (PTR) Form agreed with the findings of the HRE.

The Planning Department Preservation Team Review (PTR) Form evaluated the historic impacts associated with constructing the proposed project. The PRT form determined that implementation of SFPUC’s Standard Construction Measures, which apply to all SFPUC projects and are discussed as part of the project description above, would ensure that historic resources are protected during construction activities. As described in the project description above, the modified project would support the existing fence in place while the existing pipe is removed and a new pipe is slipped under the fence. In addition, construction would temporarily affect the Cemetery lawn. As discussed in the project description, the lawn and all other landscaping disturbed by the proposed project will be replaced in kind. The replacement of the SAPL2 pipeline within the cemetery would entail the use of construction equipment and vehicles, which could potentially damage headstones (located immediately adjacent to the SFPUC easement, but not within the work area), the lawn, wrought iron fencing, and/or fence posts, which are character-defining features of the cemetery. These construction activities could result in the temporary physical alteration of a portion of the historic resource and could diminish the historic integrity of the cemetery. A historic resources protection plan will identify protection and stabilization measures that will ensure that construction activities do not damage character-defining features of the cemetery. This plan is required through implementation of the SFPUC Standard Construction Measures, which would avoid significant impacts to the Golden Gate National Cemetery by not diminishing the historic resource’s integrity, and the modified project would conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties.

As these measures fall within the scope of the SFPUC Standard Construction Measures, and as the SFPUC has committed to including these measures into the modified project’s contract specifications, the

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10 JRP; Draft Historic Resources Evaluation San Andreas Pipeline No. 2 Lockbar Replacement Project San Mateo County, California; April 2017.
11 Allison Vanderslice, Preservation Team Review Form, Peninsula Pipelines Seismic Upgrade Project, April 12, 2017
12 Allison Vanderslice, Preservation Team Review Form, Peninsula Pipelines Seismic Upgrade Project, April 12, 2017
modified project would not result in any new significant effects on historic resources beyond those identified in the FEIR, no new mitigation measures would be required, and this impact would be less than significant.

Archaeological Resources

The FEIR found that the Adopted 2013 Project has the potential to result in significant impacts on archaeological resources or human remains due to disturbance of known archaeological resources and anticipated human remains that may be present at the site. Mitigation Measure M-CP-2a (Distribute “ALERT” Sheet), as described in the MMRP (Attachment C) would reduce potential impacts on archaeological resources to less-than-significant levels. The Modified 2017 Project would not increase the severity of the cultural resource impact, result in new or substantially different effects, or require new or modified mitigation measures for archaeological resources.

An archaeological records search that included the Area of Potential Effect (C-APE) and a 1/4-mile radius was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) on May 16, 2016 (NWIC File No. 1518) for the four segments of the Modified 2017 Project. NWIC records show seven previously recorded archaeological shell midden sites within the search radius, although none of the midden sites appear to intersect the ROW of the Modified 2017 Project segments. An archaeologist conducted a complete intensive archaeological survey of the C-APE for each of the four segments of the modified project in May 2016. The survey and records search indicated segment 4 has a high archeological sensitivity, particularly in proximity to a former creek channel.

Therefore, the modified project could cause a substantial adverse change in the significance of a historical or unique archaeological resource, similar to the adopted project. Mitigation Measures M-CP-2a: Distribute “ALERT” Sheet; M-CP-2b: Conduct Archeological Monitoring in Accordance with Approved Archaeological Monitoring Plan; and M-CP-2c: Prepare and Comply with an Archaeological Evaluation Plan and Evaluation Report, would reduce potential archeological impacts to less than significant with mitigation. The modified project would not result in any new significant effects on archaeological resources beyond those identified in the FEIR, no new mitigation measures would be required, and this impact would be less than significant.

Paleontological Resources

Impact CP-3 of the FEIR addressed the effect of the adopted project on the significance of paleontological resources, and was found to be less than significant with mitigation, as a number of construction sites were considered to be in areas of paleontological sensitivity and mitigation was required. This conclusion would be the same for portions of each segment of the modified project. Segments 1 and 2 are entirely within areas underlain with the Merced Formation geological unit, which is considered high sensitivity. A majority of segments 3 and 4 are underlain with artificial fill, which is considered low sensitivity, but some portions could include the Merced Formation within the vertical paleontological C-APE.

Therefore, the modified project could result in a substantial adverse effect by directly destroying a unique paleontological resource or site similar to the adopted project. Mitigation Measure M-CP-3: Prepare and Implement a Paleontological Resources Monitoring Program, would reduce potential archeological impacts to less than significant with mitigation. The modified project would not result in any new significant effects on paleontological resources beyond those identified in the FEIR, no new mitigation measures would be required, and this impact would be less than significant.

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14 Sally Salzman Morgan, memorandum to Deborah Craven-Green; Archeological Survey San Andreas Pipeline #2 Replacement, San Bruno, CA; October 25, 2016.
15 Ibid.
Human Remains

Similar to the adopted project, unknown burials could be found during construction. Impact CP-4 addressed this issue and required mitigation. Additionally, segment 4 would involve construction within the Golden Gate National Cemetery; therefore, construction has the potential to encounter human remains. However, within the Cemetery, the locations of human remains are clearly indicated and construction within the Cemetery would be located within the ROW. Therefore, construction of the modified project would similarly have the potential to encounter human remains, and result in a substantial adverse effect related to the disturbance of human remains, the same as the adopted project. Mitigation Measure M-CP-4: Treatment of Inadvertently Discovered Human Remains, would reduce potential impacts to less than significant with mitigation.

Transportation and Circulation

Impacts on Roadways

As discussed on page 14, CEQA Section 21099(b)(1) requires that the State Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that upon certification of the revised guidelines for determining transportation impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment under CEQA. In January 2016, OPR published for public review and comment a Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric. On March 3, 2016, in anticipation of the future certification of the revised CEQA Guidelines, the San Francisco Planning Commission adopted OPR’s recommendation to use the VMT metric instead of automobile delay to evaluate the transportation impacts of projects (Resolution 19579). (Note: the VMT metric does not apply to the analysis of impacts on non-automobile modes of travel such as riding transit, walking and bicycling.) Accordingly, this Addendum does not contain a discussion of automobile delay impacts.

OPR recommends that if a project or land use meets any one of the three screening criteria outlined by OPR, including the below screening criterion applicable to the project, then the VMT impacts are presumed to be less than significant and a detailed VMT analysis is not required. The screening criterion applicable to the modified project and how it is applied is described below:

• **Small Projects.** OPR recommends that lead agencies may generally assume that a project would not have significant VMT impacts if the project would either: (1) generate fewer vehicle trips than the level required for studying consistency with the applicable congestion management program or (2) where the applicable congestion management program does not provide such a level, fewer than 100 vehicle trips per day.

The San Mateo County Congestion Management Program (CMP) threshold is 100 net peak period trips a day. In addition, for the purpose of determining deficiencies, the CMP excludes construction, rehabilitation, or maintenance of facilities that impact the system. As the proposed project would not generate this number of trips (operation of the project would generate zero net trips), the proposed project meets the Small Projects screening criterion listed above and does not require VMT analysis.

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16 City/County Association of Governments of San Mateo County, Final San Mateo County Congestion Management Program 2011, November 2011.
Therefore, VMT impacts are presumed to be less than significant and a detailed VMT analysis is not required. In addition, as net operational trips would be zero, potential impacts to the CMP are considered to be less than significant.

**Impacts to vehicles, bicyclists, and pedestrians**

As with the adopted project, the modified project would increase traffic safety hazards for vehicles, bicyclists, and pedestrians during construction, and this is considered a potentially significant impact for the modified project. However, as with the adopted project, impacts related to increased safety hazards during construction activities would be reduced to a less than significant level with implementation of Mitigation Measure M-TR-3: Traffic Control Plan. Additionally, Mitigation Measure M-TR-1: Maintain Traffic Flow on San Bruno Avenue West During the A.M. Peak Hour, would not be required to implemented as part of the modified project because the modified project would require the closure of either the I-280 off-ramp or San Bruno Avenue.

A detailed discussion of site specific impacts of construction of segments 1-4 to public transit, bicycle facilities, emergency access, and parking is provided below. In summary, impacts to traffic safety would be less than significant with mitigation. Additionally, the proposed project modifications would not result in any new significant effects on transportation and circulation beyond those identified in the FEIR or an increase in the severity of a significant impact, and no new mitigation measures would be required.

**Public Transit**

In segments 1 and 3, no buses run through the construction areas. For segment 2, SamTrans Route 141 runs a limited service on Courtland Drive adjacent to the project site and buses run three times every school day to Peninsula High School. For these segments, the limited increase in construction vehicles on these streets would not affect SamTrans service.

For segment 4, SamTrans Route 43 runs along Cherry Avenue and Sneath Lane between Cherry Avenue and El Camino Real, adjacent to the project site. SamTrans Route 49 runs a limited service once every school day in the morning on Cherry Avenue adjacent to the project site and Sneath Lane between Cherry Avenue and Skyline Boulevard. SamTrans buses may be may be slightly delayed as they travel along Sneath Lane westbound for approximately six months, as construction would necessitate the closure of the left turn lane to Cherry Avenue. However, this is not anticipated to significantly affect transit service, which would continue.

Therefore, construction-related impacts on public transit would be less than significant.

**Bicycle Facilities**

In segment 1, bicycles share the road with vehicles along Crystal Springs Road. For approximately ten weeks, construction of the pipeline crossing of Crystal Springs Road would require alternate one-way traffic. While this could result in some delays, bicycle access would be maintained.

For segment 2, bicycle travel would not be directly affected, as construction would not occur on a roadway. For segment 3, a private road (owned and operated by Gap Inc.) behind the YouTube building would be partially closed by construction. As this short stretch of road is private and leads to a dead-end, bicycle travel would not be significantly affected.

In segment 4, there are bike lanes on both sides of Sneath Lane. Construction on Sneath Lane would necessitate the closure of a short section of the bike lane on the north side of the street (westbound lanes). During the temporary bicycle lane closure (approximately six months), bicycle travel would share the lane with vehicles, and access would be maintained.

For all segments, the limited amount of construction traffic (less than 80 trips per day, or approximately 10 per hour for each segment, including worker vehicle trips) would not result in significant project-related bicycle impacts.
Therefore, construction related impacts on public transit would be less than significant.

**Pedestrian Travel**

In segment 1, there is a sidewalk/trail on the southern side of Crystal Springs Road which could be temporarily affected by construction. If portions of the sidewalk/trail need to be temporarily closed for construction access, alternative pedestrian access parallel to the route would be provided by SFPUC as part of the modified project. In segment 2, the sidewalk on Courtland Drive adjacent to the project site would remain open, along with the street. In segment 3, no public pedestrian access would be affected by construction. In segment 4, a segment of partial sidewalk on the north side of Sneath Lane would be closed during construction. As with segment 1, alternative access parallel to the route would be provided.

Therefore, impacts on pedestrian travel from the modified project would be similar to the adopted project, and this impact would be less than significant.

**Parking**

For segment 1, parking would be provided within the proposed staging area (the Junipero Serra Park parking lot). For segment 2, parking would be provided within the proposed staging area at Peninsula High School. For segments 3 and 4, parking would be provided in the proposed staging areas, but workers could temporarily park on public roadways within adjacent neighborhoods. In total, construction staging would temporarily displace 325 parking spaces. Additionally, on-street parking spots could be used by temporarily used by construction workers. This parking displacement for construction staging and construction workers is not anticipated to lead to a physical environmental impact or a parking deficit that could create hazardous conditions, as it is assumed parking regulations would be obeyed.

**Emergency access**

For segments 1-3, project construction activities would not require full closures of any streets, and emergency vehicles would have continuous access to all public roadways. Segment 4 would require closure of sections of Boardwalk Place and Boardwalk Drive during construction. For emergency access to be maintained in segment 4, SFPUC would keep a portion open for emergency vehicles (and also for vehicles like garbage and mail trucks). Therefore, impacts on emergency vehicle access would be less than significant.

**Operations impacts on traffic and circulation**

As the net increase in vehicle trips would be zero after construction is complete, no impacts are expected to result from operation of the project.

**Noise and Vibration**

The FEIR presents information on the existing noise environment, vibration, and the regulatory framework, which also applies to the modified project. The nearest sensitive receptors to the modified project would be approximately 10 feet away in segment 3, which are the residences located within the Cherry Avenue Villas and Peninsula Place Homeowners condominium complexes. This distance from sensitive receptors is similar to the San Bruno South site under the adopted project, which was located approximately 10 feet away from the Shelter Creek Condominiums and Park Plaza Apartments.

The modified project (which would use similar types of equipment as the adopted project) could also exceed the 70-dBA L eq speech interference threshold for daytime construction activities as described in Impact NO-1, which was similar to the original project. **Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls** requires noise control measures and noise barrier walls as part of a Noise Control Plan, which would reduce construction noise. However, similar to the FEIR analysis, the construction-related noise levels could still exceed the 70-dBA L eq speech interference threshold, resulting in an impact which would be significant and unavoidable with mitigation. However,
based on the above information, implementation of the modified project would not result in a substantial increase in the severity of a significant impact, as the equipment, schedule of work, and distance to sensitive receptors would be the same as for the adopted project. No new significant effects would occur related to daytime construction activities beyond those identified in the FEIR, and no new mitigation measures would be required.

Nighttime noise from construction and pipeline dewatering activities are addressed in Impact NO-2 of the FEIR, which was found to be significant and unavoidable with mitigation for the San Bruno North site of the adopted project. Similar to the adopted project, the modified project would require nighttime construction activities. This could include dewatering and sliplining activities in all segments and the crossing of Crystal Springs Road in segment 1. Implementation of the modified project would not result in a substantial increase in the severity of a significant impact, as the equipment, schedule of work, and distance to sensitive receptors would be the same as for the adopted project. Impact NO-3 addressed the generation of noise levels in excess of standards adopted in the local general plan or noise ordinance, and was found to be significant and unavoidable with mitigation for the San Bruno North site due to nighttime activities. Additionally, Mitigation Measures M-NO-3a: Limit Hours of Construction at Colma Site and M-NO-3b: Limit Hours of Construction at Millbrae Site would not apply to the modified project because these measures applied specifically to the Colma and Millbrae sites of the adopted project, and the modified project is located entirely within the City of San Bruno. As in Impact NO-2, this would be the same for the modified project.

Similar to the adopted project, the modified project could also result in the exposure of persons to, or generation of, noise levels in excess of standards in the local general plan or noise ordinance. Noise would exceed City of San Bruno nighttime thresholds. Mitigation Measure M-NO-1: Prepare and Implement Administrative and Source Controls would apply to the modified project. Similar to Impact NO-3 for the adopted project, this impact would remain significant and unavoidable with mitigation.

The modified project could generate excessive groundborne vibration, the same as the adopted project. Mitigation Measure M-NO-4: Develop and Implement Vibration Planning, Monitoring, and Reporting, which requires a vibration control plan, would reduce groundborne vibration impacts to less than significant with mitigation.

Based on the above information, implementation of the modified project would not result in a substantial increase in the severity of a significant impact, as the equipment, schedule of work, and distance to sensitive receptors would be the same as for the adopted project. No new significant effects would occur related to noise or groundborne vibration beyond those identified in the FEIR, and no new mitigation measures would be required.

**Air Quality**

The FEIR determined that the adopted project would have less than significant impacts from criteria air pollutants, exposure of sensitive receptors to substantial pollutants and odors, and potentially significant impacts from fugitive dust during construction. The modified project would result in similar impacts. Existing air quality conditions for the modified project are similar to those described for the adopted project in that the modified project is located within the basin controlled by Bay Area Air Quality Management District (BAAQMD) and the same sensitive receptors are present (i.e. residences and schools are located within the vicinity of the adopted and modified project) As the same numbers and type of construction equipment would be used, and the same maximum number of crews (four) could be required for concurrent construction activities as the adopted project, criteria pollutant levels generated by the modified project would be similar to the adopted project. Additionally, similar to the adopted project, fugitive dust emissions during construction would result in a potentially significant impact. Implementation of Mitigation Measure M-AQ-1: BAAQMD Basic Construction Measures, would reduce

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17 Email communication from Scott Macpherson, April 3, 2017
the impact of the modified project to a less-than-significant level. As with the adopted project, the modified project would not create objectionable odors and this impact would be less than significant.

