Vista Village Drive Trunk Sewer Project
Capital Improvement Program (CIP) #8212

Addendum to the 2017 Comprehensive Sewer Master Plan Supplemental Program Environmental Impact Report for the City of Vista/Buena Sanitation District (SCH #2007091072)

Prepared for:
City of Vista
Engineering Department
200 Civic Center Drive
Vista, CA 92084
Contact: Jalal Ahmadpour, Project Manager
Phone: (760) 643-5403
Email: jahmadpour@cityofvista.com

Prepared by:
Michael Baker International
9755 Clairemont Mesa Boulevard, Suite 100
San Diego, California 92124
Contact: Michael Gonzales
Phone: 858.614.5000
Email: mgonzales@mbakerintl.com

March 2018
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B  Water Pollution Control Plan for West Vista Way Upsize and Realignment
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to the 2017 Comprehensive Sewer Master Plan (CSMP)
Supplemental Program Environmental Impact Report (SPEIR)
for City of Vista/ Buena Sanitation District
2017 Sewer Master Plan Update

Vista Village Drive Trunk Sewer Project (CIP #8212)

INTRODUCTION
This environmental document is the first Addendum to the recently certified SPEIR (State Clearinghouse [SCH] #2007091072) for the City of Vista (City)/Buena Sanitation District (District) CSMP addressing the currently proposed Design-Build Vista Village Drive Trunk Sewer Improvements ("Project"). The 2017 CSMP SPEIR updates and tiers from the 2008 Sewer Master Plan Update Program Environmental Impact Report (2008 PEIR). This document has been prepared in conformance with the provisions of the California Environmental Quality Act (CEQA; California Public Resources Code, Division 13, Environmental Quality) and the State Guidelines for the Implementation of CEQA (CEQA Guidelines; Title 14, California Code of Regulations, Chapter 3). In accordance with CEQA Guidelines §15164, this document tiers from the more recently certified 2017 CSMP SPEIR which updates the 2008 PEIR, and is therefore considered Addendum #1 to the Final 2017 CSMP SPEIR (hereinafter referred to simply as "Addendum"). The City is the Lead Agency (as defined by CEQA) for environmental review of the Project and approval of this Addendum.

PROJECT LOCATION
The Project is located within City limits (Figure 1), with the pipeline alignments in portions of the rights-of-way (ROW) along Vista Village Drive, West Vista Way, Melrose Drive, Hacienda Drive, and under-crossing State Route-78 (SR-78). (Figure 2).

PURPOSE OF THIS ADDENDUM AND BASIS FOR DECISION TO PREPARE ADDENDUM
The previous 2008 PEIR and 2017 CSMP SPEIR referenced above comply with CEQA Guidelines §15168(a), which requires that a programmatic environmental document be prepared for a series of actions that can be characterized as one large program, with each action related as logical parts in the chain of contemplated actions. Typically, such a program can involve individual activities/projects carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways (§15168(a)(4)). PEIRs generally analyze broad environmental effects of the program acknowledging that site-specific environmental reviews may be required for subsequent implementing activities/projects. When a subsequent project within the program is proposed for implementation, it must undergo additional CEQA review (§15168(c)) to confirm whether it would result in any new significant environmental effects or increase the severity of any previously identified environmental effects. CEQA Guidelines §§15162-15164 provide the circumstances under which a subsequent project that has been evaluated in a previously certified PEIR may warrant a subsequent EIR or Mitigated Negative Declaration (MND), a supplement to an EIR or MND, or an Addendum to an EIR or MND, based on the significance or severity of new or increased environmental impacts that could result from project changes, new information, changing circumstances, or changes to mitigation measures or alternatives. If determined that a subsequent project would not have any new or greater significant environmental effects than what was concluded for that project in a PEIR, then a subsequent or supplemental EIR or MND is not required, and the Lead Agency may rely on a CEQA Addendum to approve the subsequent project (§15164(a) and (b)).

For CIP #8212, the currently proposed Project is different from its counterpart as described and evaluated as “Project V2” in the 2008 Sewer Master Plan Update PEIR and as “Project BO-V5” in the 2017 CSMP SPEIR. In accordance with CEQA Guidelines §15164(a), this Addendum describes the differences in the currently proposed Project from the previous Project V2/BO-V5, and analyzes potential environmental
effects of the specific activities associated with Project implementation in light of or consistent with the 2017 CSMP SPEIR Findings for Project BO-V5. The analysis in this Addendum is based on detailed design plans for CIP #8212 involving a series of new and upsized sewer pipelines and bypasses, and some pipeline abandonments, within the above-referenced ROWs, both north and south of SR-78, as well as microtunneling under SR-78 (Figure 3). As stated above, this document incorporates by reference the pertinent 2017 CSMP SPEIR conclusions as relates to Project BO-V5. In this way, the analysis in this Addendum augments/updates the previous analysis of both Project V2 in the 2008 PEIR and Project BO-V5 in the 2017 CSMP SPEIR, as well as the accompanying CEQA Findings for both of those previously-certified documents.

Pursuant to CEQA Guidelines §15164(e), the purpose of this Addendum is to provide detailed analysis and rationale as to why the presence of changed circumstances or new information relative to Project BO-V5, since the 2017 CSMP SPEIR was certified, does not trigger the need for a subsequent EIR or MND, to provide justification for the preparation and use of this Addendum. Pursuant to CEQA Guidelines §15164(d), this Addendum is intended to inform the City’s consideration and action on the Project. City approval of this Addendum requires concurrence by the Community Development Director that the procedures were followed as described in the Engineering Director and Community Development Director memorandum entitled Approach And Process For Tiering From The Vista Sewer Master Plan Update PEIR (Meyerhoff and Merkel 2010). Pursuant to CEQA Guidelines §15164(c), this Addendum need not be circulated for public review.

PROJECT DESCRIPTION

As stated in the previous 2008 PEIR and 2017 CSMP SPEIR, the purpose of this Project is to design and install new sewer conveyance options to relieve capacity from downstream pipelines. The primary capacity-deficient pipeline improvements include: (1) installing a new 24-inch diameter sewer main; (2) converting existing 8-inch and 12-inch diameter sewer mains that are identified as projects V2 and “V3” in the 2008 Sewer Master Plan Update; (3) maintaining existing sewer mains in Melrose Drive under SR-78; (4) microtunneling under SR-78 pursuant to a Cal-Trans encroachment permit; (5) facilitating pipeline installation in the center of roads, to the maximum extent feasible, to allow two-way traffic during construction; and (6) maintaining adequate separation between utilities in accordance with the City and Buena Sanitation District pipeline separation requirements.

In total, the Project involves installation of approximately 3,482 linear feet of new 24-inch diameter polyvinylchloride (PVC) pipe, thirteen new 5-foot diameter manholes, and modification of one 5-foot diameter manhole and one 8-foot diameter manhole. The City has requested “Polycrete” manholes be installed where feasible due to their resistivity to corrosion. The depth of trenching is anticipated to range between 10-30 feet below the ground surface.

A new sewer pipeline alignment would intercept flow from existing Manhole (MH) V08-147 on West Vista Way and continue westerly via open-cut construction in the eastbound inside travel lane until it crosses the Melrose Drive intersection, thereby facilitating the placement of excavation spoils from pipeline trenching in the median area and maintaining two-way traffic with left turn restrictions. Approximately 225 feet east of Melrose Drive, this section would extend along the same horizontal alignment as an existing 8-inch diameter vitrified clay pipe (VCP). At the West Vista Way/Melrose Drive intersection, the new alignment would intercept flows from two existing sewer mains, allowing these mains to be used as additional redundant pipelines under SR-78 within Melrose Drive (see Figure 3), before crossing to the westbound curb lanes past Brass Lane to a trenchless (“underground”) pipeline installation launch pit in City ROW (Figure 4). From this launch pit, the new alignment would be installed by trenchless methods under SR-78 to a receiving pit (i.e., 16 feet wide by 16 feet deep) straddling a disturbed area adjacent to Caltrans ROW and a small roadway section inside Hacienda Drive ROW between two existing manholes (see Figure 4). The existing trunk sewer downstream of this connection accommodates the buildout peak wet weather flows of 15 million gallons per day (mgd).
Regional/Local Vicinity Map

Figure 1

VISTA VILLAGE SEWER DESIGN PROJECT

Source: ArcGIS Online
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PROJECT ALIGNMENTS

Figure 3B

HIGHWAY 78
WEST BOUND

WEST VISTA WAY

PLAN: 24" PVC SEWER MAIN

CITY OF VISTA

STA. 6+00 MATCH LINE SEE SHEET 4

STA. 14+00 MATCH LINE SEE SHEET 6

CONSTRUCTION NOTES:

1. NOTES ON PLAN
2. VISTA VILLAGE SEWER DESIGN PROJECT
   MATCH LINE SEE SHEET 6

MATCH LINE POINTS:

05/02/2018
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Vista Village Sewer Design Project

PROJECT ALIGNMENTS

Figure 3C

PLAN: 24" PVC SEWER MAIN

CONSTRUCTION NOTES:
1. Design Elevation shown in Plate. See Sheet for details.
2. Existing Utilities shown and full depth trenching required. See Sheet 5.
3. All sizes shown are nominal for schedule B 40 PVC pipe. See Schedule Table on Sheet 5.
4. Access cuts are to be provided at all manholes and catch basins as noted.
5. See Sheet 5 for all storm and sanitary sewer connections and inlets.
6. All catch basins are to be provided at all manholes and all storm sewer connections.
7. All manholes and catch basins are to be provided at all storm sewer connections.
8. All manholes and catch basins are to be provided at all storm sewer connections.
9. All manholes and catch basins are to be provided at all storm sewer connections.
10. All manholes and catch basins are to be provided at all storm sewer connections.