In regards to the exposure of sensitive receptors to substantial pollutants from construction activities that produce toxic air contaminant (TACs), the FEIR identified that the maximum pollutant exposure to TACs would result from construction of the San Bruno south site and was determined to result in an estimated cancer risk of 6.9 per million.\textsuperscript{18} Construction of segment 2 is also proposed to include construction a replacement of SAPL2 within the vicinity of the sensitive receptors that were exposed to pollutants during the construction of the San Bruno south site under the adopted project. The maximum cancer risk for both the San Bruno south site and construction of segment 2 would not exceed the significance threshold of a cancer risk of 10 per one million persons exposed. This is because the San Bruno south site required replacement of 2,200 feet of pipeline resulting in a cancer risk of 6.9. Using the same ratio of cancer risk per length of pipeline replacement (because the modified project would use the same types of construction equipment and because and sensitive receptors would be located roughly the same distance from construction activities) would result in a total cancer risk (adopted project and the modified project) of about 9.4 per million per persons exposed for the same receptors. This is less than the 10 per one million persons exposed threshold. Thus, the modified project would also result in a less than significant impact from the exposure of sensitive receptors to substantial pollutants. This analysis is also a conservative analysis because the FEIR assumed that the maximally exposed individual would be exposed to the annual average concentration throughout the construction period when during the actual construction process equipment location would vary within the project area and TAC concentrations (and therefore exposure) around the sites would vary. Additionally, the construction of segments 1, 3, and 4 would similarly result in less than significant impacts from exposure to TAC’s because the FEIR identified lower cancer risk and chronic noncancer health risks at the adopted project sites and the modified project would not overlap with the construction sites in the adopted project. Therefore, the proposed project modifications would not result in any new significant effects on air quality beyond those identified in the FEIR or an increase in the severity of a significant impact, and no new mitigation measures would be required.

Recreation

The FEIR found that the adopted project would result in less than significant impacts to recreational uses, including from the temporary degradation of recreational uses during construction. The modified project includes tree removal and pipeline replacement at the Junipero Serra County Park (Park), including the temporary closure or realignment of sidewalks and closure of a parking lot. The modified project assumes the parking lot adjacent to the De Anza Picnic Area with 54 parking spaces would be used for construction staging.\textsuperscript{19} Additionally, an area of approximately 0.13 acres within the Park next to Crystal Springs Road could be used for construction access, pending approvals from San Mateo County Parks Department. Visitors to the Park would need to use the remaining parking lots near the Willow Picnic Shelter, Buckeye Picnic Area, and Bay View Picnic Shelter. The sidewalk adjacent to Crystal Springs Road would be closed in certain areas to allow for truck access, although pedestrian access would be maintained by construction of temporary paths. No official trails would be affected.

During construction (approximately 6 months), use of the Park could decrease due to the loss of one parking lot, although the Park itself would remain open. Additionally, construction staging within the Park would displace 1.14 acres of a total 108 acres within the Park during the construction period.\textsuperscript{20} Following construction of the modified project, all construction staging areas would be revegetated, as

\textsuperscript{18}Peninsula Pipelines Air Quality Technical Report, URS, June 2012

\textsuperscript{19}San Mateo County Parks Department, Junipero Serra Park Trails webpage. Available at http://parks.smcgov.org/junipero-serra-park-trails, accessed March 6, 2017.

described further below. Therefore, recreational facilities and uses would not significantly be impaired during construction activities. In addition, there are several other open spaces/parks in the area, including Crestmore Canyon, Commodore Park, and Sweeney Ridge which can be used for dog walking and other passive recreation activities. As with the adopted project, the temporary loss (i.e. approximately six months) of open space and recreational facilities would be result in a less than significant impact for the modified project. Additionally, M-RE-1: Coordination with Green Hills Country Club Facility Managers, would not apply to the modified project because the modified project would not include construction within the Green Hills Country Club. Also similar to the adopted project, future project operations under the modified project would not have an effect on recreational resources, and there would be no impact. Therefore, the proposed project modifications would not result in any new significant effects on recreation beyond those identified in the FEIR or an increase in the severity of a significant impact, and no new mitigation measures would be required.

Utilities and Service Systems

The FEIR found that the adopted project would result in potentially significant impacts to utility and service systems, including from the potential disruption of utility operations, relocation of utilities, or accidental damage to existing utilities, and compliance with regulations pertaining to solid waste. Additionally, the FEIR identified that the adopted project would result in less than significant impacts related water supply availability, and landfill capacity. As the type and extent of construction for the modified project is the same as for the adopted project, utility and service systems impacts of the modified project also would be similar as the adopted project. This includes potential disruption of utility operations or accidental damage to existing utilities from cranes or excavation activities, potential adverse effects related to the relocation of utilities, and adverse effects relating to solid waste during construction. As impacts of the modified project would be similar to the adopted project, the modified project would be required to implement Mitigation Measures M-UT-1a: Confirm Utility Line Information; M-UT-1b: Safeguard Employees from Potential Accidents Related to Underground Utilities; M-UT-1c: Notify Local Fire Departments; M-UT-1d: Emergency Response Plan; M-UT-1e: Ensure Prompt Reconnection of Utilities; M-UT-1f: Coordinate Final Construction Plans with Affected Utilities; and M-UT-5: Prepare and Implement a Construction Solid Waste Recycling Plan. As with the adopted project, project operations would result in no impact. Impacts related to water supply availability, landfill capacity would similarly be less than significant. Therefore, the proposed project modifications would not result in any new significant effects on utilities and service systems beyond those identified in the FEIR or an increase in the severity of a significant impact, and no new mitigation measures would be required.

Biological Resources

The FEIR found that the adopted project would result in potentially significant impacts to special-status species wildlife species; coast live oak woodlands, central coast riparian scrub habitat, and other sensitive natural communities; jurisdictional waters; and local policies including ordinances protecting trees. A biological resources survey was prepared for the modified project to identify potential habitat and special-status species occurrences in the modified project vicinity. The biological resources survey analyzed aerial imagery and reviewed biological databases prior to conducting a field survey. The databases searched were: the California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database (CNDDB), the U.S. Fish and Wildlife (USFWS) Information for Planning and Conservation (IPaC) online tool, the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, and Calflora. Additionally, on May 5, 2016, a reconnaissance-level wildlife and botanical survey was conducted. On May 24, 2016, a follow-up reconnaissance-level survey was conducted to identify potentially jurisdictional waters and assess habitat for special-status wildlife. On July 19, 2016, a botanical survey was conducted.
for segment 1, and drainages were evaluated in Segment 1 to determine jurisdictional status. 21

Suitable habitat for nesting birds, raptors, and roosting bats were observed in segments 1 through 4, although suitable habitat for special-status bats was not found. The construction of the modified project would result in potential impacts to special status species. Suitable habitat for San Francisco dusky footed woodrats in the form of woodrat middens were found in segment 1, similar to the conditions at the South San Francisco and Millbrae sites. No other special-status wildlife species, or suitable habitats for such species, were found.

Regarding special status plant species, segment 2 contains marginal habitat for Oakland star-tulip (*Calochortus umbellatus*) (CNPS Rank 4.2) and fragrant fritillary (*Fritillaria liliacea*) (CNPS Rank 1B.2). The blooming period for both species had ended prior to the first survey. However, because both species prefer serpentine soils, which are not present in this segment, they are likely absent and therefore potential impacts of the modified project on special status plant species are considered less than significant. Additionally, SFPUC’s Standard Construction Measures 22, which apply to all SFPUC projects and are considered part of the project description, would ensure that any potential special status species are protected during construction activities. Compliance with the SFPUC’s Standard Construction Measures # 7 – would require that qualified biologist will carry out a survey of segment 2, as appropriate, to note the general resources and identify whether habitat for special-status plant species, including are present, and if so protect such resources in accordance with local, State, and federal laws.

Construction of the modified project would result in potentially significant impacts to special status species. The following mitigations in the FEIR would be required for the modified project (segments 1-4), to reduce potential impacts to a less than significant level: **Mitigation Measure M-BI-1a: General Protection Measures, Mitigation Measure M-BI-1b: Worker Training and Awareness Program; Mitigation Measure M-BI-1c: Prepare and Implement a Vegetation Restoration Plan; Mitigation Measure M-BI-1d: Minimize Disturbance to Nesting Birds and Raptors; and Mitigation Measure M-BI-1e: Preconstruction Surveys for Special-Status Bats and Avoidance and Minimization Measures.** These mitigation measures would reduce impacts of the modified project on biological resources including nesting birds and special-status bat species to a less-than-significant level. **Mitigation Measure M-BI-1g: Mitigation for San Francisco Dusky-Footed Woodrat Middens,** which would only apply to segment 1, would reduce the San Francisco Dusky-Footed Woodrat Middens impacts of the modified project to a less-than-significant level. **M-BI-1f: Mitigation for the Mission Blue Butterfly and M-BI-1h: Mitigation for the California Red Legged Frog** would not be required to be implemented as part of the modified project because these special status species are not present in the modified project areas.

Additionally, oak woodlands extend through Segment 1 of the modified project. Along the half-mile long segment 1, 20 coast live oak trees would be removed. This would not represent a “conversion” of an oak woodland, as the density of oak trees along the length of the segment is low (an average of one tree every 130 feet). Additionally, the bulk of the oak woodlands would remain, and only the strip along the ROW requiring removal of oak trees would be removed. Similar to the adopted project, the impact from the modified project would be minimal. Therefore, project impacts to oak woodland habitats would be less than significant.

Additionally, similar to the adopted project, and modified project would require the removal of trees, which would result in inconsistencies with the City of San Bruno Municipal Code. The City of San Bruno Municipal Code protects removal or pruning of heritage trees, including any native bay, buckeye, oak, redwood or pine trees that are 6 inches or greater when measured at 54 inches above grade. All other trees with a trunk diameter of 10 inches or more measured at 54 inches above grade also are protected. For each

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21 Mandi McElroy, AECOM; Memorandum to Scott MacPherson, SFPUC; September 14, 2016.
heritage tree removed, two 24-inch box size trees, or one 36-inch box size tree is required to be planted as a replacement. Tree removal, including the removal of 20 coast live oak trees protected under the San Bruno Municipal Code, would be required at segment 1. If trees protected by the ordinance are removed, it would result in inconsistencies with the city’s Municipal Code, resulting in a significant impact. However, this potential impact would be reduced to less than significant by Mitigation Measure M-BI-1a: General Protection Measures, which would protect the root systems of trees to be retained on site by requiring appropriate fencing; and would prevent long-term damage to trees by requiring that tree trimming be completed by an arborist. In addition, Mitigation Measure M-BI-4: Replacement of Trees to Be Removed, would fulfill the intent of City of San Bruno Municipal Code by requiring replanting of trees that are removed for construction of the project. Therefore, tree impacts would be reduced to less than significant with mitigation.

Segment 1 contains three stormwater ephemeral drainages which would be crossed by the modified project using cut and cover construction techniques. Two of these drainages were likely created by storm water runoff from Crystal Springs Road, while one has a damaged storm drain at its head which is creating wetland conditions. All of these drainages carry stormwater from Crystal Springs Road downslope to El Zanjón Creek, and are considered potential waters of the United States. The modified project could affect up to 0.06 acres of these aquatic resources, resulting in a significant impact. Mitigation Measure M-BI-3: Avoidance and Protection Measures for Jurisdictional Water Bodies, would reduce impacts on jurisdictional waters to less than significant with mitigation.

Therefore, the proposed project modifications would not result in any new significant effects on biological resources beyond those identified in the FEIR or an increase in the severity of a significant impact, and no new mitigation measures would be required.

**Geology and Soils**

The FEIR found that the adopted project has the potential to result in significant impacts from substantial soil erosion and loss of topsoil and less than significant impacts resulting from a geologic unit that has become unstable; exposure of people or structures to potential groundshaking, ground failure, or landslides; or unstable soils, including expansive soils. A geotechnical interpretive report was prepared for the modified project to identify potential geologic and seismic hazards in the modified project vicinity. The modified project would not have an impact on geology, soils, and seismicity conditions since the associated activities would primarily occur on existing roadways, flat staging areas, and access routes, and thus would not result in any new impacts compared to the adopted project.

Construction of the modified project would require excavation of up to approximately 20,100 cubic yards of soils to allow for the replacement and upgrade of existing pipelines. A portion of the soils would be reused on site and the remaining soils would be off-hauled. Excavation activities could result in substantial soil erosion during the rainy season. Additionally, the discharge and dewatering of water from the pipelines during construction could result in downstream erosion. The removal of the topsoil during site preparation and excavation activities could result in the permanent loss of these soils. While it is possible that topsoil was previously disturbed or removed from these sites during the installation of the existing pipelines, whatever topsoil does remain would be removed during project construction activities. The removal of topsoil could result in a significant loss of topsoil. As with the adopted project, soil loss would be minimized through implementation of Mitigation Measure M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan (SWPPP) and would reduce impacts to a less than significant level. Mitigation Measure M-HY-1: Preparation and

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23 AECOM, Preliminary Jurisdictional Determination Form, December 22 2016.

24 Geotechnical Interpretive Report, San Andreas Pipeline No. 2, Arup/Terra, February, 2017
Implementation of a Storm Water Pollution Prevention Plan would require the SFPUC to prepare a SWPPP prior to the start of construction and would require the contractor to stabilize soils that may be erodible or unstable.

Therefore, implementation of the modified project would not result in any new significant effects beyond those identified for the adopted project or an increase in the severity of a significant impact on geology, soils, and seismicity, and no new mitigation measures would be required.

Hydrology and Water Quality

The FEIR found that the adopted project has the potential to result in significant impacts on water quality standards and less than significant impacts from dewatering activities resulting from construction of the South San Francisco site and less-than-significant impacts resulting from construction of the Colma, San Bruno North and South, Millbrae sites, and the Common Staging area. As described in the Biological Resources section above, Segment 1 contains three ephemeral drainages which would be crossed by the modified project using cut and cover construction methods. As the modified project would include construction activities that involve soil disturbance that in the absence of proper controls could degrade the water quality of nearby creeks that flow to San Francisco Bay, impacts on water quality would be potentially significant. As with the adopted project, Mitigation Measure M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan (SWPPP) would address potential water quality impacts during construction by requiring the SFPUC or its contractor to prepare a SWPPP detailing the construction Best Management Practice’s (BMPs) that would be implemented during construction to control erosion and sedimentation of receiving water bodies, and minimize the risk of hazardous material release to surface water bodies. Therefore, this impact would be less than significant with mitigation.

Groundwater depths vary from 14 feet to 30 feet along segments 1-4; therefore, project construction has the possibility of encountering groundwater during construction activities, which would include excavation to depths of 10 to 30 feet. As with the adopted project, discharge of effluent during dewatering and discharge of treated water from the newly installed pipelines would be a less than significant impact because construction would be required to implement control measures in compliance with the National Pollutant Discharge Elimination System (NPDES) and local agency permitting requirements. Compliance with these permitting requirements would require that water pumped out as part of the dewatering activities be stored, tested, and treated to meet water quality standards prior to being discharged into the nearby sanitary sewer or other receiving body.

Therefore, the modified project would not result in any new significant effects on hydrology beyond those identified for the adopted project or a substantial increase in the severity of a significant impact, and no new mitigation measures would be required.

Hazards and Hazardous Materials

Similar to the adopted project, the modified project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, because the SFPUC and all service providers would be required to comply with hazardous materials law and regulations for the transport, use, and disposal of hazardous materials.

Similar to the adopted project, it cannot be determined with certainty whether excavated materials could contain potentially hazardous soil and/or groundwater wastes. While a review of the State Water Resources Control Board (SWRQB) GeoTracker and Department of Toxic Substances Control (DTSC) Envirostor databases did not identify any open cases within 500 feet or more of the modified project area, unknown materials could be present. As with the adopted project, implementation of Mitigation Measures M-HZ-2a: Prepare and Implement a Hazardous Material Handling and Disposal Plan, M-HZ-2b: Develop and

Implement a Hazardous Material Business Plan, and M-HZ-2c: Develop and Implement an Health and Safety Plan would reduce any potential impacts from hazardous materials to a less than significant level.

As with the adopted project, the modified project would be within 0.25 miles of the Peninsula Alternative High School, and impacts from emissions or use of hazardous materials or substances would be the less than significant as the SFPUC would be required to comply with hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials.

Additionally, similar to the adopted project, project construction would not result in public airport related aviation hazards during construction or interfere with emergency response or emergency evacuation plans.

As the modified project would maintain continuous access for emergency vehicles (including at the Cherry Avenue Villas and Peninsula Place Homeowners condominium complexes, where internal roadways would be closed to most traffic), impacts related to interference with emergency response plans or emergency evacuation plans would remain less than significant.

Thus, implementation of the modified project would not result in any new significant effects related to hazards and hazardous materials beyond those identified for the adopted project or an increase in the severity of a significant impact, and no new mitigation measures would be required.

Other Environmental Topics

The FEIR determined that the Adopted 2013 project would result in no impacts to Population and Housing and Agriculture and Forest Resources. The Modified 2017 Project would not change the analysis or conclusions reached in the FEIR and the adopted project would also result in no impacts related to these topics. The EIR also determined that the Adopted 2013 project would result in less than significant impact to: Greenhouse Gas Emissions; Public Services; Wind and Shadow; Mineral and Energy Resources. The Modified 2017 Project would not change the analysis or conclusions reached in the FEIR and impacts associated with these environmental topics would be the same as those analyzed in the adopted project and would be less than significant.

The Modified 2017 project would not change the analysis or conclusions reached in the FEIR and the impacts on these other environmental topics would be less than significant.

CONCLUSION

Based on the foregoing, it is concluded that the analyses conducted and the conclusions reached in the Final EIR certified on October 17, 2013 remain valid. The proposed modifications to the project will not cause new significant impacts not identified in the FEIR, and no new mitigation measures will be necessary to reduce significant impacts. Other than as described in this addendum, no project changes have occurred, and no changes have occurred with respect to circumstances surrounding the proposed project that would cause significant environmental impacts to which the project will contribute considerably, and no new information has become available that shows that the project will cause significant environmental impacts. Therefore, no supplemental environmental review is required beyond this addendum.
Date of Determination:

4/12/17

I do hereby certify that the above determination has been made pursuant to State and Local requirements.

Lisa Gibson
Acting Environmental Review Officer

cc: Scott Macpherson, SFPUC
Bulletin Board
Master Decision File
Distribution List
Attachments

Attachment A: Location and Vicinity Map
Attachment B: Figures
Attachment C: Mitigation Monitoring and Reporting Program (MMRP)
SAN ANDREAS PIPELINE No. 2
LOCKBAR REPLACEMENT

CONTRACT NO. WD-2829

OCTOBER 2016
## DRAWING INDEX

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### CONTRACT NO. WO-2829

50% SUBMITTAL
### GENERAL NOTES:
1. HEAVY UNDERSHOT AND SYMBOLS MARK WORK TO BE DONE BY THE CONTRACTOR. LIGHT UNDERSHOT AND SYMBOLS MARK EXISTING FEATURES OR WORK TO BE DONE BY ANOTHER ENTITY.
2. WHERE THERE IS A CONFLICT BETWEEN THE WRITTEN DESCRIPTION AND SYMBOLS, THE WRITTEN DESCRIPTION SHALL PREVAIL.
3. ALL DRAWINGS MENTIONED MIGHT BE SUBJECT TO CHANGE/ADJUSTMENTS.
4. RESTRICTED ACCESS AREAS ARE TYPICALLY THE SPACE OVER THE EXISTING UTILITIES. CONTRACTOR MAY OPERATE HEAVY MACHINERY WITHIN THE RESTRICTED AREAS WITHOUT PRIOR PERMISSION FROM THE CITY OF SAN DIEGO.
5. ALL DISCREPANCIES BETWEEN THE INFORMATION SHOWN IN THE DRAWINGS AND THE ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY REPRESENTATIVE.
6. AT THE CLOSE OF EACH WORKING SHIFT, WHERE THE NEXT SHIFT WILL NOT INHERENTLY FIELD, CUT FERRO CONCRETE AND CONSTRUCT WELDING SHIPS AT THE END OF THE WORKING SHIFT.
7. LEGEND SHEETS ARE PROVIDED FOR EACH LEGEND SYMBOL. DRAWINGS MIGHT NOT BE CONSIDERED COMPLETE UNLESS LEGEND SHEETS ARE APPROPRIATELY LSED WITH THE CORRESPONDING DRAWING.
8. THE LOCATION AND GENERAL ARRANGEMENT OF UNDERGROUND UTILITIES, UNDERGROUND STREETS, FIE SS, AND APPEARANCES WHERE SHOWN ARE DCONTRACTED AND SUBJECT TO VERIFICATION AND ADJUSTMENT IN THE FIELD.
9. CONTRACTOR SHALL SCRAP AND INSTALL Trench BLOCKS, SECURE AND ORHANIZE PRIOR TO PAVING OR OTHER WORK.
10. CONTRACTOR SHALL REMOVE ALL EXISTING Trench BLOCKS WITH SAME CONDITIONS AS NOTED IN DRAW AND ORHANIZE PRIOR TO THE CITY REPRESENTATIVE.
11. CONTRACTOR SHALL TRY TO NOTIFY CUSTOMER SERVICE REPRESENTATIVES PRIOR TO WORKING ON LARGE TREES THAT MIGHT BE AFFECTED.
12. CONTRACTOR SHALL TRY TO NOTIFY CUSTOMER SERVICE REPRESENTATIVES PRIOR TO WORKING ON LARGE TREES THAT MIGHT BE AFFECTED.
13. CONTRACTOR SHALL NOTIFY CUSTOMER SERVICE REPRESENTATIVES PRIOR TO WORKING ON LARGE TREES THAT MIGHT BE AFFECTED.

### DEMOLITION NOTES:
1. CLEAR AND REMOVE ALL EXISTING MISC. ITEMS FROM WITHIN THE LIMIT OF WORK. CONTRACTOR SHALL NOTIFY OF UNLICENSED MATERIALS IN A LEGAL MANNER AS THE PROPERTY.
2. CONTRACTOR MAY REMOVE MATERIALS SUBJECT TO SUBMIT FOR LAST MILE AND ORHANIZE OF ANY DISCONNECTS EXCEPT AS NOTED IN CONTRACT DOCUMENT. ALL EXISTING FIRE TURNOFFS AND OTHER WORK ARE TO BE LEFT IN PLACE PRIOR TO CONSTRUCTION.
3. ANY DISCONNECTS WHERE SHOWN IN THE DRAWING SHOULD BE LEFT IN PLACE TO ALERT THE CITY OF SAN DIEGO ORHANIZE OF ANY DISCONNECTS.

### CUSTOMER SERVICE TURNOUTS:
1. CUSTOMER SERVICE STAFF WILL PROVIDE THE VALUES FOR SHutting OFF AND/OR TURNING ON THE SERVICE TURNOUT.
2. CONTRACTOR SHALL VERIFY IN FIELD LOCATION A FIELD OF CONSTRUCTION POINTS, FIRE METER, ORIGINAL P Roads, Pipes, etc. PRIOR TO THE CONSTRUCTION OF THE TURNOUT PIPE.
3. ALL Trench BLOCKS AND PIPE REPAIRS SHALL BE INSPECTED AND ORHANIZED PRIOR TO ANY FIRE TESTING.
4. ALL DISCONNECTS ON THE DRAWINGS SHALL BE ORHANIZED AND ORHANIZED PRIOR TO CONSTRUCTION.
5. CUSTOMER SERVICE REPRESENTATIVES SHALL BE ORHANIZED AND ORHANIZED PRIOR TO CONSTRUCTION.

### PLAN & PROFILE NOTES:
1. IF SPECIFIED POINT OF CONNECTION SHOWN ON THE DRAWINGS IS NOT IN THE LIMIT OF WORK, CONTRACTOR SHALL PROVIDE A DETAILED CONSTRUCTION PLAN PRIOR TO THE CITY OF SAN DIEGO ORHANIZE OF ANY DISCONNECTS.
2. CONTRACTOR SHALL PROVIDE A DETAILED CONSTRUCTION PLAN PRIOR TO THE CITY OF SAN DIEGO ORHANIZE OF ANY DISCONNECTS.
3. CONTRACTOR SHALL NOTIFY CUSTOMER SERVICE REPRESENTATIVES PRIOR TO THE CITY OF SAN DIEGO ORHANIZE OF ANY DISCONNECTS.

### CONTRACT SECTIONS:
1. CONTRACTOR SHALL NOTIFY CUSTOMER SERVICE REPRESENTATIVES PRIOR TO THE CITY OF SAN DIEGO ORHANIZE OF ANY DISCONNECTS.
2. CONTRACTOR SHALL NOTIFY CUSTOMER SERVICE REPRESENTATIVES PRIOR TO THE CITY OF SAN DIEGO ORHANIZE OF ANY DISCONNECTS.
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### CONTRACT NO. WD-2829

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</tr>
<tr>
<td>SAN DIEGO FREQUENT NO. 2</td>
</tr>
<tr>
<td>CONTRACTOR REPLACEMENT</td>
</tr>
</tbody>
</table>

---

**GENERAL NOTES:**

- Located and marked for action.
- All work to be completed in accordance with the plans and specifications.
- Contractor to provide all necessary labor and materials for the work.
- Punch list to be provided upon completion.
- All work to be inspected by the owner prior to payment.

**PROJECT DESCRIPTION:**

- Proposed installation of new utilities.
- Removal of existing utilities.
- Access to existing utilities for removal.

**CONTRACTOR RESPONSIBILITIES:**

- Completion of work in accordance with plans and specifications.
- Notification of any changes or modifications.
- Provision of all necessary labor and materials.
- Inspections to be conducted by the owner.

**OWNER RESPONSIBILITIES:**

- Approval of plans and specifications.
- Payment upon completion of work.
- Inspection of work upon completion.

---

**SPECIFICATIONS:**

- All work to be performed in accordance with the City of San Diego's specifications.
- Materials to be approved by the owner.
- Work to be completed within the allotted time frame.

**REVISIONS:**

- All revisions to be confirmed in writing.
- Changes to be communicated prior to implementation.
- All changes to be documented in the project files.

---

**CONTRACTOR:**

- Responsibilities include:
  - Installation of new utilities.
  - Removal of existing utilities.
  - Access to existing utilities.

---

**OWNER:**

- Responsibilities include:
  - Approval of plans and specifications.
  - Payment upon completion of work.
  - Inspection of work upon completion.

---

**DATE OF COMPLETION:**

- Project to be completed within 30 days from the date of issuance.

---

**SIGNATURES:**

- Contractor: [Signature]
- Owner: [Signature]

---

**DOCUMENT NUMBER:**

- [0-0003]
### TREE REMOVAL TABLE

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</table>

### NOTES:
1. CONTRACTOR TO REMOVE TREE STUMP/ROOT AS NEEDED TO FACILITATE EXCAVATION AND CONSTRUCTION.

---

**CONTRACT NO. WD-2829**

PUBLIC UTILITIES COMMISSION INFRASTRUCTURE DIVISION EXHIBIT 5 NO. 2 LOCKED PIPE REPLACEMENT

.Tree Removal Table

50% Submittal

---

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NOTES:
1. Trench details are for paved or unpaved areas.
2. It is the responsibility of the contractor to determine the location and size of trench to be used.
3. The contractor shall be responsible for damage to existing utilities and equipment.
4. If trench falls within 5 feet of the centerline, the entire trench shall be reinforced.
5. If existing pavement is less than 12 inches thick, pavement shall be removed and replaced with a minimum thickness of 12 inches.
6. The contractor shall be responsible for removing any existing utilities and equipment.
7. The 12-inch thick crushed rock base is required for unpaved areas.

CONTRACT NO. WD-2829
PUBLIC UTILITIES COMMISSION
INFRASTRUCTURE DIVISION
SAN ANTONIO PIPELINE NO. 2
LOCOMOTION REPLACEMENT
TYPICAL TRENCH DETAILS

50% SUBMITTAL
NOTES:
1. ALL FLANGES SHALL BE FACED AFTER WEARING OF SHIRT.
2. EXCEPT FLANGE SURFACES, EXCEPT FLANGE FACE SHALL BE COVERED WITH CLEAN, DRY, NON-SLICKING COMPOUND. FLANGE FACE SHALL BE CLEANED WITH SOAP AND WATER.
3. FLANGES INSTALLED SHALL CONFORM TO ANSI STANDARD C-125 CLASS "F".
4. SADDLE AND VALVE DRIE NOT COMPATIBLE WITH ANSI C-125 CLASS "F".
5. RATIONAL NOZZLES SHALL BE USED FOR INSTALLATION OF WELD LEADS.
6. USE 1/2" PER GRADING 10-18, P-20, P-30, P-40 AND P-60.
<table>
<thead>
<tr>
<th>PLAN No.</th>
<th>STATION</th>
<th>TYPE OF APPURTENANCE</th>
<th>24-INCH WH</th>
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<tr>
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<td></td>
<td>SECTION I MANHOLE</td>
<td>D (FT)</td>
<td>HEIGHT (FT)</td>
</tr>
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</table>

**APPURTENANCE AND MANHOLE SCHEDULE**

**NOTE:**
Information in table is for estimating purpose only and subject to change or field verify.

**CONTRACT NO. WO-2829**

**PUBLIC UTILITIES COMMISSION**
INFRASTRUCTURE DIVISION
SAN ANTONIO, TEXAS 78207

**APPORTERANCE AND MANHOLE SCHEDULE**

**50% SUBMITTAL**
NOTES:
1. ALL OPERATING WIRES SHALL BE 2" STG. SOL. BUT THE "OVER" DIRECTION SHALL BE STAGED TO AN AREA WITH THE MOST "OVER" WIRES ON THE DRAFT OR AT THE TOP OF THE UNIT.
2. ALL STRUCTURAL STEEL & BEAMS AS SHOWN SHALL BE GUARANTEED.
3. MATERIALS
   - STRUCTURAL STEEL SHAPE AND ANGLES: ASTM A572, GRADE 50
   - STRUCTURAL TUBE: ASTM A500, GRADE B
   - WELDING: E70XX
4. ALL WORK PERFORMED SHALL MEET LATEST EDITION OF CHANGING BUILDING CODE AND APPROPRIATE REQUIREMENTS.
5. ALL MATERIALS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
6. PROVIDE LADDER IF THE DISTANCE FROM TOP OF 24" LADDER EXTEND TO THE UNIT DOOR IS GREATER THAN OR EQUAL TO 3'-0" OR PER DIRECTION OF ORDERER.

CONTRACT NO. WD-2829
PUBLIC UTILITIES COMMISSION
INFRASTRUCTURE DIVISION
ENGINEERING MANAGEMENT SECTION
SAN ANGELO FLOODING No. 2
LADDER, VALVE STEM EXTENSION AND GUIDE DETAILS FOR CONCRETE REBAR
50% SUBMITTAL
NOTES:
1. THE EXTERNAL AND OUTSIDE COATING MATERIAL FOR THE STEEL PIPE PROTECTIVE COVER SHALL BE AS FOLLOWS:
   A. FIRST COAT SHALL BE A SINGLE COMPONENT, MOISTURE-CUREEPITHANE, WINTER WHITE, 201/4" WIDE CIRCLE AT 4-4 5/8 IN. ON APPROVED EQUIPMENT.
   B. SECOND COAT SHALL BE A SINGLE COMPONENT, MOISTURE-CURE EPITHANE, WINTER WHITE 201/4" WIDE CIRCLE AT 4-4 5/8 IN. ON APPROVED EQUIPMENT.
   C. TOPCOAT SHALL BE A SINGLE COMPONENT, MOISTURE-CURE EMULSIFIED EPITHANE, WINTER WHITE EP-510, LIGHT GREEN COLOR AT 1.5' 4-4 5/8 IN. ON APPROVED EQUIPMENT.
   D. SURFACE PREPARATION SHALL BE PER SSPC-SP9.
2. A 4" X 4" VENT SCREEN SHALL BE INSTALLED ON THE PROTECTIVE ENCLOSURE. SCREEN SHALL BE 1/8" X 1/8" Galvanized screen, take need to frame.
3. HEIGHT OF DOOR OPENING "H" SHALL BE EXTEND 2" BELOW THE BOTTOM TEST TAP.
4. HEIGHT OF VERTICAL WALL "D" SHALL BE 2" LESS THAN THE TOP OF AN 18" HEAVY DUTY FLOODGATE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR CITY REPRESENTATIVE'S APPROVAL.