CITY OF VISTA

WEST VISTA WAY

MATCH LINE SEE SHEET 5

STA. 14+00

MATCH LINE SEE SHEET 7

STA. 22+00

05/02/2018
Vista Village Sewer Design Project

PROJECT ALIGNMENTS

Figure 3E
Trenchless Pipeline Segment

Figure 4

Legend
- Survey Area (100' Buffer)
- Closed to Traffic During Construction
- Proposed Sewer Alignment
- Two-Way Traffic During Construction

VISTA VILLAGE DR. SEWER DESIGN PROJECT

Trenchless Pipeline Segment

Figure 4
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Traffic flow would be diverted away from the receiving pit work limits during construction to allow ample room for construction staging/soil material laydown (i.e., temporary storage of construction equipment and excavated soil from the receiving pit) in the Hacienda Drive ROW (see the “Receiving Pit” work limits in Figure 4). Following completion of the trenchless construction and pipe connections, the receiving pit would be back-filled, the temporary construction appurtenances dismantled and removed, and the temporary disturbance area re-paved.

Furthermore, four locations would require bypassing:

1. At existing MH V08-147 where existing flows from Vista Village Drive would be intercepted and diverted into the new 24-inch pipeline capable of conveying up to 3.5 mgd. The sequence of construction at this location would involve rebuilding this manhole to intercept flows from an existing 24-inch diameter PVC pipeline, and from an existing 8-inch diameter PVC pipeline.

2. At new MH 11 where a proposed 8-inch diameter PVC pipeline running parallel to the new alignment would intercept three existing sewer laterals. The sequence of construction at this location would involve using a pump to bypass the existing laterals while the proposed 8-inch pipeline is connected to MH 11 with a “Re-liner Drop.”

3. At new MHs 7 and 8 at Melrose Drive/West Vista Way intersection where flows from two existing sewer mains (i.e., 8-inch diameter VCP and 15-inch diameter PVC) would be diverted into the new 24-inch PVC pipeline. The sequence of construction at this location would involve installing new manholes over the existing VCPs and then breaking out the tops of the existing pipelines to allow their flows to join the new alignment, providing a total flow of up to 1.7 mgd.

4. At new MH 1 at Hacienda Drive where the new 24-inch PVC pipeline would discharge into an existing 36-inch diameter ductile iron pipe trunk main that would carry flows of up to 15 mgd. The sequence of construction at this location would involve cutting away the existing pipe (while protecting the liner), casting the base and channel around the 36-inch pipeline, and then trimming away the liner.

The construction sequences described above are designed to allow for gravity bypassing to reduce pressure and spill risk. The contractor will be required to provide redundant and back-up bypass systems to avoid sewer spills. The proposed pipe sizes and anticipated flows are based on the 2008 Sewer Master Plan and 2017 Master Plan Update and City loading factors. The Project is designed according to City Standard drawings: no vertical or horizontal curves are proposed for the trunk main bypasses; and adequate separation between utilities would be maintained. The overall construction timeline is expected to be approximately 10 months. Typical construction equipment expected to be used for the Project are listed in the Initial Study Checklist section (see Table 2). Once construction is complete, no maintenance activities would be required.

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES

In general, the Project is located in the coastal plain of the Peninsular Ranges of Southern California. The Peninsular Ranges is a geologic and geomorphic province that extends from the Imperial Valley to the Pacific Ocean and from the Transverse Ranges to the north and into Baja California to the south. According to the Project Geotechnical Report (Appendix A), the Project alignments are underlain with undocumented fill (down to 10 feet in depth from surface level), alluvium (10-21 feet in depth), and granitic bedrock (below 21 feet in depth). The fill, placed during original roadway construction, is composed of medium dense to dense, silty sand and clayey sand, and stiff sandy clay. Alluvium generally consists of medium dense, sand, silty sand and clayey sand, and firm sandy clay with gravel and occasional cobbles. The granitic bedrock generally consists of silty, medium- to coarse-grained sand that should provide suitable material for trench backfill.
The reach of Buena Vista Creek south of the receiving pit is within the Carlsbad Hydrologic Unit (HU 904.0), Buena Vista Creek Hydrologic Area (HA 904.20), and Vista Hydrologic Subarea (HSA 904.22) of the Regional Water Quality Control Board’s (RWQCB) Water Quality Control Plan for the San Diego Basin, or “San Diego Basin Plan” (RWQCB 2017). The Carlsbad HU is approximately 210 square miles in area extending from the headwaters above Lake Wohlford in the east to the Pacific Ocean in the west, and from Vista and Oceanside in the north to Solana Beach, Escondido, and the community of Rancho Santa Fe to the south. Buena Vista Creek HA originates on the western slopes of the San Marcos Mountains and discharges into the Pacific Ocean via Buena Vista Lagoon, extending approximately 10.6 miles inland from the coast and totaling approximately 14,400 acres in area. This reach of Buena Vista Creek is a channelized perennial feature, with its active banks lined with riprap.

The Project is also located within the southwestern California region of the California Floristic Province, but within an urban setting along a freeway corridor and adjacent Buena Vista Creek. Existing land uses and features surrounding the rest of the Project alignment consist primarily of commercial uses and parking lots in addition to SR-78. Regional and local access to the Project is provided by SR-78.

BACKGROUND

Both the 2008 and 2017 Sewer Master Plan Updates were developed to restore the City’s sewer system to an acceptable physical condition, provide adequate hydraulic capacity to minimize sanitary sewer overflows, and address newly approved State wastewater regulations. The 2008 PEIR and 2017 CSMP SPEIR provide comprehensive analyses of the sewer system and needed improvements through a combination of operations input, maintenance assessments, and hydraulic modeling resulting in several capacity- and condition-related CIP recommendations involving thousands of sewer components, including those related to CIP #8212. Specifically, this Project is included on a priority list for capacity-related projects within the City’s service area.

Project BO-V5 was categorized as a “cross-country” component in Table 3-3 of the 2017 CSMP, or “Category 2”: CIP Capacity and Condition Projects (Cross-Country Environs). However, Footnote 3 on Table 3-3 of the 2017 CSMP SPEIR indicates, “BO-V5 may be excluded by diverting flow to a new 24-inch pipeline, north of SR-78”. Based on detailed design plans now available for the Project, CIP #8212 no longer proposes to upsize approximately 1,707 linear feet of existing sewer mains in Hacienda Drive between La Tortuga Drive and Vista Village Drive from 30 to 36 inches in diameter via traditional open-cut trench and trenchless construction methods. Rather, this Project would now involve installation of a new 24-inch pipeline via open-cut trench north of SR-78 and then a crossing under SR-78 via trenchless construction methods in the vicinity of Brass Lane to connect with the existing alignment on the south side of SR-78 (please refer to the Project Description Section above).

The previous 2017 CSMP SPEIR concluded that Category 2 projects would result in temporary construction-related environmental impacts with respect to the following issues, which would be reduced to less than significant levels with implementation of identified mitigation measures: biological resources, cultural resources, accidental releases of hazardous materials, emergency response plans/emergency access, wildland fires, hydrology/water quality, noise levels, traffic operations, travel design hazards, and conflicts with alternative transportation plans. These significant impacts and associated mitigation measures are summarized in Table ES-1 of the 2017 CSMP SPEIR. Potential biological impacts before mitigation include: (1) substantial adverse effects, either directly or through habitat modifications, on candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by the CDFW or USFWS; (2) substantial direct and/or indirect effects on sensitive natural communities; (3) substantial direct and/or indirect effects on Federally- or State-protected jurisdictional waters and/or wetlands; and/or (4) conflicts with North County MHCP policies protecting sensitive biological resources. Potential cultural impacts before mitigation include: (1) known and unknown buried historical, archaeological and paleontological resources and/or Native American human remains; and/or (2) known Tribal cultural resources. Potential hydrology/water quality impacts before mitigation include: (1) violation
of water quality standards or waste discharge requirements due to sedimentation/siltation effects from untreated storm water runoff discharges into downstream water bodies, including 303(d) listed water bodies or other sensitive water resources, from exposed ground surfaces and erosion during rain events concurrent with earth-moving/construction activities; (2) temporary alteration of existing drainage patterns within a 100-year flood zone resulting in related flood hazards; and/or (3) flood waters from failure of an upstream levee or dam passing through a construction site within a 100-year flood zone exacerbating related flood hazards.

Although the proposed alignment for CIP #8212 differs from that identified for Projects V2/BO-V5 in the previous 2008 PEIR and 2017 CSMP SPEIR, the above-listed environmental impacts and required mitigation measures for the currently proposed Project would be similar to those previously evaluated for Projects V2/BO-V5 because the Project would still involve open-cut trench and trenchless construction methods, as with Projects V2/BO-V5. As such, the Project would not result in any new significant environmental impacts or mitigation measures compared to those evaluated in the previous 2008 PEIR and 2017 CSMP SPEIR for CIP #8212, nor would it result in a greater degree of significance of the impacts evaluated for Projects V2/BO-V5 in the previous 2008 PEIR and 2017 CSMP SPEIR. For these reasons, CEQA review of this Project does not warrant the preparation of another subsequent or a supplemental EIR or MND. Therefore, the proposed Project that is the basis of this Addendum may be approved by the City as a subsequent activity covered within the scope of the 2017 CSMP SPEIR.

The detailed analyses and rationale for these findings is provided in the Environmental Initial Study Section below.
ENVIRONMENTAL INITIAL STUDY
City of Vista California

1. PROJECT NAME: Vista Village Drive Trunk Sewer Project (CIP #8212)
2. LEAD AGENCY: City of Vista
3. CONTACT PERSON & PHONE: Jalal Ahmadpour, PE, (760) 643-5403
4. PROJECT LOCATION: Please refer to the Addendum above.
5. PROJECT DESCRIPTION: Please refer to the Addendum above.
6. PROJECT SETTING & SURROUNDING LAND USES: Please refer to the Addendum above.
7. REQUIRED AGENCY APPROVALS:

It is anticipated that Project implementation would require approval of the discretionary actions and permits in Table 1, which are listed in the approximate order they are expected to be obtained. Because the new alignments would follow City ROW (i.e., West Vista Way, Melrose Drive, and a portion of Hacienda Drive), and cross under Caltrans ROW, no ROW/easement acquisitions are required for the Project.

8. PREVIOUS ENVIRONMENTAL DOCUMENTATION:

This report tiers from and incorporates by reference relevant information from the City’s 2017 CSMP SPEIR (SCH #2007091072 City 2017b). Specifically, this Addendum “incorporates by reference” the impacts and mitigation measures which were evaluated programmatically for Project BO-V5 in the 2017 CSMP SPEIR and that are now also applicable to this Project at a project-specific level. It does so by using the same “CSMP Impact and Mitigation” designators used in the SPEIR. For example, the term “CSMP BIO-1” used herein refers to the Migratory Bird Treaty Act (MBTA) nest avoidance mitigation measure for “CSMP Impact 4.2-1” addressed in the 2017 CSMP SPEIR.