CONTRACT NO. WD-2829
PUBLIC UTILITIES COMMISSION
INFRASTRUCTURE DIVISION
SAN ANTONIO PUBLIC UTILITY BOARD
SPOONER & CAMPBELL
CONTRACTOR: SPOONER & CAMPBELL

PROTECTIVE COVER FOR OFFSET AIR AND VACUUM VALVES IN PAVED AREA

50% SUBMITTAL
NOTES:
1. Location of existing facilities and utilities shown in the drawings are approximate and shall be checked in field prior to construction.
2. Existing facilities shown on this Plan are for reference only. Contractor is responsible for determining the location of all existing infrastructure and utilities. Contractor shall perform underground utility surveys and provide the existing facilities to verify the alignment prior to excavating and installing staging area and communicating any existing conditions or hazards.
3. Contractor shall notify Department of Public Safety (DPS) by calling 1-800-227-8622 prior to excavation.

CONTRACT NO. WD-2829
PUBLIC UTILITIES COMMISSION
INFRASTRUCTURE DIVISION
PROJECT No. 3
LOT 4
Primary Contact:
San Diego Planning Commission
Staging Area at Peninsula High School
PENDING LOT

50% SUBMITTAL
### Adopted Mitigation Measures

#### Required for segments 1-4

**Mitigation Measure M-LU-1a: Notice of Construction Activities**

This mitigation measure applies to all project sites. The following notification procedures shall be implemented prior to construction:

1. The SFPUC shall provide advance notification to businesses, property owners, facility managers, and residents of adjacent areas potentially affected by the project about the nature, extent, and duration of construction activities, at least 1 week prior to construction. The SFPUC or its contractor will coordinate with the City of San Bruno to agree on a public notification process and notification boundaries in San Bruno. The SFPUC shall also provide interim updates to these parties during periods of active construction to inform them of the status of the construction activities and schedule. Notices shall be sent to sensitive receptors and affected adjacent properties identified below:
   - **Colma Site** – Kohl’s Department Store; Home Sweet Home Assisted Living Facility (if occupied); Creekside Villas, residential units in front of Kohl’s Department Store to the East; and Cypress Lawn Memorial Cemetery.
   - **South San Francisco Site** – Residences adjacent to the construction zone along Arroyo Drive; Clubview Apartments; and California Golf Club of San Francisco.
   - **San Bruno Segments 1 through 4** – Residences adjacent to the construction zone along Crystal Springs Road, Courtland Road, the 280 North off-ramp to San Bruno Avenue, San Bruno Avenue and Cedarwood Court, and within the Peninsula Place Homeowners and Cherry Avenue Villas condominium complexes.
   - **San Bruno North Site** – Residences adjacent to the construction zone along Cedarwood Court and Pepper Drive.
   - **San Bruno South Site** – Park Plaza Apartments and Shelter Creek Condominiums; Residences adjacent to the construction zone along Courtland Drive; Peninsula High School and other uses at the former Crestmoor High School campus; Peninsula High School Athletic Fields; and San Bruno Chinese Church; and
   - **Millbrae Site** – Green Hills Country Club; Meadows Elementary School; Residences along Ridgewood Drive; Residences adjacent to the construction zone along Ridgewood Drive; Hacienda Way, Helen Drive, Banbury Lane; Millwood Drive and Barcelona Drive; and Glen Oaks and Millbrae Montessori Schools.
2. The SFPUC shall coordinate with managers of facilities including, but not limited to, Kohl’s Department Store, San Bruno Chinese Church, Peninsula High School, and the Green Hills Country Club to minimize disruptions to facility operations and activities, to the extent feasible.
3. Should weekend work be necessary, the SFPUC shall notify adjacent properties, including reasonable advance notification to the businesses, owners, and residents of adjacent areas potentially affected by the proposed project, and interim updates shall be provided.

<table>
<thead>
<tr>
<th>Monitoring and Reporting Program</th>
<th>Responsible Party</th>
<th>Reviewing and Approval Party</th>
<th>Monitoring and Reporting Actions</th>
<th>Implementation Schedule</th>
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<tbody>
<tr>
<td>Adopted Mitigation Measures</td>
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<tr>
<td>Land Use and Land Use Planning</td>
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<td><strong>Mitigation Measure M-LU-1a:</strong></td>
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<td><strong>Notice of Construction Activities</strong></td>
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<tr>
<td>This mitigation measure applies to all project sites. The following notification procedures shall be implemented prior to construction:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1. The SFPUC shall provide advance notification to businesses, property owners, facility managers, and residents of adjacent areas potentially affected by the project about the nature, extent, and duration of construction activities, at least 1 week prior to construction. The SFPUC or its contractor will coordinate with the City of San Bruno to agree on a public notification process and notification boundaries in San Bruno. The SFPUC shall also provide interim updates to these parties during periods of active construction to inform them of the status of the construction activities and schedule. Notices shall be sent to sensitive receptors and affected adjacent properties identified below:</td>
<td></td>
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<tr>
<td>2. The SFPUC shall coordinate with managers of facilities including, but not limited to, Kohl’s Department Store, San Bruno Chinese Church, Peninsula High School, and the Green Hills Country Club to minimize disruptions to facility operations and activities, to the extent feasible.</td>
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<tr>
<td>3. Should weekend work be necessary, the SFPUC shall notify adjacent properties, including reasonable advance notification to the businesses, owners, and residents of adjacent areas potentially affected by the proposed project, and interim updates shall be provided.</td>
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MODIFIED PENINSULA PIPELINES SEISMIC UPGRADE PROJECT (SF Environmental Planning Case No. 2011.0123E) – MITIGATION MONITORING AND REPORTING PROGRAM FINAL (Continued)

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<th>Adopted Mitigation Measures</th>
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<th>Responsible Party</th>
<th>Reviewing and Approval Party</th>
<th>Monitoring and Reporting Actions</th>
<th>Implementation Schedule</th>
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<td><strong>M-LU-1b: Minimum 2-Week Notice of Construction Activities to Homes with Significant Unavoidable Noise Impacts</strong></td>
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<td>This mitigation measure applies to South San Francisco, San Bruno North, San Bruno South, and Millbrae sites only. The SFPUC or its contractor shall provide 14-day advance notice by mail or hand delivery to all residents, tenants, and/or property owners in those homes listed below as being potentially subject to significant and unavoidable noise impacts, even after administrative and source controls are implemented.</td>
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<tr>
<td>• South San Francisco Site – Arroyo Drive (address numbers 105, 107 and 108);</td>
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<td>SFPLUC Communications</td>
<td>SFPLUC BEM</td>
<td>Provide advance notification to residents and/or property owners.</td>
<td>1) Prior to construction (at least 14 days)</td>
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<tr>
<td>• San Bruno Segments 1 through 4 – Residents adjacent to the construction zone along Boardwalk Place and Boardwalk Drive within the Peninsula Place Homeowners condominium complex and adjacent to the unnamed roadway within the Cherry Avenue Villas;</td>
<td></td>
<td>SFPLUC Communications/CM Team</td>
<td>SFPLUC BEM</td>
<td>Identify a public liaison. Develop and review procedures for receiving and responding to questions and complaints.</td>
<td>2) Pre-construction</td>
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<td>• San Bruno North Site – Cedarwood Court (address numbers 1790, 1791, 1800, 1801, 1820, 1821, 1840, and 1841); and Pepper Drive (address numbers 763, 769, 773, 779, 783, 789, 793, and 795);</td>
<td></td>
<td>SFPLUC Communications/CM Team</td>
<td>SFPLUC BEM</td>
<td>Provide interim updates and respond to complaints.</td>
<td>3) Construction</td>
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<td>• San Bruno South Site – Courtland Drive (address numbers 300, 306, 310, 316, 320, 326, 330, 336, 340, 350, 360, and 370); Shelter Creek Condominiums Buildings 4A, 4B, and 4D; and Park Plaza Apartments; and</td>
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<td>SFPLUC BEM</td>
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<td>• Millbrae Site – Hacienda Way (address numbers 859, 869, 873, 877, 881, 885, 889, 893, and 917); Ridgewood Drive (address numbers 1078, 1086, 1094, 1100, 1101, 1106, 1110, 1116, 1120, 1126, and 1130); and Banbury Lane (address number 971);</td>
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<td>SFPLUC BEM</td>
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</tr>
<tr>
<td>The notice will state the construction location, anticipated activities, and schedule, including whether nighttime construction is proposed. The notice will provide information about anticipated construction-related noise impacts and provide suggestions for avoiding or reducing exposure to such impacts (e.g., planning alternative schedules, closing windows facing the planned construction sites). The SFPUC shall identify and provide a public liaison person before and during construction to respond to the concerns of neighboring property owners. Procedures for contacting the public liaison officer via a toll-free telephone number, email, or in person will be included in the notices.</td>
<td></td>
<td>SFPLUC Communications</td>
<td>SFPLUC BEM</td>
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<tr>
<td>Prior to construction, the SFPUC communications manager, resident engineer, and construction manager shall develop and review procedures for receiving and responding to questions and complaints.</td>
<td></td>
<td>SFPLUC Communications/CM Team</td>
<td>SFPLUC BEM</td>
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**Aesthetics**

| **M-AE-2: Site-Specific Construction Lighting Plan** | | | | | |
| This mitigation measure applies to the San Bruno North site only. The SFPUC shall require the contractor to develop and implement a site-specific nighttime lighting plan. A qualified lighting professional shall prepare the plan, which shall specify lighting sources for nighttime operations, and require that lighting be shielded and directed specifically onto work areas to minimize light spillover. The plan shall also provide for light source monitoring to ensure that feasible adjustments are made as necessary to provide maximum shielding during all phases of construction. The contractor shall submit the plan to the SFPUC for review and approval prior to commencing nighttime construction operations, at which time the plan shall be implemented continuously until the end of nighttime construction. | | SFPLUC EMB | SFPLUC BEM | Ensure that contract documents include requirement for contractor to develop lighting plan requirements. | 1) Design |
| | | CM Team | SFPLUC CMB | Ensure that contractor prepares lighting plan and submits to SFPUC for review and approval. | 2) Prior to nighttime construction |
| | | CM Team | SFPLUC BEM | Monitor to ensure that the contractor implements plan requirements. Report noncompliance and ensure corrective action. | 3) Construction |

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BEM = (SFPUC) Bureau of Environmental Management
CDFG = California Department of Fish and Game
CM Team = (SFPUC) Construction Management Team
NRLMD = (SFPUC) Natural Resources and Lands Management Division
USFWS = U.S. Fish and Wildlife Service

CMBA = (SFPUC) Communications Bureau
COM = (SFPUC) Communications Department
EMB = (SFPUC) Engineering Management Bureau
ERD = SF Planning Department Environmental Review Officer
SF Planning = SF Planning Department
SFPUC = San Francisco Public Utilities Commission
### Cultural and Paleontological Resources

#### Required for segments 1-4

**M-CP-2a: Distribute “ALERT” Sheet**

This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only.

At these sites, there is a potential for the inadvertent discovery of archaeological resources because all require excavation into previously undisturbed soils.

To avoid any potential adverse effects on accidentally discovered buried cultural resources, as defined in CEQA Guidelines Section 15064.5(a)(c), the SFPUC shall distribute the San Francisco Planning Department’s archaeological resource “ALERT” sheet to the project prime contractor; to any subcontractors (including firms subcontracted to perform demolition, excavation, grading, foundation, and pile driving); and/or to any utilities firms involved in any and all soil-disturbing activities within the PPSU C-APE.

Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel. The SFPUC shall provide the Environmental Review Officer (ERO) with the sign-in sheet from the responsible parties (i.e., prime contractor, subcontractor[s], and utilities firm) confirming that all field personnel have received copies of the ALERT sheet.

Should any indication of an archeological resource be encountered during any soil-disturbing activity, SFPUC and/or the contractor shall immediately suspend the soil-disturbing activities within 50 feet of the discovery, and shall notify the ERO immediately.

**M-CP-2b: Conduct Archaeological Monitoring in Accordance with Approved Archaeological Monitoring Plan**

This mitigation measure applies to the Colma, South San Francisco, and San Bruno South sites only. At these sites, portions of the C-APE are of elevated archaeological sensitivity. The SFPUC will retain a qualified archaeologist meeting the Secretary of the Interior’s professional standards for archaeology and, as necessary, a Native American monitor to be present during specific ground disturbing activities at specific locations within the Colma, South San Francisco, and San Bruno South sites as stipulated within the Archaeological Monitoring Plan (AMP) to be prepared for the project (URS, 2012a). The monitoring shall be conducted in accordance with the approved AMP. Archaeological monitoring is not required at the Millbrae site, given the low archaeological sensitivity of the soils occurring within that portion of the C-APE.

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Responsible Parties</th>
</tr>
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<tbody>
<tr>
<td>M-CP-2a: Distribute “ALERT” Sheet</td>
<td>SFPUC EMB, CM Team (qualified archaeologist)</td>
</tr>
<tr>
<td>M-CP-2b: Conduct Archaeological Monitoring in Accordance with Approved Archaeological Monitoring Plan</td>
<td>SFPUC EMB, CM Team (qualified archaeologist)</td>
</tr>
</tbody>
</table>

If an archaeological resource is present, the archaeological monitor retained for the project (see Mitigation Measure M-CP-2b) shall identify and evaluate the archaeological resource. The archaeological monitor shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the SFPUC. These measures might include preservation in situ of the archaeological resource; or an archaeological evaluation program (see Mitigation Measure M-CP-2c).

#### Required for segments 1-4

**M-CP-2c: Ensure that the contract documents include measures related to archaeological discoveries.**

1. Ensure that the contract documents include measures related to archaeological discoveries.
2. Ensure that all personnel attend environmental training prior to beginning work, receive the ALERT sheet, and sign the training sign-in sheet. Maintain file of signature sheets for submittal to ERO. Monitor to ensure that the contractor implements measures in contract documents including halting activities within 50 feet of discovery. Report noncompliance and ensure corrective action.
3. Evaluate the potential discovery and advise the ERO as to the significance of the discovery.

**M-CP-2d: Monitor ground disturbing activities in compliance with the Archaeological Monitoring Plan.**

1. Ensure that contract documents include requirement that contractor implement measures related to archaeological monitoring.
2. Monitor ground disturbing activities in compliance with the Archaeological Monitoring Plan.
MODIFIED PENINSULA PIPELINES SEISMIC UPGRADE PROJECT (SF Environmental Planning Case No. 2011.0123E) – MITIGATION MONITORING AND REPORTING PROGRAM FINAL (Continued)

Required for segments 1-4

M-CP-2c: Prepare and Comply with an Archaeological Evaluation Plan and Evaluation Report
This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only. In the event archaeological resources are inadvertently disturbed during any project-related construction, all ground-disturbing work within 50 feet of the discovery shall immediately cease, and the SFPUC Project Manager and the ERO shall be notified immediately.

In consultation with the SFPUC, the ERO, and the San Francisco Planning Department’s Environmental Planning Division archaeologist or Designee, the monitoring archaeologist shall prepare an Archaeological Evaluation Plan (AEP) consistent with the requirements of the San Francisco Planning Department, Environmental Planning Division (EP) WSIP Archaeological Guidance No. 5.

The AEP shall create a program to determine the potential of the expected resource to meet the California Register criteria—particularly Criterion 4, the resource’s potential to address important research questions identified in the AEP—and the archaeologist shall submit this plan to the ERO for approval. The archaeologist shall then conduct an evaluation consistent with the ERO-approved AEP. The methods and findings of the evaluation shall be presented in an Archaeological Evaluation and Effects Report consistent with EP WSIP Archaeological Guidance No. 6, which shall be submitted to the ERO upon completion.

Based on the conclusions of the Archaeological Evaluation and Effects Report, the Environmental Planning Division Archeologist or Designee shall determine if the project will adversely affect a CQSA-significant archaeological resource. If the project will have an adverse effect on such a resource, an Archaeological Research Design and Treatment Plan shall be prepared by the archaeologist and submitted to the ERO. The Archaeological Research Design and Treatment Plan shall be prepared consistent with the EP (formerly MEA) WSIP Archaeological Guidance No. 7. Once approved by the ERO, a data-recovery investigation and/or other treatment shall be conducted by the archaeologist.

Required for segments 1-4

M-CP-3: Prepare and Implement a Paleontological Resources Monitoring Program
This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only.

Prior to the initiation of any site preparation or start of construction, SFPUC shall retain a qualified professional paleontologist or a California Professional Geologist with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology’s Conformable Impact Mitigation Guidelines Committee (SVP, 1995), to carry out a paleontological resources training program for construction workers and to develop a paleontological monitoring program, except at the San Bruno North site. The SFPUC shall require the paleontologist to be on call throughout the duration of ground-disturbing activities. At a minimum, the monitoring program shall include:

Preparation of a Paleontological Monitoring Plan. Based on the results of the paleontological investigation completed for the PPSU project (URS, 2012b), the volume and depth of proposed soil excavations, and professional judgment, the paleontologist shall identify the specific locales and depths within the project components where geologic units of high paleontological sensitivity occur, and to determine the frequency in which monitoring will be undertaken to ensure the proper management of paleontological resources. The SFPUC shall review and approve the plan in consultation with the ERO.

Paleontological Resources Training. All construction forepersons and field supervisors shall be trained in the recognition of potential fossil materials prior to the initiation of any site preparation or start of construction. Training on paleontological resources shall also be provided to all other construction workers, but may include videotape of the initial training and/or the use of written materials rather than in-person training by the qualified paleontologist. In addition to fossil recognition, the training shall convey procedures to follow if construction crews encounter potential fossil materials in the course of earthwork, excavation, or grading, as described below.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1)</td>
<td>Prepare Paleontological Monitoring Plan for ERO review and approval.</td>
</tr>
<tr>
<td>2)</td>
<td>Ensure that contract documents include requirements related to paleontological resources including training and discoveries.</td>
</tr>
<tr>
<td>3)</td>
<td>Obtain and review resume or other documentation of paleontologist’s qualifications. Ensure that contractor’s staff participate in the environmental training prior to beginning work and sign the training sign-in sheets. Maintain file of sign-in sheets.</td>
</tr>
<tr>
<td>4)</td>
<td>Prepare Paleontological Monitoring Plan for ERO review and approval.</td>
</tr>
<tr>
<td>5)</td>
<td>File documentation of paleontologist’s qualifications (e.g., resume). If monitoring is required in the Paleontological Monitoring Plan, document paleontological monitoring activities in logs. In the event of a discovery, confirm suspension of work, examine fossil, and report as required.</td>
</tr>
<tr>
<td>6)</td>
<td>Monitor to ensure that the contractor implements measures in contract documents report noncompliance, and ensure corrective action.</td>
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<tr>
<td>7)</td>
<td>Ensure corrective action.</td>
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CMB = (SFPUC) Construction Management Bureau  
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ERO = SF Planning Department Environmental Review Officer  
NRLMD = (SFPUC) Natural Resources and Lands Management Division  
SF Planning = SF Planning Department  
SFPUC = San Francisco Public Utilities Commission  
USFWS = U.S. Fish and Wildlife Service  
USGS = U.S. Geological Survey
Active Monitoring of Construction Sites for Paleontological Resources, if Recommended in the Paleontological Monitoring Plan.  

Paleontological monitoring shall consist of inspecting disturbed, graded, and excavated surfaces, as well as soil stockpiles and disposal sites in accordance with the schedule and methods outlined in the Paleontological Monitoring Plan. The monitor (i.e., the professional paleontologist or a designee of the paleontologist) shall have authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely and/or recover fossils. The monitor shall coordinate with the construction manager to ensure that construction activities occurring on the site. Recommendations for any necessary treatment shall be consistent with the SVP 1995 and 1996 guidelines and currently accepted scientific practices.  

If required, treatment for fossil remains may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection, and may also include preparation and publication of a report describing the finds. The monitor’s recommendations shall be subject to review and approval by the ERO or designee. The SFPUC shall be responsible for ensuring that treatment is implemented and reported to the San Francisco Planning Department. If no report is required, the SFPUC shall nonetheless ensure that information on the nature, location, and depth of all finds is readily available to the scientific community through university curation or other appropriate means.  

M-CP-4: Treatment of Inadvertently Discovered Human Remains  

This mitigation measure applies to the Colma, South San Francisco, San Bruno South, and Millbrae sites only. The treatment of any human remains and associated funerary objects discovered during soil-disturbing activities shall comply with applicable state laws. Such treatment would include immediate notification of the San Mateo County coroner and, in the event of the coroner’s determination that the human remains are Native American, notification of the NAHC, which would appoint a Most Likely Descendant (MLD) (PRC Section 5097.98).  

The archaeological consultant, SFPUC, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated objects (CEQA Guidelines Section 15064.5(a)). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.  

The PRC allows 48 hours to reach agreement on these matters.  

If the MLD and the other parties could not agree on the reburial method, the SFPUC shall follow Section 5097.98(b) of the PRC, which states that “the landowner or his or her authorized representative shall notify the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.”  

All archaeological work performed under this mitigation measure shall be subject to review by the ERO or designee.
**Transportation and Circulation**

**Required for segments 1-4**

<table>
<thead>
<tr>
<th>M-TR-3: Traffic Control Plan</th>
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<tbody>
<tr>
<td><strong>This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractor(s) shall prepare and implement a traffic control plan. The [traffic control] plan shall conform to the California Manual on Uniform Traffic Control Devices (Caltrans, 2012) and shall incorporate the applicable requirements of the jurisdictions of the Town of Colma and the cities of South San Francisco, San Bruno, and Millbrae. It shall be provided for review and comment if requested by these jurisdictions.</strong></td>
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</tbody>
</table>

**General Measures for All Project Sites**

- Advance warning signs shall be placed upstream of work areas advising motorists, bicyclists, and pedestrians of the construction zone ahead in order to minimize hazards associated with construction activities, including the vehicular entry and egress of project-related construction activities.
- A public information system shall be developed and implemented to advise motorists, bicyclists, and nearby property owners of the impending construction activities (e.g., direct distribution of flyers to affected properties, email notices, portable message signs, and informational signs).
- All equipment and materials shall be stored within the designated work areas so as to avoid obstructing traffic.
- At all project sites, roadside safety protocols shall be implemented such as advance “Road Work Ahead,” “One Lane Road Ahead,” “Flagger Ahead,” “Prepare to Stop,” and “Trucks Entering Road” signs. Warning signs and speed control shall be provided to achieve speed reductions for safe traffic flow through the work zone.
- At all sites, pedestrian and bicycle access and circulation shall be maintained during project construction where it is safe to do so. Where appropriate, detours shall be included for bicycles and pedestrians in areas affected by project construction.
- To the maximum extent feasible, truck trips (i.e., haul trucks and heavy construction equipment) shall be scheduled outside of the a.m. (7 to 9 a.m.) and p.m. (4 to 6 p.m.) peak commute periods.
- At all project sites, construction shall be coordinated with facility owners or administrators of sensitive land uses such as schools, police and fire stations, churches, hospitals, and residences. Facility owners or operators shall be notified in advance by the SFPUC regarding the timing, location, and duration of construction activities, and the locations of detours and lane closures.
- Roadway rights-of-ways shall be repaired or restored to their original conditions or better upon completion of construction.

**Specific Measures for Project Sites**

- At the Colma site, construction worker parking shall be accommodated within the project area boundary. At the Colma Site, flaggers shall be provided at the Serramonte Boulevard driveway to the staging area and Kohl’s department store site, to reduce the potential for conflicts between construction vehicles and customers accessing the Kohl’s parking lot via Serramonte Boulevard. If construction activities occur on weekends, flaggers shall also be provided.
- At the South San Francisco site, flaggers shall be provided at new project driveway on West Orange Avenue to facilitate pedestrian travel adjacent to the project site. Construction worker parking shall be accommodated within the project staging area, or within the common staging area; carpooling between the South San Francisco site and the common staging area shall be established.
- At the San Bruno North site, the construction contractor shall obtain an encroachment permit from Caltrans, and comply with Caltrans requirements for traffic control activities within the State right-of-way, as described in Section 3.10, Required Permits.
At the San Bruno South site, travel lane closures on Whitman Way shall be limited during the a.m. (7 to 9 a.m.) and p.m. (4 to 6 p.m.) peak periods to the maximum extent feasible. Outside of allowed working hours or when work is not in progress, Whitman Way shall be restored to normal operations by covering all trenches with steel plates. When sidewalk closures are required on Whitman Way, pedestrian detour routes shall be maintained.

At the intersection of Shelter Creek Lane and the driveway to the Shelter Creek Condominiums (Intersection #5), the construction contractor shall provide flaggers to facilitate truck access into and out of the project work area at the Shelter Creek Condominiums. Access to lower Garage 4, Lot B, and Lot C shall be maintained to the maximum extent feasible, and alternative fire access to building #3B shall be maintained.

The construction contractor shall be required to have ready at all times the means necessary to accommodate emergency vehicles, such as platting over excavations through the use of steel plate to provide for a fire lane with a minimum width of 12 feet. The traffic control plan shall include flaggers with radio communication to allow ingress/egress to the parking areas.

Flaggers shall be provided on Courtland Drive at the construction vehicle access to the staging area within the Peninsula High School site, to reduce the potential for conflicts between construction vehicles and vehicles destined to other parking or passenger loading/unloading areas within the site. If construction activities occur on weekends, flaggers shall be provided.

Plans and Specifications at 65 percent design completion, along with the construction plan control, shall be submitted to the San Bruno Fire Marshal when available for review and comment.

Construction worker parking shall be accommodated within the project area boundary.

At the Millbrae site, the SFPUC or the construction contractor shall coordinate with the schedule of schools to minimize impacts on school operations to the maximum extent feasible. At the Millbrae site, to the maximum extent feasible, construction haul trips shall not be conducted prior to 9 a.m. or after 3 p.m. when children are traveling to and from the Meadows Elementary School and the Glen Oaks/Millbrae Montessori School. Similarly, if determined appropriate by the school administrators, the SFPUC or the construction contractor shall provide traffic control officers at the intersections of Helen Drive/Larkspur Drive (Intersection #9) near the Meadows Elementary School, and Santa Margarita Avenue/Capuchino Drive (Intersection #11) near the Glen Oaks/Millbrae Montessori School.

If sidewalk closures are required on Ridgewood Drive, pedestrian detour routes shall be provided.

At the Common Staging Area, construction worker parking for the PSU project shall be accommodated within the site, as feasible.

### Noise

#### Required for segments 1-4

**M-NO-1: Prepare and Implement Administrative and Source Controls**

This mitigation measure applies to all project sites, but does not apply to the common staging area. The SFPUC shall include in construction contract specifications the requirement to prepare a noise control plan. The contractor shall submit a noise control plan, prepared by a qualified noise consultant, to the SFPUC for review and approval at least 21 days before the start of mobilization/construction. The SFPUC shall require the noise consultant to be a board-certified Institute of Noise Control Engineering member or other qualified consultant or engineer, to be approved by the SFPUC project construction manager. The noise control plan shall contain performance standards based on the more-restrictive of the 60-dBA [A-weighted-decibels] Leq (equivalent continuous noise level) sleep interference threshold (applicable to nighttime construction), the 70-dBA Leq speech interference threshold (for daytime construction) and the limits established in noise ordinances of San Mateo County, the Town of Colma, and the cities of San Bruno and Millbrae. The noise control plan shall identify the applicable threshold for each project site. The noise control plan shall, at a minimum, contain the following elements:

1. SFPLUC EMB
2. CM Team
3. SFPLUC Communications/CM Team
4. SFPLUC Communications/CM Team
5. CM Team

1. SFPLUC EMB
2. CM Team
3. SFPLUC BEM
4. SFPLUC BEM
5. SFPLUC BEM

1. Ensure that contract documents include noise performance standards and the requirement that contractor’s qualified noise consultant prepare and implement a noise control plan.
2. Ensure that contractor’s qualified noise consultant prepares and submits a noise control plan that complies with noise performance standards.
3. Designate project liaison responsible for responding to noise complaints. Develop procedures for recording and responding to questions and complaints. Ensure public questions and complaints are responded to and corrective actions taken as needed.
4. If contractor is unable to mitigate noise by measures described in this

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**CDFG** = California Department of Fish and Game
**CM Team** = (SFPUC) Construction Management Team
**CMB** = (SFPUC) Construction Management Bureau
**Communications** = (SFPUC) Communications Department
**EMB** = (SFPUC) Engineering Management Bureau
**ERD** = SF Planning Department Environmental Review Officer
**NRLMD** = (SFPUC) Natural Resources and Lands Management Division
**RHRQCB** = California Regional Water Quality Control Board
**SFPUC** = San Francisco Public Utilities Commission
**USFWS** = U.S. Fish and Wildlife Service
specific noise control measures that shall be contained in the plan may include, but are not limited to, the following:

a) Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will be used for all equipment and trucks in order to minimize construction noise impacts.

b) If impact equipment (e.g., concrete/rock breaker, rock drill) is used during project construction, hydraulically or electric-powered equipment will be used to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust will be used (a muffler can lower noise levels from the exhaust by up to 10 dBA). External jackets on the tools themselves will be used, which could achieve a reduction of 5 dBA. Quieter procedures, such as drilling or vibratory methods rather than impact equipment, will be used.

c) Alternative shoring installation techniques, such as beam-and-plate or drilled soldier piles, shall be employed to meet noise thresholds.

d) The use of vibratory rollers and pile drivers shall be limited to the hours between 7 a.m. and 5 p.m., except in the City of San Bruno, where such equipment shall be limited to the hours between 9 a.m. and 5 p.m., and in the City of Millbrae, where such equipment shall be limited to the hours between 8 a.m. and 5 p.m.

e) Locate stationary noise sources away from sensitive receptors. If the sources must be located near receptors, adequate muffling (with enclosures where appropriate) will be used to ensure performance standards are met. Enclosure openings or vents will face away from sensitive receptors. If any stationary equipment (pumps, ventilation fans, generators) is operated beyond the ordinance time limits, this equipment will conform to the affected jurisdiction’s noise limits.

f) Erect temporary noise barriers to maintain construction noise levels at or below the performance standards. Barriers shall be constructed with a solid material with a density of at least 2 pounds per square foot with no gaps. The location, height, and specification of the barriers shall be determined by the approved noise consultant as part of the noise control plan.

g) Designate a project liaison to be responsible for responding to noise complaints during construction. The name and phone number of the liaison will be conspicuously posted at construction areas and on all advanced notifications. The liaison will take steps to resolve complaints, including the arrangement of periodic noise monitoring, if necessary. Results of noise monitoring will be presented at regular project meetings with the project contractor, and the liaison will coordinate with the contractor to modify any construction activities that generated excessive noise levels.
h) In the event of noise complaints, the contractor shall provide information to the SFPUC within 48 hours of being notified of the complaint regarding the noise levels measured and activities that correspond to the complaints. The SFPUC will compare the noise levels to the information in the noise control plan, and the effectiveness of the noise control measures will be verified by the contractor. The contractor will be responsible for the correct installation and use of all implemented noise control measures and for complying with noise specifications.

i) For the limited locations where the contractor is unable to mitigate noise through the measures described above (a through h), the contractor shall work with the SFPUC communications liaison and the construction management team to provide alternative solutions. The contractor will provide a white noise machine* to residents adjacent to the construction work area whose exterior nighttime noise level due to project construction activities exceeds 60 dBA, or exceeds the daytime speech interference threshold of 70 dBA Leq. Exceedances of the dBA criterion shall first be verified by field acoustical measurements. On a case-by-case basis, when the white noise machine does not provide an effective solution and when there are special circumstances such as those home owners with verified special medical conditions or those who work at night and therefore need to sleep during daytime hours, the SFPUC will offer to temporarily relocate them to a nearby hotel. Special medical conditions shall be verified by a doctor.

* A white noise machine is a device that produces a soothing humming or a fan-like sound.

To mitigate the contribution to elevated noise levels from back-up alarms, the contractor may use administrative controls instead of audible back-up alarms, subject to safety priorities and consistency with state and federal worker safety laws. Administrative controls may include designing traffic patterns at the project sites to minimize the need for backward movement, or requiring a spotter or flagger in clear view of the operator to direct the backing operation, or requiring the operator to dismount and circle the vehicle immediately prior to starting a reverse operation.