Table 1: Anticipated Project Approvals and Permits

<table>
<thead>
<tr>
<th>Permit/Action Required</th>
<th>Approving Agency</th>
<th>Lead/Trustee/Responsible Agency Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement Plans/Construction Docs</td>
<td>City</td>
<td>Lead Agency</td>
</tr>
<tr>
<td>Encroachment Permits for trenchless pipeline construction under SR-78</td>
<td>California Department of Transportation (Caltrans), Cal OSHA (Mining and Tunneling)</td>
<td>Responsible Agencies</td>
</tr>
<tr>
<td>Waste Discharge Permit for dewatering (i.e., decanting subsurface water into sewer system) due to expected groundwater at receiving pit excavation</td>
<td>Encina Wastewater Authority (EWA), RWQCB</td>
<td>Responsible Agencies</td>
</tr>
<tr>
<td>Statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity*</td>
<td>RWQCB</td>
<td>Responsible Agency</td>
</tr>
</tbody>
</table>

* Water Pollution Control Plan (WPCP) is required since the total area of unpaved ground surfaces to be disturbed would be less than 1 acre.

9. CONSULTATION:

FEDERAL AGENCIES

- **U.S. Army Corps of Engineers (USACE):** since construction and use of the receiving pit would avoid direct impacts to jurisdictional Waters of the U.S. (including wetlands), no Clean Water Act permits are required.
• **U.S. Fish & Wildlife Service (USFWS):** since construction and use of the receiving pit is outside Buena Vista Creek, the Project is not anticipated to impact any Federally-listed species that could potentially occur in this reach of the creek; therefore, compliance with Section 7 of the Federal Endangered Species Act is not expected.

**STATE AGENCIES**

• **CDFW:** since construction and use of the receiving pit would avoid direct impacts to jurisdictional Waters of the State (including wetlands), a Streambed Alteration Agreement under the California Fish and Game Code (CFGC) is not expected.

• **San Diego RWQCB:** since construction and use of the receiving pit would avoid direct impacts to jurisdictional Waters of the U.S. (including wetlands), no Clean Water Act permits are required.

• **California Native American Heritage Commission (NAHC):** The City will contact the NAHC for Tribal Consultation and to request a search of the Sacred Lands File for the Project, and a list of individuals and organizations in the Native American community that may be able to provide information about unrecorded sites in the Project vicinity. Such persons and organizations on this list will be contacted by email, fax, or certified mail to request information on unrecorded cultural resources that may exist in the Project vicinity, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the Project.

**10. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

<table>
<thead>
<tr>
<th>Aesthetics</th>
<th>Greenhouse Gas Emissions</th>
<th>Population/Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Resources</td>
<td>X</td>
<td>Hazards and Hazardous Materials</td>
</tr>
<tr>
<td>Air Quality</td>
<td>X</td>
<td>Hydrology/Water Quality</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>X</td>
<td>Land Use/Planning</td>
</tr>
<tr>
<td>X</td>
<td>Cultural Resources</td>
<td>Mineral Resources</td>
</tr>
<tr>
<td>Geology/Soils</td>
<td>X</td>
<td>Noise</td>
</tr>
</tbody>
</table>

X | Utilities/Service Systems |
X | Mandatory Findings of Significance |

**11. ENVIRONMENTAL CHECKLIST:**

In compliance with the City/District's Environmental Quality Regulations (Municipal Code Chapter 15.04), this section analyzes the potential environmental impacts which may result from the proposed Project. For the evaluation of potential impacts, the questions below are restated from the CEQA Initial Study Checklist, and answers are provided based on the analysis undertaken herein as part of this Initial Study. The analysis considers the Project's short-term impacts (construction-related) and long-term impacts (operational or day-to-day). For each question, there are four possible responses:

• **No Impact:** Project implementation will not have any measurable environmental impact on the environment, and no additional analysis is required.

• **Less than Significant Impact:** Project implementation will have the potential to impact the environment; however, these impacts will be less than the levels or thresholds considered significant.

• **Less than Significant with Mitigation:** Project implementation will have the potential to significantly impact the environment; however, with incorporation of standard construction measures and design features (e.g., changes to the Project's physical or operational characteristics), these impacts will be less than the levels or thresholds considered significant.

• **Potentially Significant Unless Mitigated:** Project implementation will have the potential to significantly impact the environment; however, with incorporation of mitigation measures identified herein, these impacts will be less than the levels or thresholds considered significant.
• **Potentially Significant Unless Mitigated:** Project implementation will have the potential to significantly impact the environment; however, with incorporation of mitigation measures identified herein, these impacts will be less than the levels or thresholds considered significant.

11.1 **AESTHETICS**

<table>
<thead>
<tr>
<th>AESTHETICS</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
</table>

**AESTHETICS.** Would the Project:

a. Have a substantial adverse effect on a scenic vista? ☐ ☐ ☐ ☒

b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic building along a State-designated scenic highway? ☐ ☐ ☐ ☒

c. Substantially degrade the existing visual character or quality of the site and its surroundings? ☐ ☐ ☐ ☒

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ☐ ☐ ☐ ☒

a) *Have a substantial adverse effect on a scenic vista?* The Project alignments are in a heavily urban area surrounded by SR-78 and primarily commercial uses (Figure 5). As such, there are no scenic vistas within the vicinity that would be blocked, obstructed, or otherwise adversely affected by the Project. **No impact** would occur relative to this issue.

b) *Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic building along a State-designated scenic highway?* The section of SR-78 adjacent to the Project is not a designated State scenic highway. **No impact** would occur relative to this issue.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?* The Project alignments are in a heavily urban area surrounded by SR-78 and primarily commercial uses. As such, the Project vicinity does not possess exceptional visual character or quality (Figure 5). Furthermore, potential construction-related aesthetic impacts (e.g., grading activities, construction equipment, warning markers on roadways) would only be short-term as motorists drive by the construction sites. **No impact** would occur relative to this issue.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?* After completion of the pipeline installations, there would be no permanent above-ground Project features that would result in lighting or glare effects. **No impact** would occur relative to this issue.
PROJECT PHOTOS

Figure 5

1: Vista Village Drive / West Vista Way intersection looking east at Project starting point
2: West Vista Way looking west toward Valencia Drive
3: West Vista Way looking west toward Rollins Street
4: West Vista Way looking east from Rollins Street

5: North side of West Vista Way between Rollins Street and Melrose Drive, looking west
6: South side of West Vista Way between Rollins Street and Melrose Drive, looking west
7: South side of West Vista Way between Rollins Street and Melrose Drive, looking west
8: West Vista Way / Melrose Drive intersection, looking east

9: Panoramic view of maintenance access for pipeline spur south side of Buena Vista Creek for Ford Dealership
11.2 AGRICULTURE AND FORESTRY RESOURCES

<table>
<thead>
<tr>
<th>AGRICULTURE AND FORESTRY RESOURCES. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☒ ☒ ☒ ☒</td>
</tr>
<tr>
<td>b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☒ ☒ ☒ ☒</td>
</tr>
<tr>
<td>c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code [PRC] Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
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<tr>
<td>d. Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
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</tr>
<tr>
<td>e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☒</td>
<td>☒ ☒ ☒ ☒</td>
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</table>

a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance per the FMMP of the California Resources Agency? The Project is in an urbanized area, and is designated as Other Land according to the California Department of Conservation (CDC) Farmland maps (i.e., non-agricultural land in and surrounded by urban development greater than 40 acres). As there are no FMMP-designated farmlands (CDC 2014), the Project would not convert any such lands to non-agricultural uses. No impact would occur relative to this issue.

b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract? There are no lands zoned for agricultural use, nor are there any lands under a Williamson Act contract, located on or in proximity to the Project alignments. No impact would occur relative to this issue.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? There are no lands zoned for forest or timber production located on or in proximity to the Project alignments. No impact would occur relative to this issue.

d) Result in the loss of forest land or conversion of forest land to non-forest use? There are no designated forest lands located on or in proximity to the Project alignments; therefore, the Project would not convert any such lands to non-forest uses. No impact would occur relative to this issue.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use, or conversion of forest land to non-forest use? Refer to #11.2.a-d.
11.3 AIR QUALITY

<table>
<thead>
<tr>
<th>AIR QUALITY</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less than Significant</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>Would the Project:</td>
<td>☐ ☐ ☒</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>a. Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐ ☐ ☒</td>
<td>☒</td>
<td>☒</td>
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</tr>
<tr>
<td>b. Violate an air quality standard or contribute to an existing or projected air quality violation?</td>
<td>☐ ☐ ☒</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
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<tr>
<td>c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under the applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
<td>☐ ☐ ☒</td>
<td>☒</td>
<td>☒</td>
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</tr>
<tr>
<td>d.Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☐ ☐ ☒</td>
<td>☒</td>
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<tr>
<td>e. Create objectionable odors affecting a substantial number of people?</td>
<td>☐ ☐ ☒</td>
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</table>

a) Conflict with or obstruct implementation of the applicable air quality plan? The Project is in the San Diego Air Basin (SDAB) and is regulated by the San Diego Air Pollution Control District (SDAPCD). The SDAPCD monitors air pollution, implementation of the County of San Diego’s portion of the State Implementation Plan (SIP), and application of the SDAPCD Rules and Regulations. The SIP contains strategies and tactics to be applied in order to attain and maintain acceptable air quality in the County called the Regional Air Quality Strategy (RAQS). The RAQS is the applicable air quality plan for the proposed Project.

Consistency with the RAQS is determined by whether a project would: (1) exceed assumptions contained in the RAQS; and (2) increase the frequency or severity of violations of existing air quality standards, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as contained in the RAQS.

The air quality emission projections and emission reduction strategies in the RAQS are based on information from the California Air Resources Board (CARB) and San Diego Association of Governments (SANDAG) regarding mobile and area source emissions, as well as growth in the County (including the City). The CARB mobile source emissions projections and SANDAG growth projections are derived from population and vehicle use trends, and land use plans developed by the cities and County as part of their general plans. A project that proposes development consistent with the growth anticipated in a general plan would be consistent with the RAQS.