Alternatively, the SFPUC may consult with the California Division of Occupational Safety and Health (Cal/OSHA) to determine whether additional noise reductions may be achieved through Cal/OSHA-approved alternatives to back-up alarms without compromising site safety. If Cal/OSHA indicates that such alternatives are a viable option and the SFPUC, in consultation with the contractor, determines that site safety would not be compromised, then the contractor shall apply for a variance from Cal/OSHA and use such alternatives consistent with Cal/OSHA requirements. Such alternatives could include, but are not limited to:

- "Smart" alarms that have an audible range of 77 to 103 dBA (but limit the warning signal to 5 dBA over ambient noise levels).
- Radar presence-sensing alarms that identify objects in the reversing path of a truck.
- Use of "bbs-tek" broadband back-up alarm systems that use a broadband sound instead of a more noticeable single-frequency sound.
- Use of strobe lights instead of audible alarms.

The administrative source controls and alternatives identified above that are approved by Cal/OSHA instead of back-up alarms shall be included in the noise control plan. If none of these alternatives to back-up alarms can be implemented, the use of back-up alarms shall be minimized by routing the trucks and equipment through sites in a manner that reduces the need to back up.
Required for segments 1-4

M-NO-4: Develop and Implement Vibration Planning, Monitoring, and Reporting

This mitigation measure applies to the South San Francisco, San Bruno North, San Bruno South, and Millbrae sites. The SFPUC shall include in construction contract specifications the requirement to prepare and implement a vibration control plan. The contractor shall submit a vibration control plan, prepared by a qualified vibration consultant, to the SFPUC for review and approval at least 21 days before the start of mobilization/construction. The vibration control plan shall contain measures to reduce construction-related vibration to meet the 0.3 in/sec PPV damage potential threshold. In addition, at the San Bruno North site, the plan shall contain measures to reduce construction-related vibration to meet the 0.01 in/sec PPV nighttime annoyance potential threshold, to the extent feasible.

The vibration control plan shall, at a minimum, contain the following elements:

- Procedures outlining the coordination among the SFPUC, the contractor, field monitors, and property owners.
- Address the use of low-vibration equipment (or using lower power equipment or lower power setting) and methods when working near residential receptors.
- Continuous monitoring of vibration levels when vibratory equipment is in use within 50 feet of residential receptors.
- Continuous monitoring of pile driving vibration levels within 150 feet of residential receptors.
- Pile driving is not to occur within 60 feet of residential structures; the contractor must provide trench shoring using another less-vibration-intensive method within 60 feet of residential structures.
- Weekly reporting of the vibration monitoring results, including distribution of reports to interested parties that have requested them.

Specific vibration control measures that could be addressed in the plan include, but are not limited to, the following:

a) Avoiding or reducing simultaneous operation of multiple pieces of construction equipment in proximity to buildings.

b) The use of vibratory rollers and pile drivers shall be limited to the hours between 7 a.m. and 5 p.m., except in the City of San Bruno and the City of Millbrae where such equipment shall be limited to the hours between 9 a.m. and 5 p.m. and between 8 a.m. and 5 p.m., respectively.

c) Continuous monitoring of vibration levels when vibratory equipment is in use within 50 feet of residential receptors.

d) Continuous monitoring of pile driving vibration levels within 150 feet of residential receptors.

e) Pile driving is not to occur within 60 feet of residential structures; the contractor must provide trench shoring using another less-vibration-intensive method within 60 feet of residential structures.

f) Weekly reporting of the vibration monitoring results, including distribution of reports to interested parties that have requested them.

1) SFPUC EMB
2) SFPUC Communications/CM Team
3) CM Team
4) CM Team
5) CM Team
6) CM Team

1) SFPUC BEM
2) SFPUC BEM
3) SFPUC BEM/CMB
4) SFPUC BEM
5) SFPUC BEM
6) SFPUC CMB

1) Ensure that contract documents include the requirement for the preparation of a vibration control plan and the specific requirements listed therein.
2) Provide outreach and information to affected residential receptors and offer to perform pre-construction crack surveys to homes within 200 feet of the project.
3) Consult with a California-licensed geotechnical engineer to develop procedures to reduce vibration impacts on adjacent sensitive receptors.
4) Ensure contractor’s qualified vibration specialist monitors vibration in accordance with the plan.
5) Monitor the contractor to ensure the recommendations of the final geotechnical report are implemented. Report noncompliance and ensure corrective action.
6) Perform post-construction structure evaluations.
If construction vibration monitoring demonstrates that the project-generated vibration is lower than the values estimated, then the SFPUC could allow these activities to be conducted within the buffer zones, based on evaluation of monitoring data by a qualified vibration consultant. The SFPUC will consult with a California-licensed geotechnical engineer to develop procedures to reduce vibration impacts on adjacent sensitive receptors. The SFPUC will ensure that the construction contractor follows the recommendations of the final geotechnical report regarding excavation and construction. The SFPUC will also ensure that the construction contractor monitors adjacent residential receptors during construction as recommended by the geotechnical engineer.

The construction contractor will use low-vibration equipment and appropriate trench shoring when working close to buildings, when required by the geotechnical engineer. If necessary, trench shoring near buildings will be designed with the capacity to support the soil loading, as determined by the project structural and/or geotechnical engineer. The construction contractor will monitor the building until the trench is backfilled.

SFPUC and the contractor will coordinate with property owners to attempt to gain property access where necessary for vibration monitoring. Where access is granted, the SFPUC shall conduct monitoring to assess construction vibration impacts on adjacent buildings. The SFPUC shall assess the building’s pre-construction conditions, identify potential sources of background vibration, and monitor construction vibration near adjacent residential receptors using appropriate monitoring equipment. The SFPUC will coordinate with the construction contractor to adjust construction techniques so as to keep vibration levels below the 0.3 in/sec PPV threshold potential damage criterion. The SFPUC will conduct visual surveys during construction, monitor for cracks and other damage, and conduct a post-construction structural evaluation.

SFPUC will provide outreach and information to affected residential receptors regarding projected vibration. At a minimum, this will be provided to residences with structures within approximately 200 feet of construction activities. For residential structures within these zones, the SFPUC will convey to the owners the fact that structural damage occurs at very high vibration levels, far above the threshold of human perception, and that vibration from construction activities will be monitored to prevent structural damage.

### Air Quality

**Required for segments 1-4**

**M-AQ-1: BAAQMD Basic Construction Measures**

This mitigation measure applies to all project sites and the common staging area. The SFPUC shall post one or more publicly visible signs with the telephone number and person to contact at the SFPUC with complaints related to excessive dust or vehicle idling. This person shall respond to complaints and, if necessary, take corrective action within 48 hours. The telephone number and person to contact at the BAAQMD’s Compliance and Enforcement Division shall also be provided on the sign(s) in the event that the complainant also wishes to contact the applicable air district.

In addition, to limit dust, criteria pollutants, and precursor emissions associated with project construction, the following BAAQMD-recommended Basic Construction Measures shall be included in all construction contract specifications for the proposed project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Measure</th>
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</thead>
<tbody>
<tr>
<td>1) Design</td>
<td>Ensure that the contract documents include specified dust control measures and exhaust control measures, including signage requirements.</td>
</tr>
<tr>
<td>2) Pre-construction/Construction</td>
<td>Designate project liaison responsible for developing and implementing procedures responding to complaints related to dust or vehicle idling. Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action.</td>
</tr>
<tr>
<td>3) Construction</td>
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MODIFIED PENINSULA PIPELINES SEISMIC UPGRADE PROJECT (SF Environmental Planning Case No. 2011.0123E) – MITIGATION MONITORING AND REPORTING PROGRAM FINAL (Continued)

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Vehicle speeds on unpaved areas shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times for construction equipment (including vehicles) shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes. Clear signage of this requirement shall be provided for construction workers at all access points to construction areas.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Utilities and Service Systems

**Required for segments 1-4**

**M-UT-1b: Safeguard Employees from Potential Accidents Related to Underground Utilities**

This mitigation measure applies to all project sites, as well as the common staging area. While any excavation is open, the SFPUC or its contractors shall protect, support, or remove underground utilities as necessary to safeguard employees. As part of contractor specifications, the contractor(s) shall be required to provide updates on planned excavations for the upcoming week, and to specify when construction will occur near a high-priority utility. SFPUC construction managers shall attend tailgate meetings with contractor staff, as required by the California Occupational Safety and Health Administration, to record all protective and avoidance measures regarding such excavations.

1. SFPUC EMB
2. CM Team
3. CM Team

1. SFPUC EMB
2. SFPUC CMB
3. SFPUC CMB

1. Ensure that contract documents include applicable requirements to safeguard employees from potential accidents.
2. Conduct weekly tailgate meetings with contractor prior to any work near high-priority utility lines, and record all protective and avoidance measures that will be implemented in such excavations.
3. Monitor to ensure that the contractor implements measures in contract documents and the protective and avoidance measures identified at tailgate meetings. Report noncompliance and ensure corrective action.

**Required for segments 1-4**

**M-UT-1c: Notify Local Fire Departments**

This mitigation measure applies to all project sites, as well as the common staging area. In the event that construction activities result in damage to high-priority utility lines, including leaks or suspected leaks, the SFPUC or its contractors shall immediately notify local fire departments to protect worker and public safety.

1. SFPUC EMB
2. CM Team

1. SFPUC EMB
2. SFPUC CMB

1. Ensure that contract documents include the requirement that the contractor notify local fire departments in the event of damage to high-priority utility lines.
2. Obtain documentation from contractor of their notification to local fire departments if damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.
3. Construction
### Required for segments 1-4

**M-UT-1d: Emergency Response Plan**

This mitigation measure applies to all project sites, as well as the common staging area. Prior to commencing construction activities, the SFPUC shall develop an emergency response plan that outlines procedures to follow in the event of a leak or explosion. The emergency response plan shall identify the names and phone numbers of PG&E staff who would be available 24 hours per day in the event of damage or rupture of the high-pressure PG&E natural gas pipelines. The plan shall also detail emergency response protocols including notification, inspection, and evacuation procedures; any equipment and vendors necessary to respond to an emergency, such as an alarm system; and routine inspection guidelines.

1. **SFPUC EMB**
2. **CM Team**
3. **CM Team**

**M-UT-1e: Ensure Prompt Reconnection of Utilities**

This mitigation measure applies to all project sites, as well as the common staging area. Prior to commencing construction activities, the SFPUC or its contractors shall coordinate final evacuation procedures; any equipment and vendors necessary to respond to an emergency, such as an alarm system; and routine inspection guidelines.

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-1f: Coordinate Final Construction Plans with Affected Utilities**

This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractors shall develop an emergency response plan that outlines procedures to follow in the event of a leak or explosion. The emergency response plan shall identify the names and phone numbers of PG&E staff who would be available 24 hours per day in the event of damage or rupture of the high-pressure PG&E natural gas pipelines. The plan shall also detail emergency response protocols including notification, inspection, and evacuation procedures; any equipment and vendors necessary to respond to an emergency, such as an alarm system; and routine inspection guidelines.

1. **SFPUC EMB**
2. **CM Team**
3. **CM Team**

**M-UT-2: Prepare and Implement a Construction Solid Waste Recycling Plan**

This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC or its contractors shall prepare a construction solid waste recycling plan/waste management plan. The plan shall include actions to divert waste with disposal in a landfill in accordance, at a minimum, with the solid waste diversion goal set by the California Integrated Waste Management Act, and with local ordinance requirements as follows:

1. **SFPUC EMB**
2. **CM Team**
3. **CM Team**

**M-UT-3: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-4: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-5: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-6: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-7: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-8: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-9: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-10: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-11: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-12: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-13: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-14: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-15: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-16: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-17: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-18: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-19: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**

**M-UT-20: Ensure that applicable measures are included in contract documents and emergency response plan. Report non-compliance and ensure corrective action is taken.**

1. **SFPUC EMB**
2. **CM Team**
3. **SFPUC CMB**
MODIFIED PENINSULA PIPELINES SEISMIC UPGRADE PROJECT (SF Environmental Planning Case No. 2011.0123E) – MITIGATION MONITORING AND REPORTING PROGRAM FINAL (Continued)

- At the Colma site – 50 percent recycling of the waste tonnage from any demolition project where the waste includes concrete and asphalt (or 15 percent where there is no concrete and/or asphalt); and 50 percent recycling of waste tonnage;
- At the South San Francisco site and Common Staging Area – 100 percent recycling of inert solids; and at least 50 percent recycling of the remaining construction and demolition debris tonnage; and
- At the Millbrae site – 50 percent recycling of all waste generated for the project by weight, with at least 25 percent achieved through reuse and recycling of materials other than source separated dirt, concrete and asphalt.

No local ordinances apply at the San Bruno North and South sites; therefore, diversion shall be consistent with State law (at least 50 percent recycling of solid wastes).

### Biological Resources

#### Required for segments 1-4

**M-BI-1a: General Protection Measures**

This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC shall ensure that the following general measures are implemented by the contractor(s) during construction to minimize or avoid impacts on biological resources:

- Construction contractor(s) shall minimize the extent of the construction disturbance as much as feasible, which shall be limited to boundaries of the project sites.
- For trees to be retained or trimmed:
  - A qualified arborist or a qualified biologist will identify trees to be retained, and exclusion fencing will be installed no closer than the drip line of these trees.
  - Prior to the start of construction, SFPUC or its contractors will install exclusion fencing at the limits of construction, outside the drip line of all trees bordering the limits.
  - All necessary tree pruning will be completed either by a certified arborist or by the contractor under the supervision of either an International Society of Arboriculture qualified arborist, American Society of Consulting Arborists consulting arborist, or a qualified horticulturist.
- Project-related vehicles shall observe a 15 mile-per-hour speed limit on unpaved roads in the work area, or as otherwise determined by the applicable regulatory agencies.
- The contractor shall provide closed garbage containers for the disposal of all food-related trash items (e.g., wrappers, cans, bottles, food scraps). All garbage shall be collected daily from the project site and placed in a closed container from which garbage shall be removed weekly.
- Construction personnel shall not feed or otherwise attract wildlife in the project area.
- No firearms shall be allowed in the project area.
- No pets shall be allowed in the project area.
- No staging areas shall be located at least 100 feet from riparian habitat, creeks, and wetlands, where feasible. If not feasible, then staging areas shall be situated outside of the drip line of riparian trees. If a 100-foot setback is not feasible due to field constraints, the project biologist will work with the contractor to determine where the silt fence erected for perimeter control should be placed, and what additional BMPs may be required to prevent construction spoils and sediment from leaving the work area. Sediment controls, such as silt fence or straw wattles, shall be erected along the perimeter of all construction and staging areas to minimize the transport of sediment from the site. If silt fence is used, the fence shall be installed so that the stakes face toward the outside of the work area.
- Exclusion fencing shall be erected along the boundaries of construction and staging areas to provide perimeter control, and to prevent construction personnel and activities from entering sensitive areas, as determined to be needed by the project biologist.
- If vehicle or equipment fueling or maintenance is necessary, it shall be performed in the designated staging area, consistent with Mitigation Measure M-HY-1: Preparation and Implementation of a SWPPP (see Section 5.16, Hydrology and Water Quality).

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<th>Mitigation Measures</th>
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<tr>
<td>1)</td>
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<td>4)</td>
<td>SFPP UC BEM</td>
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1) Ensure that the contract documents include the general protection measures including requirement to provide qualified arborist.
2) Monitor to ensure that contractor implements measures. Report noncompliance and ensure corrective action.

### Table of Responsible Agencies

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**Bay Area Air Quality Management District**

**California Department of Fish and Game**

**San Francisco Public Utilities Commission**

**Natural Resources and Lands Management Division**

**U.S. Fish and Wildlife Service**

Environmental Planning Case No. 2011.0123E
April 2017
Required for segments 1-4

M-BI-1b: Worker Training and Awareness Program
This mitigation measure applies to all project sites, as well as the common staging area. The SFPUC shall ensure that mandatory biological resources awareness training is provided to all construction personnel as follows:

- The training shall be developed and provided by a qualified biologist or construction compliance manager familiar with the sensitive species that may occur in the project area. If a consulting biologist prepares the training program, the SFPUC staff shall approve the program prior to implementation.
- The training shall be provided before any work, including vegetation clearing and grading, occurs within the work area boundaries.
- The training shall provide education on the natural history of the special-status species potentially occurring in the project area, and discuss the required mitigation measures to avoid impacts on the special-status species and the penalties for failing to comply with biological mitigation requirements.
- The environmental awareness training program for construction personnel shall include an orientation regarding the importance of preventing the spread of invasive nonnative plants.
- If new construction personnel are added to the project, the contractor shall ensure that they receive training prior to starting work. The subsequent training of personnel can include a videotape of the initial training and/or the use of written materials rather than in-person training by a biologist.

Required for segments 1-4

M-BI-1c: Prepare and Implement a Vegetation Restoration Plan
This mitigation measure applies to all project sites, but does not apply to the common staging area. The SFPUC or contractor shall prepare and implement a vegetation restoration plan with detailed specifications for minimizing the introduction of invasive weeds, and for restoring all temporarily disturbed areas. The plan shall include methods to ensure that the contractor successfully implements the vegetation restoration plan after the project is completed, so that proposed success criteria can be achieved subsequent to construction.

- The plan shall be developed by a qualified restoration ecologist familiar with the ecological requirements of special-status species. Willows removed from the South San Francisco site, north of Westborough Boulevard, shall be replaced with vegetation that would provide shelter for California red-legged frog, as specified in the SFPUC’s ROW Integrated Vegetation Management Policy (SFPUC, 2007).
- The plan shall be developed with the intent to replace (to the extent possible) the function and values of trees removed during the construction project with plants that are acceptable for planting within the SFPUC ROW.
- The plan shall indicate the best time of year for seeding to occur and will be consistent with the SFPUC’s ROW Integrated Vegetation Management Policy (SFPUC, 2007). The restoration plan shall specify measures to remove and/or control weeds in the project area. For grassland and ruderal areas, the affected areas shall be reseded with a native or noninvasive grass and forb seed mix.
- Replacement of ordinance-protected trees shall be completed as described in Mitigation Measure M-BI-4: Replacement of Trees to Be Removed. As specified therein, a qualified biologist shall conduct post-construction monitoring of the replacement trees for 5 years.
- The SFPUC or contractor shall ensure that topsoil is salvaged during grading and earthmoving activities (including during the preparation of spoils sites), stockpiled separately from subsoils, and protected from erosion (e.g., covered or watered); that composting amendments are added if necessary; and, if needed, that potentially compacted construction work areas are properly prepared prior to reuse of the soil in the post-construction restoration of temporarily disturbed areas. The SFPUC shall ensure that a minimum of 12 inches of topsoil is salvaged; or, if there is less than 12 inches of topsoil, as much as practicable.

- The SFPUC or contractor shall ensure that topsoil is salvaged during grading and earthmoving activities (including during the preparation of spoils sites), stockpiled separately from subsoils, and protected from erosion (e.g., covered or watered); that composting amendments are added if necessary; and, if needed, that potentially compacted construction work areas are properly prepared prior to reuse of the soil in the post-construction restoration of temporarily disturbed areas. The SFPUC shall ensure that a minimum of 12 inches of topsoil is salvaged; or, if there is less than 12 inches of topsoil, as much as practicable.

- The SFPUC or contractor shall ensure that topsoil is salvaged during grading and earthmoving activities (including during the preparation of spoils sites), stockpiled separately from subsoils, and protected from erosion (e.g., covered or watered); that composting amendments are added if necessary; and, if needed, that potentially compacted construction work areas are properly prepared prior to reuse of the soil in the post-construction restoration of temporarily disturbed areas. The SFPUC shall ensure that a minimum of 12 inches of topsoil is salvaged; or, if there is less than 12 inches of topsoil, as much as practicable.
• Construction equipment shall arrive at the project areas free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species.
• Any soil amendments, gravel, etc., required for construction and/or restoration activities that would be placed within the upper 12 inches of the ground surface shall be free of vegetation and plant material, and certified pathogen-free. Imported fill material shall be covered with the topsoil layer to prevent any imported seed bed from growing.
• Certified, weed-free, imported erosion-control materials (or rice straw in upland areas) shall be used exclusively, as applicable (this measure concerns biological material and does not preclude the use of silt fences, etc.). Erosion-control materials shall be natural and biodegradable, such as burlap wattles, and not have plastic netting, especially in areas with the potential for California red-legged frog, to prevent wildlife entanglement.
• No invasive nonnative plant species shall be used in any restoration plantings.

### Required for segments 1-4

#### M-BI-1d: Minimize Disturbance to Nesting Birds and Raptors
This mitigation measure applies to all project sites, as well as the common staging area. As feasible, the SFPUC shall conduct tree and shrub removal in the project areas during the nonbreeding season (generally August 15 through February 15) for migratory birds, raptors, and special-status bird species. If trees cannot be removed outside of the bird breeding season, nest bird surveys will be conducted on all trees prior to removal. If construction activities must occur during the bird breeding season (February 15 to August 15), the SFPUC shall retain a qualified wildlife biologist who is experienced in identifying birds and their habitat to conduct nesting-raptor surveys in and within 300 feet of the project area. Migratory passerine bird surveys shall be conducted within 50 feet of all work areas (as feasible) unless otherwise directed by CDFW.

If an area is not accessible for survey, the project biologist shall make a determination if further survey is necessary, and may request assistance to enter properties that may need closer investigation.

All migratory bird and active raptor nests within these areas shall be mapped. These surveys must be conducted within 2 weeks prior to initiation of construction activities at any time between February 15 and August 15. If no active nests are detected during surveys, no additional mitigation is required.

If migratory bird and/or active raptor nests are found in the project areas or in the adjacent surveyed area, the SFPUC shall establish a no-disturbance buffer around the nesting location to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late June through mid-July). The extent of those buffers would be determined by a wildlife biologist in consultation with CDFW and would depend on the species’ sensitivity to disturbance (which can vary among species); the level of noise or construction disturbance; line of sight between the nest and the disturbance; ambient levels of noise and other disturbances; and consideration of other topographical or artificial barriers. The wildlife biologist shall analyze and use these factors to assist the CDFW in making an appropriate decision on buffer distances.

#### Required for segments 1-4

#### M-BI-1e: Pre-construction Surveys for Special-Status Bats and Avoidance and Minimization Measures
This mitigation measure applies to the Millbrae site. Not more than 1 week prior to tree removal in the project areas, a qualified biologist (i.e., one familiar with the identification of bats and signs of bats) shall identify trees that might be potential day or maternity roosts. Bats may be present any time of the year. The biologist shall thoroughly search the tree or snag that provides appropriate habitat (trees with foliage or cavities or that are hollow) for the presence of roosting bats or evidence of bats. If bats are found or evidence of use by bats is present, the following procedures shall be implemented before felling the tree:

| 1) | SFPUC EMB |
| 2) | CM Team (qualified biologist) |
| 3) | CM Team |

If tree removal is not completed during the nonbreeding season, then obtain and review resume or other documentation of consulting biologist’s qualifications. Conduct surveys, mapping, and agency coordination. Document activities in monitoring logs.

### Monitor to ensure that the contractor implements measures in contract documents. Report noncompliance and ensure corrective action.

| 1) | Design |
| 2) | Pre-construction/Construction |
| 3) | Construction |

### CDMG = Bay Area Air Quality Management District
SFPUC = San Francisco Public Utilities Commission
CM Team = (SFPUC) Construction Management Team
SFPUC EMB = (SFPUC) Bureau of Environmental Management
CM Team (qualified biologist) = CM Team with expertise in bats
SFPUC BEM = (SFPUC) Bureau of Engineering Management
CM Team = (SF Planning) San Francisco Planning Department
ERD = SF Planning Department Environmental Review Officer
SFPUC = San Francisco Public Utilities Commission
CDFGW = California Department of Fish and Game
CMB = (SFPUC) Construction Management Bureau
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CMB = (SF Planning) San Francisco Planning Department
SF Planning = SF Planning Department
ERD = SF Planning Department Environmental Review Officer
1. Trees shall be removed under the warmest possible conditions. Peel any sections of the exfoliated bark off the tree gently and search for any roosting bats underneath. Create noise and vibrations on the tree itself. Noise and vibrations may include running a chain saw and making shallow cuts in the trunk (where bark has been), and striking the tree base with fallen limbs or tools such as hammers. Disturbance shall be near-continuous for 10 minutes, and then another 10 minutes shall pass before the tree is felled. When cutting sections of the trunk, if any hollows or cavities (such as woodpecker holes) are discovered, be especially careful to check for the presence of bats in those areas. Cut slowly and carefully at all times. If possible, section trunk near cavities to focus noise and vibrations, and open hollows by sectioning off a side.

2. The SEPLUC will ensure that trees are not removed or altered until CDFW has been contacted for guidance on measures to avoid and minimize disturbance of the bats. Additional measures may include monitoring trees, excluding bats from a tree until it is removed and/or restricting the timing of tree removal, and use of a construction buffer to avoid breeding disturbance of young before they are able to fly (for pallid bats, this period is between April and August).

**Required for segments 1**

**M-BI-1g: Mitigation for San Francisco Dusky-Footed Woodrat Middens**

This mitigation measure applies to the South San Francisco and Millbrae sites. Not more than 2 weeks prior to the onset of work activities (including equipment mobilization) and immediately prior to commencing work, the qualified biologist shall survey the areas to be disturbed within the Central Coast riparian scrub (South San Francisco site) and eucalyptus grove and coast live oak woodland (Millbrae site) for San Francisco dusky-footed woodrat and their nests.

- If no middens are found within such areas, no further action is required.
- If middens are found and can be avoided, the biologist shall direct the contractor in placing orange barrier fencing between the proposed construction clearing and the midden, allowing as much room as possible to avoid indirect disturbance to the midden, but no less than 2 feet from and along the construction side of the middens to protect them from construction activities.
- If avoidance is not feasible and the minimum fencing distance cannot be achieved, a qualified biologist shall disassemble middens or, if adjacent habitat is not suitable, trap and relocate woodrats out of the construction area (using live-traps) prior to the start of construction. In addition, the biologists shall attempt to relocate the disassembled midden to the same area where the woodrats are released. If young are present during disassembling, discontinue disassembling and inspect every 48 hours until young have relocated. The midden may not be fully disassembled until the young have left.

**Required for segments 1-4**

**M-BI-2a: Minimize Disturbance to Riparian Habitat**

This mitigation measure applies to the South San Francisco site. To minimize impacts to Central Coast riparian scrub and water quality in the drainage situated adjacent to the northwest end of the work area, a silt fence shall be placed along the work area boundaries adjacent to the drainage. This would prevent construction personnel from damaging riparian vegetation outside of the work area, and prevent sediment and debris from entering the drainage.
MODIFIED PENINSULA PIPELINES SEISMIC UPGRADE PROJECT (SF Environmental Planning Case No. 2011.0123E) – MITIGATION MONITORING AND REPORTING PROGRAM FINAL (Continued)

Required for segments 1-4

M-BI-2b: Supplemental Measures for the Vegetation Restoration Plan

This mitigation measure applies to the South San Francisco site. The following activities shall be completed for the Vegetation Restoration Plan at the site:

- To facilitate preparation of the plan, the SFPUC shall ensure that prior to construction a qualified botanist (i.e., one experienced in identifying plant species in the project area) performs additional pre-construction surveys of the areas to collect more detailed vegetation composition data, including species occurrence, vegetation characterization (tree diameter size, etc.), and percent cover of plant species. Photo documentation shall be used to show pre-project conditions.

- If required, the SFPUC shall provide the vegetation restoration plan to the CDFW and RWQCB during the permitting process, as any vegetation to be removed may provide habitat for special-status species and may also be within areas under the jurisdiction of the Corps and the RWQCB.

- Although trees cannot be replanted within the SFPUC ROW, native plant species allowed for planting as described in the Right of Way Integrated Vegetation Management Policy (SFPUC, 2007) should be selected and planted in appropriate locations. Enhancement of the riparian corridor outside of the ROW may be incorporated into the Vegetation Restoration Plan (see Impact BI-1, above, for description).

- To ensure success, vegetation planted as part of the vegetation restoration plan will be monitored for up to 5 years following installation. In addition, monitoring shall be conducted for 5 years for any tree species planted, except for tree species planted in riparian habitat, for which the monitoring period shall be 10 years.

M-BI-3: Avoidance and Protection Measures for Jurisdictional Water Bodies

This mitigation measure applies to the Colma, San Bruno South, and Millbrae sites. The SFPUC and its contractors shall minimize impacts on waters of the United States and waters of the State by implementing the following measures:

- Erosion and sedimentation control measures such as a silt fence shall be installed adjacent to all water conveyance features to be avoided within 100 feet of any proposed construction activity, and signs installed indicating the required avoidance. If a 100 foot setback is not feasible due to field constraints, the project biologist or qualified environmental inspector will work with the contractor to determine where the silt fence erected for perimeter control should be placed, and what additional erosion and sedimentation controls, such as sediment traps, may be required to prevent construction spoils and sediment from leaving the work area. No equipment mobilization, grading, clearing, or storage of equipment or machinery, or similar activity, shall occur until a representative of the SFPUC has inspected and approved the fencing installed around these features. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed. No construction activities, including equipment movement, material storage, or temporary spoil stockpiling, shall be allowed within the fenced areas protecting water features.

- Exposed slopes shall be stabilized immediately upon the completion of construction activities.

1) SFPUC BEM (qualified botanist)
2) SFPUC EMB
3) CM Team
4) SFPUC NRLMD/BEM

Required for segments 1-4

M-BI-3: Avoidance and Protection Measures for Jurisdictional Water Bodies

This mitigation measure applies to the Colma, San Bruno South, and Millbrae sites. The SFPUC and its contractors shall minimize impacts on waters of the United States and waters of the State by implementing the following measures:

- Erosion and sedimentation control measures such as a silt fence shall be installed adjacent to all water conveyance features to be avoided within 100 feet of any proposed construction activity, and signs installed indicating the required avoidance. If a 100 foot setback is not feasible due to field constraints, the project biologist or qualified environmental inspector will work with the contractor to determine where the silt fence erected for perimeter control should be placed, and what additional erosion and sedimentation controls, such as sediment traps, may be required to prevent construction spoils and sediment from leaving the work area. No equipment mobilization, grading, clearing, or storage of equipment or machinery, or similar activity, shall occur until a representative of the SFPUC has inspected and approved the fencing installed around these features. The SFPUC shall ensure that the temporary fencing is continuously maintained until all construction activities are completed. No construction activities, including equipment movement, material storage, or temporary spoil stockpiling, shall be allowed within the fenced areas protecting water features.

- Exposed slopes shall be stabilized immediately upon the completion of construction activities.

1) SFPUC EMB
2) CM Team

1) Design
2) Construction
3) Post-construction
 Required for segments 1-4

M-BI-4: Replacement of Trees to Be Removed

This mitigation measure applies to the South San Francisco and San Bruno North sites only, where affected trees meet the parameters of the applicable ordinance outlined in the summary table below. The SFPUC will avoid and minimize impacts on ordinance-protected trees by implementing the following measures:

- A tree survey will be conducted prior to construction by a qualified arborist (defined as an International Society of Arboriculture certified arborist or consulting arborist who is a member of the America Society of Consulting Arborists) or a qualified biologist to identify the protected and heritage trees within the project footprint. Protected trees and heritage trees are defined in Table 5.14 (on the following page) for the City of South San Francisco and the City of San Bruno.

- Removal of ordinance-protected trees or work within the dripline of such trees will be avoided to the extent feasible during construction. If construction must occur within the dripline of a tree, a qualified arborist will determine where the protective fencing should be placed in order to protect the tree.

- Where feasible, native trees to be removed that are located within the existing SFPUC ROW, shall be replaced according to the SFPUC’s Right of Way Integrated Vegetation Management Policy. If it is not feasible to compensate for all native tree removal in SFPUC’s ROW in the vicinity of the project, then native tree compensation shall occur at a suitable offsite location.

- For each removed landscape tree that meets ordinance criteria, the SFPUC shall plant two 24-inch box size trees or one 36-inch box size replacement tree of similar species. If replanting trees on the same site is infeasible, the SFPUC shall find a suitable alternative location.

- A qualified biologist or arborist shall conduct post-construction monitoring of replacement trees for 5 years. Any replacement trees that fail within the first 5 years shall be replaced. The survival period shall be extended, as necessary, until the planted trees have survived for a period of 5 years, and show signs that they are permanently established.