The proposed Project would not result in any changes to the City’s General Plan land use designations, and thus, would be consistent with the growth anticipated in the General Plan. In addition, as analyzed in the 2017 CSMP SPEIR Section 4.1-2, construction emissions are not expected to exceed the SDAPCD thresholds or obstruct implementation of the RAQS for the SDAB. No impact would occur relative to this issue.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? The SDAPCD regulates daily significance thresholds for the following criteria air pollutants: reactive organic gases (ROG), nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO2), and fugitive dust consisting of course particulate matter up to 10 microns (PM10) and fine particulate matter up to 2.5 microns (PM2.5). Project exceedance of these thresholds means that a significant air quality
impact may occur resulting in violations of air quality standards and/or substantial contributions to existing/projected air quality violations. Short-term criteria air pollutant emissions may occur during pipeline trenching and construction operations as follows:

- Fugitive dust particles from earth-moving activities and re-suspension of particles from the ground or road surfaces by wind and construction activities
- Exhaust emissions (ROG, NOx, CO, SO2) from construction equipment (e.g., excavators, tractors, loaders, backhoes); from trucks transporting materials, machinery and supplies to and from the construction sites; and from motor vehicles of the construction crews

Fugitive dust particles consist of inert silicates, rather than the complex organic particulates released from combustion sources. Dust generated by such activities is usually more of a local nuisance than a serious health problem. In addition to standard dust control practices required by SDAPCD rules for all projects (subject to inspection and verification by SDAPCD), the City enforces the following Best Management Practices (BMPs) as conditions of Grading Permit issuance to contain and reduce construction-related fugitive dust emissions:

- Water graded areas twice daily at a minimum
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce export soil blow-off during hauling
- Stabilize graded areas (e.g., hydrosanding, landscaping) as quickly as possible following Project completion

Exhaust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. The use of diesel-powered construction equipment would be temporary and episodic and would occur over several locations isolated from one another. Furthermore, diesel exhaust disperses rapidly over short distances.

The 2008 PEIR analyzed a worst-case scenario of air pollution emissions from implementation of the CSMP, and the conclusions from that analysis were carried over into the 2017 CSMP SPEIR, as only the existing air quality conditions in the SDAB were updated. As such, Project construction is not expected to exceed any of the SDAPCD daily significance thresholds for criteria air pollutants, violate any air quality standard, or contribute substantially to an air quality violation. Therefore, the potential short-term air quality impacts associated with Project construction would be less than significant (consistent with the 2017 CSMP SPEIR findings).

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? The County of San Diego is designated as non-attainment area for the Federal Ozone (O3) standard, and is also a non-attainment area for the State standards for O3, PM10, and PM2.5. As such, significant cumulative air quality impacts in the SDAB exist for the O3 precursors Volatile Organic Compounds (VOCs) and NOx, as well as PM10, and PM2.5. Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructing projects, or if a project’s VOCs, NOx, PM10, and/or PM2.5 emissions are in exceedence of SDAPCD thresholds. However, with implementation of the dust control BMPs listed above, Project-related construction activities would not result in a cumulatively considerable net increase of these criteria air pollutants for which the SDAB is in non-attainment. Therefore, the potential short-term cumulative air quality impacts associated with Project construction would be less than significant (consistent with the 2017 CSMP SPEIR findings).
d) *Expose sensitive receptors to substantial pollutant concentrations?* Sensitive receptors are residences, schools, hospitals, and daycare centers that contain people which are more susceptible to the effects of air pollution than the general population, such as children, the elderly, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. Sensitive receptors within 500 feet of the proposed Project include a preschool located at 145 North Melrose Drive and a kindergarten-eighth grade private school located at 525 West Vista Way. Project construction would result in the generation of toxic air contaminants (TACs) from the use of diesel-powered equipment, such as PM$_{2.5}$ emissions. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. However, for the reasons given in #11.3.b, the potential impacts associated with exposure of sensitive receptors to TACs during the short-term Project construction period would be less than significant (consistent with the 2017 CSMP SPEIR findings).

e) *Create objectionable odors affecting a substantial number of people?* Individual responses to odors are highly variable and can result in a variety of psychological effects (i.e., irritation, anger, or anxiety) to physiological (i.e., circulatory and respiratory effects, nausea, vomiting, and headache). Generally, the impact of an odor results from a variety of interacting factors such as frequency, duration, offensiveness, location, and sensory perception. Frequency is a measure of how often an individual is exposed to an odor in the ambient environment. Intensity refers to an individual’s or group’s perception of the odor strength or concentration. Duration refers to the elapsed time over which an odor is experienced. Offensiveness is the subjective rating of the pleasantness or unpleasantness of an odor. Location refers to where a potentially affected person lives, works, or visits. Sensory perception is the sensitivity of the impacted receptor; however, the ability to detect odors varies considerably among the population and is inherently subjective in nature.

Some exhaust emissions from diesel-powered construction equipment may generate objectionable odors. However, for the reasons given in #11.3.b., Project construction is not expected to expose a substantial number of people to such odors, and the associated potential short-term impacts would be less than significant (consistent with the 2017 CSMP SPEIR findings).

In addition, although odors periodically emanate from sewer manholes, in general, the Project is not expected to increase the frequency and severity of such odors because the Project would result in more stable sewer flows (compared to existing flows) due to the larger diameter pipes, which tend to ameliorate the generation of odors that typically occurs with slower sewer flows and frequent in-pipe stoppages (during low-flow conditions) more often associated with the current deficient pipe sizes.
11.4 BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>BIOLOGICAL RESOURCES. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
</table>

a. Have a substantial adverse effect, either directly or through habitat modifications, on any listed or special status species as identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community as identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy/ordinance?

f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or State HCP?

a) Have a substantial adverse effect, either directly or through habitat modifications, on any listed or special status species as identified in local or regional plans, policies, or regulations, or by CDFW or USFWS? Since the receiving pit would occur in the Hacienda Drive ROW, outside Buena Vista Creek, direct impacts would be avoided to any special status plant or animal species that may potentially occur in this reach of the creek. In addition, because construction operations at the receiving pit would be over 100 feet away from the creek, indirect construction-related impacts (e.g., noise, human disturbances) would be avoided to any special status plant or animal species that may potentially occur in this reach of the creek. The nearest record of the potentially occurring Federally- and State-endangered least Bell’s vireo (Vireo bellii ssp. pusillus) is approximately 3.75 miles to the north. In addition, the Federally-threatened California gnatcatcher (Polioptila californica ssp. californica) has been reported approximately 2,000 feet to the west but is not expected to occur due to lack of suitable habitat (i.e., no coastal sage scrub). Likewise, no Project impacts are anticipated to occur to other special status (including MHPA-Covered and MHPA-NE) plant and wildlife species due to lack of suitable habitat.

Existing trees near the receiving pit may be used by breeding birds for perching, nesting and breeding, and are therefore considered a noise-sensitive receptor. Common passerine birds and raptors are protected by both the MBTA and CFGC Sections 3500 et seq. and 3800 et seq. Such birds may be affected by short-term construction-related noise levels which can result in the disruption of nesting and reproductive activities. As such, construction activities during the nesting season for breeding birds protected by the MBTA and CFG (typically January through mid-September, but varies annually based on seasonal weather conditions) could result in a temporary indirect noise impact on these species.
The regulatory agencies typically recognize 60 dB $L_{eq}$ as the threshold for determining a significant noise impact to breeding birds. Referenced as CSMP Impact 4.2-1 in the 2017 CSMP SPEIR, there is a potential for Project construction to result in substantial temporary or periodic increases in noise above ambient levels and exposure of breeding birds to such noise levels in excess of the 60 dB $L_{eq}$ threshold; however, such potential impacts would be reduced to less than significant with incorporation of mitigation measure CSMP BIO-1 (in the CSMP 2017 SPEIR), as paraphrased below:

**CSMP BIO-1:** If construction activities are scheduled to occur during the nesting season (typically January through mid-September), then the following measures shall be implemented:

(A) Within three (3) days prior to commencement of construction activities, a qualified biologist shall perform a preconstruction survey within 500 feet from the proposed work limits.

(B) If active avian nest(s) are discovered within or 500 feet from the work limits, a non-disturbance buffer shall be delineated around the active nest(s) measuring 300 feet for least Bell’s vireos and passerines and 500 feet for raptors. The biologist shall monitor the nest(s) weekly after commencement of construction to ensure that measured noise levels remain below 60 dB $L_{eq}$ at the nest site and that nesting behavior is not adversely affected by construction activities.

(C) If the biologist determines that measured noise levels equal or exceed 60 dB $L_{eq}$ at the nest site and/or that nesting behavior is adversely affected by construction activities, then a noise mitigation program shall be implemented in consultation with USFWS and CDFW, to allow construction to proceed. The biologist shall again monitor the nest(s) weekly with the agency-approved noise mitigation measures in place to ensure that measured noise levels remain below 60 dB $L_{eq}$ at the nest site and that nesting behavior is not adversely affected by construction activities. Once the young have fledged and left the nest(s), then construction activities may proceed within 300 feet (500 feet for raptor species) of the fledged nest(s).

(D) Raptor nests are protected under Section 3503.5 of the California Fish and Game Code (California Law 2011) which makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes; or to take, possess, or destroy the nests or eggs of any such birds. Consultation with CDFW shall be required prior to the removal of any raptor nest(s) observed during the preconstruction clearance surveys.

(E) The results of all biological monitoring shall be submitted to the City within 30 days of completion (and made available to the wildlife agencies, upon request).

b) **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?** As stated in #11.4.a., the receiving pit would occur in the Hacienda Drive ROW, outside the Buena Vista Creek riparian habitat. Therefore, the Project would not any sensitive vegetation community. **No impact** would occur relative to this issue.

c) **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?** As stated in #11.4.a., the receiving pit would occur in the Hacienda Drive ROW, outside Buena Vista Creek wetlands or non-wetland Waters of the U.S. (WoUS) under USACE jurisdiction, or RWQCB wetlands jurisdiction (which coincides with USACE wetlands jurisdiction), or “Waters of the State” under CDFW jurisdiction. Since the Project would not affect Federal jurisdictional waters (i.e., non-wetland WoUS or wetlands) or State jurisdictional waters
(i.e., CDFW perennial/intermittent/ephemeral rivers, streams, and lakes; riparian habitat/wetlands; and non-vegetated streambed). **No impact** would occur relative to this issue.

d) **Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?** Riparian systems such as Buena Vista Creek are typically used as wildlife corridors. However, since the receiving pit would occur in the Hacienda Drive ROW, outside Buena Vista Creek, construction activities at this location would not result in direct or indirect impacts to diurnal wildlife movements, nor interfere with the movement of any native resident or migratory fish or wildlife species, that may occur along the creek. **No impact** would occur relative to this issue.

e) **Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy/ordinance?** There are no City-adopted tree preservation policies or ordinances. Further, the Project would comply with the following applicable (Project-level) goals and policies of the City General Plan Resource Conservation and Sustainability (RCS) Element:

**RCS Goal 4 (Water Resources):** Preserve, protect, and enhance water quality in watersheds to which the City contributes stormwater and urban runoff. **Project Consistency:** Per the required WPCP, BMPs would be implemented around the receiving pit work limits to reduce indirect water quality impacts within the City’s storm water conveyance system and Buena Vista Creek associated with potential sedimentation/siltation runoff effects from soil stockpiles at this location.

**RCS Policy 4.5:** Protect and restore appropriate beneficial uses for prioritized water bodies impacted by stormwater and urban runoff. **Project Consistency:** Per the required WPCP, BMPs would be implemented around the receiving pit work limits to reduce indirect water quality impacts within the City’s storm water conveyance system and Buena Vista Creek associated with potential sedimentation/siltation runoff effects from soil stockpiles at this location.

**RCS Goal 5 (Biological Resources):** Preserve and protect, to the extent practicable, the range of natural biological communities and species native to the City and region; and conserve viable populations of endangered, threatened, and key sensitive species and their habitats. **Project Consistency:** The receiving pit would avoid Buena Vista Creek; and perimeter construction fencing would be erected around the work limits to discourage unauthorized access and accidental intrusions into the nearby creek by construction workers/equipment. No Project impacts are anticipated to occur to special status (including MHPA-Covered and MHPA-NE) plant and wildlife species as evaluated in #11.4.a.

**RCS Policy 5.1:** For work proposed in areas containing sensitive vegetation and wildlife communities, continue to consult with wildlife agencies (e.g., CDFW) early in the review process regarding special status plant and wildlife species; conduct biological assessments, as appropriate; and develop and implement Project-specific measures to mitigate impacts on listed species. **Project Consistency:** As stated above, no impacts to Federal or State jurisdictional areas, nor any associated USACE/RWQCB or CDFW permitting actions are anticipated. No Project impacts are anticipated to occur to special status (including MHPA-Covered and MHPA-NE) plant and wildlife species.

**RCS Policy 5.2:** In areas adjacent to sensitive vegetation and/or wildlife communities, continue to require activities to be designed and managed to ensure minimal impacts to those resources. Examples include, but are not limited to the following:

a. **Provide buffers or barriers between the work and biological resources. Project Consistency:** Perimeter construction fencing would be erected around the work limits of the receiving pit to discourage unauthorized access and accidental intrusions into the nearby creek by construction workers/equipment.
b. Prohibit work areas from draining into sensitive resources. **Project Consistency:** Per the required WPCP, BMPs would be implemented around the receiving pit work limits to reduce indirect water quality impacts within the City’s storm water conveyance system and Buena Vista Creek associated with potential sedimentation/siltation runoff effects from soil stockpiles at this location.

c. Avoid degradation of habitats from erosion and sedimentation. **Project Consistency:** Per the required WPCP, BMPs would be implemented around the receiving pit work limits to reduce indirect water quality impacts within the City’s storm water conveyance system and Buena Vista Creek associated with potential sedimentation/siltation runoff effects from soil stockpiles at this location.

d. Ensure that sensitive species are protected from night lighting. **Project Consistency:** No nighttime work is proposed at the receiving pit to prevent use of artificial temporary lighting that could otherwise increase predation of nocturnal wildlife that may use the Buena Vista Creek riparian corridor.

e. Mitigate noise impacts from activities on nearby sensitive species through noise reduction measures and/or restriction of hours during the breeding season of sensitive species. **Project Consistency:** Implementation of mitigation measure CSMP BIO-1 would avoid short-term construction-related noise levels associated with use of the receiving pit that may adversely affect potential avian nesting activities.

**RCS Policy 5.3:** Preserve the integrity of riparian habitat areas, creek corridors, and other drainages that support biological resources and contribute to the overall health of the watershed areas through the preservation and restoration of native plants and the removal of invasive, exotic, and nonnative species. **Project Consistency:** The receiving pit would avoid Buena Vista Creek; and perimeter construction fencing would be erected around the work limits to discourage unauthorized access and accidental intrusions into the nearby creek by construction workers/equipment. No Project impacts are anticipated to occur to special status (including MHPA-Covered and MHPA-NE) plant and wildlife species as evaluated in #11.4.a.

**RCS Policy 5.7:** To the extent practicable, and as determined by the City, avoid sensitive habitats and species during the planning, design, and construction of new public infrastructure (such as sewers, storm drain and flood control facilities, utilities, and roads), unless alternative locations are not practical. **Project Consistency:** The receiving pit would avoid Buena Vista Creek; and perimeter construction fencing would be erected around the work limits to discourage unauthorized access and accidental intrusions into the nearby creek by construction workers/equipment. No Project impacts are anticipated to occur to special status (including MHPA-Covered and MHPA-NE) plant and wildlife species as evaluated in #11.4.a.

**RCS Goal 6 (Biological Resources):** Implement the provisions of the regional MHCP. **Project Consistency:** Please refer to #11.4.f.

**RCS Goals 7-8 (Open Space):** Conserve, enhance, and restore, to the extent practicable, open space areas for the protection of wildlife habitats and plant and animal species. **Project Consistency:** The receiving pit would avoid the Buena Vista Creek riparian corridor which is located within the MHPA open space preserve system.

**RCS Policy 8.3:** Preserve sensitive lands, including permanent bodies of water, floodways, and slopes over 35 percent, as open space for resource conservation and public safety purposes. **Project Consistency:** The receiving pit would avoid the Buena Vista Creek riparian corridor which is located within the MHPA open space preserve system.
RCS Policy 8.4: Preserve and increase the amount of open space/forest land within the City to help mitigate GHG emissions. Project Consistency: The receiving pit would avoid the Buena Vista Creek riparian corridor which is located within the MHPA open space preserve system.

RCS Policy 8.5: Preserve and maintain natural areas in urban neighborhoods, such as creeks. Project Consistency: The receiving pit would avoid the Buena Vista Creek riparian corridor which is located within the MHPA open space preserve system.

Therefore, potential Project conflicts with applicable local policies or ordinances protecting biological resources would be less than significant with mitigation incorporated (CSMP BIO-1).

f) Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State HCP? In addition to mitigation measure CSMP BIO-1 (in the 2017 CSMP SPEIR), implementation of mitigation measure MM BIO-1, as described below, would ensure Project compliance with applicable provisions in Section 6.0 (Guidelines for Compatible Land Uses, Preserve Management, and Monitoring) of the MHCP (referenced as CSMP Impact 4.2-6 in the 2017 CSMP SPEIR):

   MM BIO-1: Project construction plans, specifications and documents shall specify the following mitigation measures:
   
   (A) Avoid streambed alteration of Buena Vista Creek.
   
   (B) Place perimeter construction fencing around the receiving pit work limits to discourage unauthorized access and accidental intrusions into the creek by construction workers/ equipment.
   
   (C) Implement BMPs around the receiving pit work limits (per the required WPCP) to reduce indirect water quality impacts within the City’s storm drain system and to riparian/wetland vegetation and aquatic resources in Buena Vista Creek due to potential sedimentation/siltation runoff effects from soil stockpiles at this location.
   
   (D) Schedule work at the receiving pit to avoid forecasted rain events to avoid the potential for excessive sedimentation/siltation runoff effects from construction activities at this location.
   
   (E) Designation of no-fueling zones in the receiving pit staging area in Hacienda Drive a minimum distance of 33 feet from the nearby creek
   
   (F) Implementation of runoff control BMPs at the receiving pit staging area in Hacienda Drive, according to the Erosion and Sediment Control Plan in the Project’s WPCP
Vista Village Drive Trunk Sewer Project, CIP 8212

Addendum to the 2017 CSMP SPEIR, SCH#2007091072

City of Vista, California

(Appendix B) and mitigation measure CSMP HWQ-1 (in the 2017 CSMP SPEIR), to reduce indirect water quality impacts associated with:

- Sedimentation/siltation from soil stockpiles;
- Storage of construction materials/equipment/chemicals; and
- Hazardous materials spills/ hydrocarbon leaks.

(G) Implementation of mitigation measure CSMP BIO-1 (in the 2017 CSMP SPEIR) would avoid short-term construction-related noise levels associated with use of the receiving pit that may adversely affect potential nearby avian nesting activities.

(H) Avoid nighttime work at the receiving pit to prevent use of artificial temporary lighting that could otherwise increase predation of nocturnal wildlife that may use the nearby Buena Vista Creek riparian corridor.

Therefore, potential Project conflicts with applicable provisions of the MHCP would be less than significant with implementation of the Project’s WPCP (Appendix B) and mitigation incorporated (CSMP BIO-1, MM BIO-1, and CSMP HWQ-1).