Summary of Applicable Tree Ordinances

<table>
<thead>
<tr>
<th>City</th>
<th>Protected Trees</th>
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</table>
| South San Francisco | - Any tree with a circumference of 48 inches or more when measured 54 inches above natural grade; or  
|                  | - A tree or stand of trees so designated based upon findings that it is unique and of importance to the public due to its unusual appearance, location, or historical significance; or  
|                  | - A stand of trees whereby each tree is dependent upon the others for survival. |
| San Bruno        | - Any native bay (Umbellularia californica), buckeye (Aesculus species), oak (Quercus species), redwood, or pine tree that has a diameter of 6 inches or more measured at 54 inches above natural grade;  
|                  | - Any tree or stand of trees designated by resolution of the City Council to be of special historical value or of significant community benefit;  
|                  | - A stand of trees, the nature of which makes each dependent on the others for survival; or  
|                  | - Any other tree with a trunk diameter of 10 inches or more, measured at 54 inches above natural grade. |
### Hydrology and Water Quality

#### Required for segments 1-4

**M-HY-1: Preparation and Implementation of a Storm Water Pollution Prevention Plan**

This mitigation measure applies to all project sites, as well as the common staging area. In accordance with the Construction General Permit, the SFPUC or its contractor(s) would submit the required notices, prepare a SWPPP, and implement site-specific BMPs to control and reduce discharges of sediments and pollutants associated with construction stormwater runoff that could discharge to storm drains or creeks. BMPs would include, but are not limited to, the following.

**Scheduling**
- Schedule construction to minimize ground disturbance during the rainy season to the extent practicable.
- Install erosion and sediment control BMPs prior to the start of any ground-disturbing activities.
- Provide plans to stabilize soil with vegetation or physical means in the event that rainfall is expected. Stabilize all disturbed soils as soon as possible following the completion of soil-disturbing activities.

**Erosion and Sedimentation**
- Install silt fences or fiber rolls, or implement other suitable measures around the perimeters of the construction zone, staging areas, temporary stockpiles, and drainage features.
- Use filter fabric or other appropriate measures to prevent sediment from entering storm drain inlets.
- When dewatering, regulate discharge rate, use energy dissipation devices, and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.
- Detain and treat water produced by construction site dewatering using sedimentation basins, sediment traps (when water is flowing and there is sediment), or other measures, to ensure that discharges to receiving waters meet applicable water quality objectives.
- Locate stockpiles a minimum of 50 feet away from concentrated flows of stormwater, water bodies, ditches, and inlets. Contain all stockpiles using perimeter controls such as berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale barriers. Cover all stockpiles with visqueen or other impermeable materials.
- Preserve existing vegetation in areas where no construction activity is planned or where construction activity will occur at a later date.
- Stabilize and revegetate disturbed areas as soon as possible after construction by planting or seeding and/or using mulch (e.g., straw or hay, erosion control blankets, hydromulch, or other similar material).
- LUP [linear underground/overhead projects] dischargers shall provide effective soil cover for inactive areas and all finished slopes, and utility backfill.
- Install slope breakers at spacing intervals required by the RWQCB.

**Nonstormwater Control**
- Prevent raw cement, concrete or concrete washings, asphalt, paint or other coatings, and oils or other petroleum products from entering watercourses or storm drains. If possible, all concrete waste and wash water should be returned with each concrete truck for disposal at the concrete batch plant.
- Locate the entrance and exit pit at each end of the jack-and-bore construction area at least 10 feet from the creek, ditch, or canal.
- Cofferdam materials used to create dams upstream and downstream of diversion should be erosion-resistant and could include materials such as steel plate, sheetpile, sandbags, continuous berms, inflatable or water bladders.
- Keep construction vehicles and equipment clean; do not allow excessive buildup of oil and grease.
- Check construction vehicles and equipment daily at startup for leaks, and repair any leaks immediately.
- To prevent run-on and runoff and to contain spills, do not refuel vehicles and equipment within 100 feet of surface waters.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Responsible Party</th>
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<tbody>
<tr>
<td>1. Schedule construction to minimize ground disturbance during the rainy season.</td>
<td>SFPUC EMB</td>
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<tr>
<td>2. Install erosion and sediment control BMPs prior to the start of any ground-disturbing activities.</td>
<td>CM Team</td>
</tr>
<tr>
<td>3. Provide plans to stabilize soil with vegetation or physical means in the event that rainfall is expected.</td>
<td>SFPUC EMB</td>
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</table>

**BMPs** would include:
- SFPUC or its contractor(s) would submit the required notices, prepare a SWPPP, and implement site-specific BMPs to control and reduce discharges of sediments and pollutants associated with construction stormwater runoff that could discharge to storm drains or creeks.
- BMPs would include, but are not limited to, the following.

**Scheduling**
- Schedule construction to minimize ground disturbance during the rainy season to the extent practicable.
- Install erosion and sediment control BMPs prior to the start of any ground-disturbing activities.
- Provide plans to stabilize soil with vegetation or physical means in the event that rainfall is expected. Stabilize all disturbed soils as soon as possible following the completion of soil-disturbing activities.

**Erosion and Sedimentation**
- Install silt fences or fiber rolls, or implement other suitable measures around the perimeters of the construction zone, staging areas, temporary stockpiles, and drainage features.
- Use filter fabric or other appropriate measures to prevent sediment from entering storm drain inlets.
- When dewatering, regulate discharge rate, use energy dissipation devices, and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.
- Detain and treat water produced by construction site dewatering using sedimentation basins, sediment traps (when water is flowing and there is sediment), or other measures, to ensure that discharges to receiving waters meet applicable water quality objectives.
- Locate stockpiles a minimum of 50 feet away from concentrated flows of stormwater, water bodies, ditches, and inlets. Contain all stockpiles using perimeter controls such as berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale barriers. Cover all stockpiles with visqueen or other impermeable materials.
- Preserve existing vegetation in areas where no construction activity is planned or where construction activity will occur at a later date.
- Stabilize and revegetate disturbed areas as soon as possible after construction by planting or seeding and/or using mulch (e.g., straw or hay, erosion control blankets, hydromulch, or other similar material).
- LUP [linear underground/overhead projects] dischargers shall provide effective soil cover for inactive areas and all finished slopes, and utility backfill.
- Install slope breakers at spacing intervals required by the RWQCB.

**Nonstormwater Control**
- Prevent raw cement, concrete or concrete washings, asphalt, paint or other coatings, and oils or other petroleum products from entering watercourses or storm drains. If possible, all concrete waste and wash water should be returned with each concrete truck for disposal at the concrete batch plant.
- Locate the entrance and exit pit at each end of the jack-and-bore construction area at least 10 feet from the creek, ditch, or canal.
- Cofferdam materials used to create dams upstream and downstream of diversion should be erosion-resistant and could include materials such as steel plate, sheetpile, sandbags, continuous berms, inflatable or water bladders.
- Keep construction vehicles and equipment clean; do not allow excessive buildup of oil and grease.
- Check construction vehicles and equipment daily at startup for leaks, and repair any leaks immediately.
- To prevent run-on and runoff and to contain spills, do not refuel vehicles and equipment within 100 feet of surface waters.
- Conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility.
- Contain fueling areas to prevent run-on and runoff and to contain spills.

**Tracking Controls**
- Grade and stabilize construction site entrances and exits to prevent runoff from the site, and to prevent erosion.
- Employ street sweeping to remove any soil or sediment tracked off paved roads during construction.

**Waste Management and Hazardous Materials Pollution Controls**
- Control the discharge of pollutants in stormwater from vehicles and equipment by using drip pans, spill kits, berms, and secondary containment.
- Remove trash and construction debris from the project area regularly. Provide an adequate number of waste containers with lids or covers to keep rain out of the containers, and to prevent trash and debris from being blown away during high winds.
- Locate sanitary facilities a minimum of 200 feet from creeks.
- Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the stormwater drainage system or receiving water.
- Maintain sanitary facilities regularly.
- Store all hazardous materials in an area protected from rainfall and stormwater run-on, and prevent the offsite discharge of leaks or spills.
- Minimize the potential for contamination of surface water bodies by maintaining spill containment and cleanup equipment onsite, and by properly labeling and disposing of hazardous wastes.
- Inspect dumpsters and other waste and debris containers regularly for leaks, and remove and properly dispose of any hazardous materials and liquid wastes placed in these containers.
- Train construction personnel in proper material delivery, handling, storage, cleanup, and disposal procedures.

**BMP Inspection, Maintenance, and Repair**
- Inspect all BMPs on a regular basis to confirm proper installation and function.
- Inspect all stormwater BMPs daily during storms.
- Inspect sediment basins, sediment traps, and other detention and treatment facilities regularly throughout the construction period.
- Provide sufficient devices and materials (e.g., silt fence, fiber rolls, and erosion blankets) throughout project construction to enable immediate repair or replacement of failed BMPs.
- Inspect all seeded areas regularly for failures, and remediate or repair as soon as feasible.

**Permitting, Monitoring, and Reporting**
- Provide the required documentation for SWPPP inspections, maintenance, and repair requirements.
- Maintain written records of inspections, spills, BMP-related maintenance activities, corrective actions, and visual observations of any offsite discharge of sediment or other pollutants, as required by the RWQCB.
- Monitor water quality to assess the effectiveness of control measures.
- Notify the RWQCB and other agencies as required (e.g., California Department of Fish and Wildlife, California Emergency Management Agency) if the criteria for turbidity, oil/grease, or foam are exceeded, and undertake corrective actions.
- Immediately notify the RWQCB and other agencies as required (e.g., California Department of Fish and Wildlife) of any spill of petroleum products or other organic or earthen materials, and undertake corrective action.
<table>
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<tr>
<th>Post-Construction BMPs</th>
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<tr>
<td>• Revegetate all temporarily disturbed areas as required after construction activities are completed.</td>
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<tr>
<td>• Remove any remaining construction debris and trash from the project area and staging areas upon project completion.</td>
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<tr>
<td>• Phase the removal of temporary BMPs as necessary to ensure stabilization of the site.</td>
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<tr>
<td>• Maintain post-construction site conditions to avoid any unintended drainage channels, erosion, or areas of sedimentation.</td>
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<tr>
<td>• Correct post-construction site conditions as necessary to comply with the SWPPP and any other pertinent RWQCB requirements.</td>
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<tr>
<td>The SWPPP will be provided for review and comment, upon request, to the jurisdictions in which the project is located.</td>
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### Hazards and Hazardous Materials

#### Required for segments 1-4

**M-HZ-2a: Prepare and Implement a Hazardous Material Handling and Disposal Plan**

This mitigation measure applies to all project sites, as well as the common staging area. The contractor shall prepare, submit to SFPUC, and implement a Hazardous Material Handling and Disposal Plan during the construction of the project. The Hazardous Material Handling and Disposal Plan shall include, but would not be limited to, the following information:

<table>
<thead>
<tr>
<th>1) SFPUC EMB</th>
<th>2) CM Team</th>
<th>3) CM Team</th>
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<tbody>
<tr>
<td>M-HZ-2a: Prepare and Implement a Hazardous Material Handling and Disposal Plan</td>
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<tr>
<td>M-HZ-2b: Develop and Implement a Hazardous Material Business Plan</td>
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<tr>
<td>This mitigation measure applies to all project sites, as well as the common staging area. A Hazardous Material Business Plan (HMBP) shall be required when any of the following conditions are met:</td>
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<tr>
<td>• 55 gallons or more of liquid hazardous material, such as fuel products, are present on site at any one project site;</td>
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<td>• 500 pounds of solid hazardous material are present at any one project site;</td>
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<td>• 200 cubic feet of compressed gases including flammable gases for welding are present at any one project site;</td>
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<tr>
<td>• Any amount of radiological materials that are present in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40, or 70.</td>
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<tr>
<td><strong>Required for segments 1-4</strong></td>
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<tr>
<td><strong>M-HZ-2b: Develop and Implement a Hazardous Material Business Plan</strong></td>
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<td>This mitigation measure applies to all project sites, as well as the common staging area. A Hazardous Material Business Plan (HMBP) shall be required when any of the following conditions are met:</td>
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<tr>
<td>• 20 cubic feet of compressed gases including flammable gases for welding are present at any one project site;</td>
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<tr>
<td>• Any amount of radiological materials that are present in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40, or 70.</td>
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<table>
<thead>
<tr>
<th>1) SFPUC EMB</th>
<th>2) CM Team</th>
<th>3) CM Team</th>
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<tbody>
<tr>
<td>• Softwood soils, a qualified professional (e.g., CA licensed civil engineer) shall collect a representative sample and submit it to a California-certified laboratory for analysis of contaminants-of-concern. The analytical results will be used to classify the spoils as hazardous or nonhazardous waste, in accordance with applicable federal and state laws and regulations for disposal and reuse.</td>
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<tr>
<td>• Transport and disposal for hazardous wastes in accordance with applicable federal and state regulations.</td>
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<tr>
<td>• Hazardous waste management documentation and reporting.</td>
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### Hazardous waste characterization protocols, and waste profiling and acceptance criteria. To properly evaluate suspected contaminated soil, a qualified professional will collect a representative sample and submit it to a California-certified laboratory for analysis of contaminants-of-concern. The analytical results will be used to classify the spoils as hazardous or nonhazardous waste, in accordance with applicable federal and state laws and regulations for disposal and reuse. | | |

**Required when any of the following conditions are met:**

- Any amount of radiological materials that are present in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40, or 70.
In the event that the above criteria are applicable to the construction activities, the contractor will prepare, submit to SFPUC, and implement a HMBP for the construction. The HMBP shall be certified by a qualified professional (such as a California-licensed civil engineer) from the contractor, and will include step-by-step procedures for the use, storage, and handling of hazardous materials during construction. The HMBP shall include, but not be limited to, the following elements:

- Descriptions of planned operation for which the HMBP is applicable;
- Procedures for handling, transporting, storing, and disposing all hazardous materials used for the project component activities;
- Location where the hazardous materials are stored;
- Spill prevention protocols;
- Protocols including response equipment to address any accidental spill and releases of hazardous materials to be used during the operation;
- Personnel training requirement to implement the HMBP; and
- Emergency response and spill contingency protocols to address any emergencies and contingencies resulting from hazardous chemicals or waste from the project components.

The HMBP will be prepared in compliance with the requirements of the local environmental department (San Mateo County, SMCEH Division).

### Required for segments 1-4

**M-HZ-2c: Develop and Implement an Health and Safety Plan**

This mitigation measure applies to all project sites, as well as the common staging area. This mitigation measure will be applicable when any of the following conditions is observed:

- Handling of hazardous materials during construction is required;
- Visual signs of hazardous wastes are observed during construction; or
- Potential presence of hazardous wastes is anticipated for the construction activities.

Prior to the start of any construction activities, the contractor shall prepare, submit to SFPUC, and implement a Health and Safety Plan (HASP) to address chemical hazards identified for the construction. The contractor shall not start any construction activities until the contractor receives SFPUC’s notification that all submittal requirements regarding the health and safety plan have been fulfilled in accordance with the project contract bid and specification documentation.

The HASP shall be consistent with all applicable CCR Title 8 or other applicable regulations and SFPUC’s health and safety requirements. The HASP shall establish, in detail, the protocols necessary for the recognition, evaluation, and control of all hazards associated with the construction activities performed by the contractor and its subcontractors. The HASP will include, but not be limited to, the following major elements:

1) SFPUC BEM
2) CM Team
3) CM Team

1) Ensure that contract documents include the requirement that the contractor prepare and implement a Health and Safety Plan.
2) Review the plan to ensure that it complies with requirements.
3) Monitor to ensure that the contractor implements the measures in the contract documents and the plan. Report noncompliance and ensure corrective action.
- Chemicals to be encountered, handled, or used;
- Chemical hazard analyses to identify potential health and safety hazards associated with the chemicals identified for the project;
- Chemical action levels for site worker safety;
- Name and qualifications of all the site health and safety personnel designated for the project;
- Health and safety organization for the project including, but not limited to, lines of authority, responsibility, and communication protocols
- Worker safety monitoring requirement and protocols;
- Confined space entry permit and plan, if applicable;
- Crane critical lift plan, if applicable;
- Fall protection and prevention plan;
- Personal protective equipment;
- Emergency response and contingency planning procedures, including emergency and first aid equipment; and information on the nearest emergency room, including address, phone number, and routing from each of the project sites; and
- Inspection, incident investigation, and reporting requirements, including documentation and record keeping procedures.