11.5 CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>CULTURAL RESOURCES. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of CEQA?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d. Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e. Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of CEQA? The Project is not expected to disturb any buried historical resources because trenching for all pipeline alignments, as well as excavation for the proposed trenchless launch/receiving pits, would occur in existing roadway or freeway ROW underlain by a maximum of 10 feet of artificial fill material, including the disturbed area at the receiving pit within Caltrans ROW, for which there is no sensitivity for such cultural resources. No impact would occur relative to this issue.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA? The Project is not expected to disturb any buried archaeological resources because trenching for all pipeline alignments, as well as excavation for the proposed trenchless launch/receiving pits, would occur in existing roadway or freeway ROW underlain by a maximum of 10 feet of artificial fill material, including the disturbed area at the receiving pit within Caltrans ROW, for which there is no sensitivity for such cultural resources. No impact would occur relative to this issue.
d) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

The Project is not expected to disturb any paleontological resources because trenching for all all pipeline alignments, as well as excavation for the proposed trenchless launch/receiving pits, would occur within existing roadway or freeway ROW underlain by a maximum of 10 feet of artificial fill material, including the disturbed area at the receiving pit within Caltrans ROW, for which there is no sensitivity for such resources. **No impact** would occur relative to this issue.

d) **Disturb any human remains, including those interred outside of formal cemeteries?** The Project is not expected to disturb any buried Native American human remains because trenching for all pipeline alignments, as well as excavation for the proposed trenchless launch/receiving pits, would occur in existing roadway or freeway ROW underlain by a maximum of 10 feet of artificial fill material, including the disturbed area at the receiving pit within Caltrans ROW, for which there is no sensitivity for such cultural resources. **No impact** would occur relative to this issue.

e) **Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?** Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) establishes a formal consultation process for California Native American tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (California Public Resources Code, Section 21084.2). California Public Resources Code, Section 21074 defines tribal cultural resources as follows:

- Sites, features, places, sacred places, and objects with cultural value to descendant communities or cultural landscapes defined in size and scope that are:
  - Included in or eligible for listing in the California Register of Historical Resources (CRHR); or
  - Included in a local register of historical resources.

- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the California Public Resources Code, Section 5024.1.

Sacred places can include Native American sanctified cemeteries, places of worship, religious or ceremonial sites, and sacred shrines. In addition, both unique and non-unique archaeological resources, as defined in California Public Resources Code, Section 21083.2, can be tribal cultural resources if they meet the criteria detailed above. The lead agency relies upon substantial evidence to make the determination that a resource qualifies as a tribal cultural resource when it is not already listed in the CRHR or a local register.

AB 52 defines a “California Native American Tribe” (Tribe) as a Native American tribe located in California that is on the contact list maintained by the NAHC (California Public Resources Code, Section 21073). Under AB 52, formal consultation with Tribes is required prior to determining the level of environmental document if a Tribe has requested to be informed by the lead agency of proposed projects and if the Tribe, upon receiving notice of the project, accepts the opportunity to consult within 30 days of receipt of the notice. AB 52 also requires that consultation, if initiated, address project alternatives and mitigation measures for significant effects, if specifically requested by the Tribe.

AB 52 states that consultation is considered concluded when either the parties agree to measures to mitigate or avoid a significant effect on tribal cultural resources, or when either the Tribe or the agency concludes that mutual agreement cannot be reached after making a reasonable, good-faith effort. Under AB 52, any mitigation measures recommended by the agency or agreed upon with the Tribe may be included in the final environmental document and in the adopted mitigation monitoring program if they were determined to avoid or lessen a significant impact on a tribal cultural resource. If the recommended measures are not included in the final environmental document, then the lead agency
must consider the four mitigation methods described in California Public Resources Code, Section 21084.3(e). Any information submitted by a Tribe during the consultation process is considered confidential and is not subject to public review or disclosure.

There is no indication that the Project alignment was used by Native Americans for religious, ritual, or other special activities. No traditional cultural properties that served religious or other community practices are known to exist within the Project vicinity. No information has been obtained through the Native American consultation process that would indicate the presence of any significant tribal resource. No impact would occur relative to this issue.

11.6 GEOLOGY AND SOILS

<table>
<thead>
<tr>
<th>GEOLOGY AND SOILS: Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist, or based on other substantial evidence of a known fault (refer to California Department of Mines and Geology Publication 42)?; or</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) strong seismic ground shaking?; or</td>
<td></td>
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<tr>
<td>(iii) seismic-related ground failure, including liquefaction?; or</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) landslides?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Result in substantial soil erosion or loss of topsoil?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (UBC), creating substantial risks to life or property?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Southern California is a seismically active region subject to seismic events. Active faults are those that are considered likely to undergo renewed movement within a period of concern to humans, as they have had surface displacement within Holocene times (about the last 11,000 years), according to the California Geological Survey. These include faults that are currently slipping, those that display earthquake activity, and those that have historical surface rupture.
Potentially active faults are those believed to have generated earthquakes during the Quaternary period, but prior to Holocene times. There are several regional active and potentially active fault zones that could affect the Project alignments including Newport-Ingleswood, Rose Canyon, Elsinore (Temecula, Julian, Glen Ivy), Coronado Bank, and San Joaquin Hills. The nearest known active fault is the Newport-Ingleswood and Rose Canyon fault system, located approximately 10 miles to the west. This system has the potential to be a source of strong ground motion.

According to Appendix A, the Project alignments are not underlain by active, potentially active, or inactive faults, nor are they within a State of California Earthquake Fault Zone, but because the Project is within the seismically active southern California region, as described above, it could be subjected to potential ground surface rupture, thus potentially exposing pipelines to seismic hazards; however, Project construction is required to comply with soil stabilization/compaction requirements and standard engineering practices per seismic standards (i.e., in accordance with the 2016 California Building Code [CBC] guidelines or guidelines currently adopted by the City). With implementation of these standard requirements according to Appendix A, potential exposure of people or buried infrastructure (pipelines) to substantial adverse effects, including the risk of loss, injury, or death, from seismically-induced ground rupture would be less than significant.

ii) Strong seismic ground shaking? According to Appendix A, the Project alignments are not underlain by active, potentially active, or inactive faults, nor are they within a State of California Earthquake Fault Zone, but because the Project is within the seismically active southern California region, as described above, it could be subjected to potential strong groundshaking, thus potentially exposing pipelines to seismic hazards; however, Project construction is required to comply with soil stabilization/compaction requirements and standard engineering practices per seismic standards (i.e., in accordance with the 2016 California Building Code [CBC] guidelines or guidelines currently adopted by the City). With implementation of these standard requirements according to Appendix A, potential exposure of people or buried infrastructure (pipelines) to substantial adverse effects, including the risk of loss, injury, or death, from strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction? Liquefaction is the loss of strength of cohesionless soils below groundwater surface that generally occurs as a “quicksand” type of ground failure caused by strong groundshaking. Primary factors influencing liquefaction include soil types, relative density of any sandy soils, groundwater levels, and the intensity and duration of groundshaking. However, the soil types underlying the Project alignments are not susceptible to liquefaction hazards due to the presence of shallow dense formational materials and the lack of permanent, near-surface groundwater (i.e., perched groundwater was encountered in the Project’s Geotechnical Investigation [Appendix A] at an approximate depth of 12 feet). With implementation of these standard requirements according to Appendix A, potential exposure of people or buried infrastructure (pipelines) to substantial adverse effects, including the risk of loss, injury, or death, from seismically-induced liquefaction, unstable soils or geologic units, and expansive soils would be less than significant.

iv) Landslides? Landslides are mass movements of the ground that include rock falls, relatively shallow slumping and sliding of soil, and deeper rotational or transitional movement of soil or rock; however, the Project alignments are not located within known or highly suspected landslide areas. Therefore, no impact would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

b) Result in substantial soil erosion or loss of topsoil? Pipeline trenching/excavation and soil stockpiling would temporarily increase the potential for displaced soils to be subject to wind and/or water erosion. However, implementation of the Erosion and Sediment Control Plan as part of the WPCP (Appendix B) would reduce offsite sedimentation.
Therefore, the potential for soil erosion from soil stockpiles at in-street staging areas would be less than significant (consistent with the 2017 CSMP SPEIR findings) with implementation of the Project’s WPCP (Appendix B) and mitigation incorporated (MM-BIO-2 and CSMP-HWQ-1).

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse? The potential for seismic-induced settlement or lateral spreading along the Project alignments is very low due to underlying geological conditions (e.g., relatively thick alluvium) that would not make the proposed Project susceptible to such hazards. Any displaced surface material would be recompacted in pipeline trench backfills according to standard soil stabilization/compaction requirements and engineering practices (i.e., in accordance with the 2016 CBC guidelines or guidelines currently adopted by the City). In addition, to reduce settlement potential in the trenches, and avoid damaging adjacent pipelines, Appendix A recommends the bedding material supporting the overlying pipe be stabilized locally using cement grout from the ground surface. With implementation of these standard requirements according to Appendix A, potential exposure of people or buried infrastructure (pipelines) to substantial adverse effects, including the risk of loss, injury, or death, from unstable soils or geologic units would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the UBC, creating substantial risks to life or property? Expansive soils are characterized by their ability to undergo significant volume changes (shrinking or swelling) due to variations in moisture content, the magnitude of which is related to both clay content and plasticity. Such volume changes can be damaging to infrastructure. However, the potential for expansive soil conditions along the Project alignments is considered to be low due because the underlying soil types are not susceptible to such hazards (i.e., they possess a “very low” to “medium” expansion potential [or Expansion Index of 50 or less] as defined in Section 1803.5.3 of the 2016 CBC guidelines), according to Appendix A. With implementation of these standard requirements according to Appendix A, potential exposure of people or buried infrastructure (pipelines) to substantial adverse effects, including the risk of loss, injury, or death, from expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? The Project does not propose the use of septic tanks or alternative wastewater disposal systems; therefore, no impact would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

### 11.7 GREENHOUSE GAS EMISSIONS

<table>
<thead>
<tr>
<th>GREENHOUSE GAS EMISSIONS. Would the Project:</th>
<th>Potentially Significant unless Mitigated</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
</tr>
</tbody>
</table>

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

According to the California Energy Commission (CEC), California is a substantial contributor of global greenhouse gases (GHGs), emitting over 400 million tons of CO₂ per year (CEC 2014). Climate studies indicate that California is likely to see an increase in average temperatures of three to four degrees
Fahrenheit (ºF) over the next century. Methane is also an important GHG that contributes to global climate change. GHGs are global in their effect, which is to increase the earth’s ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

The impact of human activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO₂, methane (CH₄), and nitrous oxide (N₂O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO₂ concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from approximately 1750 to the present, global CO₂ concentrations increased from a pre-industrialization period concentration of 280 ppm to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range.

**Regulations and Significance Criteria**

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm carbon dioxide-equivalent (CO₂e) concentration is required to keep global mean warming below two degrees Celsius (ºC), which in turn is assumed to be necessary to avoid dangerous climate change.

California Governor Arnold Schwarzenegger issued Executive Order S-3-05 in June 2005, which established the following GHG emission reduction targets:

- 2020: Reduce GHG emissions to 1990 levels; and
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill (AB) 32 requires that the CARB determine what the Statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 million metric tons (MMT) of CO₂eq.

Executive Order (EO) B-30-15, which was issued in April 2015, requires statewide GHG emissions to be reduced 40 percent below 1990 levels by 2030. Senate Bill 32 (SB 32), signed into law in September 2016, codifies the 2030 GHG reduction target in EO B-30-15. The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

The California Governor’s Office of Planning and Research (OPR) published a Technical Advisory (OPR 2008) which provides informal guidance for public agencies as they address the issue of climate change in CEQA documents. This is assessed by determining whether a proposed Project is consistent with or obstructs the 39 Recommended Actions identified by CARB in its Climate Change Scoping Plan which includes nine Early Action Measures (qualitative approach). The Attorney General’s Mitigation Measures identify areas were GHG emissions reductions can be achieved in order to achieve the goals of AB 32. As set forth in the OPR Technical Advisory and in the proposed amendments to the CEQA Guidelines Section 15064.4, the 2017 CSMP SPEIR examined whether the CSMP’s GHG emissions are significant based on a qualitative and performance based standard (CEQA Guidelines Section 15064.4(a)(1) and (2)). The 2017 CSMP SPEIR concluded that the program’s direct (i.e., emissions from construction activities and mobile sources) and indirect (i.e., emissions from electricity consumption, water demand, and solid waste generation) GHG emissions would not hinder the State’s

1 Carbon Dioxide Equivalent (CO₂eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.
ability to meet its goals of reduced statewide GHG emissions under AB 32 (i.e., less than significant) and SB 32. Similarly, Project impacts would be less than significant (consistent with the 2017 CSMP SPEIR findings).

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions?

Because the Project’s GHG emissions impacts would be less than significant as evaluated above, the Project would not conflict with applicable plans, policies and regulations for reducing GHG emissions; specifically, the City’s Climate Action Plan (City 2012), AB 32, SB 32, the City’s General Plan, and the City’s interim guidance on climate change. No impact would occur relative to this issue.

### 11.8 HAZARDS AND HAZARDOUS MATERIALS

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

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Project construction would involve limited use of toxic or hazardous substances that are typical for construction-related activities (e.g., oil, fuel for vehicles and construction equipment, hydraulic fluids, solvents) which could result in exposure of the public or the environment to such hazardous materials. However, the contractor is required to employ standard cleanup and
safety procedures in compliance with applicable Federal, State, and local regulations pertaining to the handling, storage, and disposal of toxic and/or hazardous substances. With implementation of these standard requirements, potential exposures of people or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant (consistent with the 2017 CSMP SPEIR findings).

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? Project construction would involve limited use of toxic or hazardous substances that are typical for construction-related activities (e.g., oil, fuel for vehicles and construction equipment, hydraulic fluids, solvents). As such, there is the possibility of accidental releases (e.g., spilling of hydraulic fluid or diesel fuel from construction equipment maintenance) during pipeline installations. Such incidents are expected to involve small volumes and low concentrations, and the contractor is required to employ standard cleanup and safety procedures in compliance with applicable Federal, State, and local regulations pertaining to the handling, storage, and disposal of toxic and/or hazardous substances. With implementation of these standard requirements, potential exposures of people or the environment to reasonably foreseeable upset and accident conditions involving the release of such substances would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? There is a K-8 school on West Vista Way and a preschool on North Melrose Drive, both within one-quarter mile of the Project alignments. Project construction would involve limited use of toxic or hazardous substances that are typical for construction-related activities (e.g., oil, fuel for vehicles and construction equipment, hydraulic fluids, solvents) which could result in exposure of the public to such hazardous materials. However, the contractor is required to employ standard cleanup and safety procedures in compliance with applicable Federal, State, and local regulations pertaining to the handling (i.e., routine transport, use, storage, disposal) of toxic and/or hazardous substances. With implementation of these standard requirements, potential exposures of people through the handling of hazardous materials would be less than significant (consistent with the 2017 CSMP SPEIR findings).

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? Two leaking underground storage tanks are identified within the Project alignments, both of which are “closed” status (i.e., remediated) according to the Envirostor website, although the 2017 CSMP SPEIR determined that no CSMP projects were located on a list hazardous materials sites. Therefore, consistent with CSMP Impact 4.5-2 in the 2017 CSMP SPEIR, there is a potential that underlying conditions along some of the Project alignments could be affected by potential contamination from prior uses and owners (e.g., waste disposal, leaking underground storage tanks, groundwater contamination). However, such potential impacts would be reduced to less than significant with incorporation of mitigation measures CSMP HAZ-1 and HAZ-2 in the 2017 CSMP SPEIR, which require halting of work if potentially hazardous materials are encountered, and implementation of hazardous materials surveys.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? No public airports are located in the vicinity of the Project alignments. No impact would occur relative to this issue.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? No private airstrips are located in the vicinity of the Project alignments. No impact would occur relative to this issue.
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? Project construction activities along heavily used roads, including West Vista Way and Hacienda Drive, would result in temporary reductions in roadway widths (or capacity) and increased volumes of construction-related traffic and/or re-distributed traffic which could affect circulation for emergency vehicles and potentially impair implementation of or physically interfere with adopted City emergency response and evacuation plans. However, such potential impacts would be reduced to less than significant with incorporation of mitigation measure CSMP TR-1 (consistent with the 2017 CSMP SPEIR findings), which requires implementation of a Traffic Control Plan to ensure emergency response and evacuation plans are effectively facilitated through the construction sites, as needed.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? The Project is in a highly urbanized area with no potential for wildfire risk. No impact would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

### 11.9 HYDROLOGY AND WATER QUALITY

<table>
<thead>
<tr>
<th>HYDROLOGY AND WATER QUALITY. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Violate any water quality standards or waste discharge requirements?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>c. Substantially alter the existing drainage pattern of the site or area including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>f. Otherwise substantially degrade water quality?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>g. Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate (FIRM) map or other flood hazard delineation map?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>☐ ☒ ☐ ☐</td>
<td>☐ ☐ ☐ ☒</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>
The reach of Buena Vista Creek near the Project alignments (“receiving water”) is designated an impaired water body, as listed on the CWA Section 303(d) list, for habitat alteration/hydromodification (Category 4c) and for toxicity/pesticides/selenium (Category 5), with 2016 proposed listings for benthic community effects and Bifenthrin. The water quality and biological “beneficial uses” identified for this reach in the San Diego Basin Plan include: Municipal and Domestic Supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); Freshwater Replenishment (FRSH); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); and Wildlife Habitat (WILD). As such, it is important the Project not contribute any pollutant loads that could cause or contribute to an exceedance of applicable surface water quality objectives or degradation of beneficial uses in the Buena Vista Creek receiving waters.

a) Violate any water quality standards or waste discharge requirements?

As indicated in Table 1, Project construction at the proposed receiving pit requires temporary dewatering because groundwater is expected to be encountered due to the depth of excavation at this location. As such, the contractor is required to obtain (and comply with the requirements of) a dewatering discharge permit and/or wastewater permit from the EWA and/or RWQCB.

To avoid the potential for sedimentation/siltation to be discharged from stockpiled soils at the in-street staging areas along the Project alignments during pipeline trenching, the Project is required to implement construction-related stormwater control BMPs identified in the Erosion and Sediment Control Plan as a part of the WPCP (see Appendix B), as well as the mitigation measures MM-BIO-2 and CSMP HWQ-1 in the 2017 CSMP SPEIR; the latter paraphrased below:

**CSMP HWQ-1:** The construction contractor will implement a WPCP that complies with the requirements of the NPDES General Construction Permit (Order 2009-0009-DWQ as amended by 2010 0014-DWQ and 2012-006-DWQ) based on the project-specific risk level subject to the City Engineer’s approval. The WPCP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from construction sources by identifying a practical sequence for BMP implementation, contingency measures, responsible parties, and agency contacts. The WPCP shall reflect localized surface hydrological conditions and local jurisdictional requirements, and shall be reviewed and approved by the City Engineer prior to commencement of work. The WPPP shall be prepared by a Qualified SWPPP Developer (QSD) with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of

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2 Pyrethroid insecticide used primarily against the red imported fire ant by influencing its nervous system. It has a high toxicity to aquatic organisms.
contaminant reduction or elimination, (e.g., inadvertent petroleum release) is required to determine adequacy of the measure.

Therefore, the potential for the Project to violate RWQCB water quality standards and waste discharge requirements due to substantial erosion or siltation on or offsite would be less than significant (consistent with the 2017 CSMP SPEIR findings) with issuance of a dewatering discharge permit/wastewater permit by EWA/RWQCB; and implementation of the Project’s WPCP (Appendix B) and mitigation incorporated (MM-BIO-2 and CSMP-HWQ-1).

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? If Project construction requires temporary dewatering, the contractor would be required to obtain and comply with the requirements of a groundwater dewatering discharge permit and/or wastewater permit as required by the RWQCB. As such, the Project would not substantially deplete groundwater supplies or interfere with groundwater recharge. No impact would occur relative to this issue.

c) Substantially alter the existing drainage pattern of the site, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on or offsite? The receiving pit’s location within the Hacienda Drive ROW would not alter the course of the nearby Buena Vista Creek and it would not substantially alter existing drainage patterns at this location in a manner that would result in substantial erosion or siltation because following completion of the trenchless operation and pipe connections at this location, the receiving pit would be back-filled, all temporary construction appurtenances dismantled and removed, and the temporary disturbance area repaved. No impact would occur relative to this issue.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite? The receiving pit’s location within the Hacienda Drive ROW would not alter the course of the nearby Buena Vista Creek and it would not substantially alter existing drainage patterns nor increase the rate or amount of surface runoff at this location in a manner which would result in flooding onsite or offsite or which would exceed the capacity of existing or planned stormwater facilities. Following completion of the trenchless operation and pipe connections at this location, the receiving pit would be back-filled, all temporary construction appurtenances dismantled and removed, and the temporary disturbance area repaved. No impact would occur relative to this issue.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Following completion of pipeline installations within roadways along the Project alignments, all trenches would be back-filled and the road surfaces repaved. Aside from the potential for typical runoff pollutants from the in-street staging areas along the Project alignments (e.g., sedimentation/siltation, spilling of solvents or oil, hydraulic fluid or diesel fuel from construction equipment maintenance and vehicles), as described above, the Project would not generate any additional substantial sources of polluted runoff. No impact would occur relative to this issue.

f) Otherwise substantially degrade water quality? As evaluated in #11.9.a., the potential for the Project to substantially degrade water quality due to substantial erosion or siltation on or offsite would be less than significant with implementation of the Project’s WPCP (Appendix B) and mitigation incorporated (MM-BIO-2 and CSMP-HWQ-1).

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map? The Project would not place housing or any other structures within a 100-year flood hazard area (as mapped on a federal Flood Hazard Boundary,
FIRM or other flood hazard delineation map) or within the floodplain of Buena Vista Creek that would impede or redirect flows. No impact would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? The Project would not place housing or any other structures within a 100-year flood hazard area (as mapped on a federal Flood Hazard Boundary, FIRM or other flood hazard delineation map) or within the floodplain of Buena Vista Creek that would impede or redirect flows. No impact would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? There are no levees in proximity of the Project, and although portions of the City may be subject to inundation upon failure of upstream dams (e.g., Lake Wohlford, Lake Henshaw) due to seismic activity or for any other reason (e.g., structural, sabotage), emergency access/egress during any significant flood events would be maintained during Project construction. No impact would occur relative to this issue.

j) Inundation by seiche, tsunami, or mudflow? Since the Project is over 7 miles from the Pacific Ocean, there is no threat of inundation of the pipeline construction sites in the event of a seismically-induced tsunami. Because there are no large water bodies capable of producing seiche events and no steep hillsides near the Project alignments, no potential threats from mudflow events would occur. No impact would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).

11.10 LAND USE AND PLANNING

<table>
<thead>
<tr>
<th>LAND USE AND PLANNING. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Conflict with any applicable HCP or NCCP?</td>
<td>☐</td>
<td>☑</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

a) Physically divide an established community?

Following completion of pipeline installations within roadways along the Project alignments, all trenches would be back-filled and the road surfaces re-paved. As such, the Project would not physically divide an established community in a permanent way. No impact would occur relative to this issue.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Refer to #11.4.e. for the Project consistency analysis with applicable goals and polices of the City General Plan RCS Element. In addition to the RCS, the Project is consistent with the following other applicable plans,
policies, and regulations which are incorporated by reference from, and described and evaluated in, Table 4.7.1 of the 2017 CSMP SPEIR:

- San Diego County General Plan Land Use Element Goals: LU-12, LU-12.3, LU-12.4, and LU-14.4
- San Diego County General Plan: North County Metro Subregional Plan: Policy 13
- Vista GP 2030 Update: Public Safety, Facilities, and Services Element: Goals PSFS 9 and PSFS 16; and Policies PSFS 9.3 and PSFS 16.2

c) Conflict with any applicable HCP or NCCP? Refer to #11.4.f.

### 11.11 MINERAL RESOURCES

<table>
<thead>
<tr>
<th>MINERAL RESOURCES</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the Project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State? The Project alignments and the launch/receiving pits would occur in paved roads. As such, there is no potential for mineral resources to occur under these roads, and the Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State. **No impact** would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? The Project alignments and the launch/receiving pits would occur in paved roads. As such, there is no potential for mineral resources to occur under these roads, and the Project would not result in the loss of availability of a locally-important mineral resources recovery site as delineated per the City’s General Plan. **No impact** would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).
11.12 NOISE

<table>
<thead>
<tr>
<th>NOISE. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significantly Mitigated</th>
<th>Less than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Expose persons to or generate excessive groundborne vibration levels?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Result in a substantial permanent increase in ambient noise levels in the vicinity above levels existing without the Project?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. Result in a substantial temporary or periodic increase in ambient noise levels in the vicinity above levels existing without the Project?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Expose people residing or working in the project area to excessive noise levels, where the project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f. Expose people residing or working in the project area to excessive noise levels, where the project is located within the vicinity of a private airstrip?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear de-emphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately three dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are a number of metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (Leq), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period of time is often evaluated based on the Day-Night Sound Level (Ldn or DNL). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10:00 p.m. and 7:00 a.m. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical Ldn noise levels for light and medium density residential areas range from 55 dBA to 65 dBA.
Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted for understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Two of the primary factors that reduce levels of environmental sounds are increasing the distance between the sound source and the receiver and having intervening obstacles such as walls, buildings, or terrain features between the sound source and the receiver. Factors that act to increase the loudness of environmental sounds include moving the sound source closer to the receiver, sound enhancements caused by reflections, and focusing caused by various meteorological conditions.

**City of Vista General Plan Noise Element**

The General Plan Noise Element provides noise standards, goals, objectives, and policies to control excessive or unwanted noise and improve quality of life in the City. The Noise Element states:

> Periodic noise also can be disruptive to Vista’s quiet residential neighborhoods. These noise sources include use of landscaping maintenance equipment, construction noise, barking dogs, and loud music. This type of nuisance noise* is especially annoying when it occurs in the early morning or late-night hours.

**City of Vista Municipal Code, Noise Control Ordinance**

Construction noise is governed by the City’s Noise Control Regulations (Vista Municipal Code, Section 8.32.040) which incorporates by reference certain provisions of the San Diego County Noise Ordinance (Sections 36.408 and 36.409) and which restricts demolition, excavation, construction, and equipment maintenance hours to 7:00 AM to 7:00 PM Monday through Saturday. Construction equipment is prohibited from operating Sundays and holidays. In addition, construction activities are allowed between these hours, provided the noise level at any residential property lines adjacent to the Project alignments does not exceed 75 dBA for more than 8 hours during any 24-hour period; however, this provision does not apply as there are no residential properties along the Project alignments.

The Project is located in an urbanized area, with the primary sources of noise being urban-related activities (i.e., mechanical equipment, commercial areas, parking areas, and vehicles). The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise. The following existing land uses adjacent to the Project alignments are considered “noise-sensitive receptors”:

- Chili’s Restaurant at the east end of the West Vista Way segment, near the Vista Village Drive intersection
- St. Francis of Assisi Catholic Church and Catholic School in the middle of the West Vista Way segment (north side)
- Denny’s Restaurant in the middle of the West Vista Way segment (south side)
- Wendy’s and Coco’s restaurants at the West Vista Way/Melrose Drive intersection (north side)
- Vista Inn at the west end of the West Vista Way segment, near the launch pit

Noise generated by Project construction equipment, trucks, transit mixers, or transient equipment that may or may not be owned by the contractor would occur with varying intensities and durations during the various
phases of construction (e.g., demolition, trench excavations, pipeline installations, paving). In addition, with pipeline work, the construction activities are generally limited to a defined section of roadway (e.g., 50-100 feet) for a short duration (e.g., a few days, up to 1-2 weeks) before moving to the adjacent sections, resulting in periodic increases in the ambient noise environment. As such, construction noise would be sequentially dispersed along the Project alignments and not concentrated in or confined to one specific area over the entire construction duration.

a) *Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?* Typical noise levels generated by construction equipment that could be used for the Project (at 50 and 100 feet) are shown in Table 3. Operating cycles for these types of construction equipment may involve one or two minutes of full power followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents (lasting less than one minute) such as dropping large pieces of equipment or the hydraulic movement of machinery lifts. The closest noise-sensitive receptors to Project construction activities are listed above, and are generally 50-100 feet from the roadway edges, with the projected maximum noise levels presented in Table 2. However, it is important to note these are peak noise levels – the equipment is not producing these noise levels continuously over many hours of the day. From the perspective of a noise-sensitive receptor, peak noise levels would thus be periodic, intermittent, and temporary throughout the day.

### Table 2: Maximum Noise Levels Generated by Construction Equipment

<table>
<thead>
<tr>
<th>Type of Equipment</th>
<th>Acoustical Use Factor</th>
<th>$L_{max}$ at 50 Feet (dBA)</th>
<th>$L_{max}$ at 100 Feet (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Saw</td>
<td>20</td>
<td>90</td>
<td>84</td>
</tr>
<tr>
<td>Crane</td>
<td>16</td>
<td>81</td>
<td>75</td>
</tr>
<tr>
<td>Concrete Mixer Truck</td>
<td>40</td>
<td>79</td>
<td>73</td>
</tr>
<tr>
<td>Backhoe</td>
<td>40</td>
<td>78</td>
<td>72</td>
</tr>
<tr>
<td>Dozer</td>
<td>40</td>
<td>82</td>
<td>76</td>
</tr>
<tr>
<td>Excavator</td>
<td>40</td>
<td>81</td>
<td>75</td>
</tr>
<tr>
<td>Forklift</td>
<td>40</td>
<td>78</td>
<td>72</td>
</tr>
<tr>
<td>Paver</td>
<td>50</td>
<td>77</td>
<td>71</td>
</tr>
<tr>
<td>Roller</td>
<td>20</td>
<td>80</td>
<td>74</td>
</tr>
<tr>
<td>Tractor</td>
<td>40</td>
<td>84</td>
<td>78</td>
</tr>
<tr>
<td>Water Truck</td>
<td>40</td>
<td>80</td>
<td>84</td>
</tr>
<tr>
<td>General Industrial Equipment</td>
<td>50</td>
<td>85</td>
<td>73</td>
</tr>
</tbody>
</table>

Note: Acoustical Use Factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: Federal Highway Administration (FHWA) 2006.

Ambient noise levels are typically measured over a long-term period and consider noise levels during the daytime (e.g., 7:00 a.m. to 10:00 p.m.) and nighttime (e.g., 10:00 p.m. to 7:00 a.m.). As such, Project construction activities would result in short-term increases in ambient noise levels causing potential nuisance impacts to workers/visitors at the closest noise-sensitive receptors listed above. Project construction noise has the potential to exceed the City’s 75 dBA noise limit; however, such potential impacts would be reduced to less than significant with incorporation of mitigation measure *CSMP NV-1* (in the 2017 CSMP SPEIR), as paraphrased below:


**CSMP NV-1:** The Construction Contractor shall demonstrate to the satisfaction of the City Engineer that the following standard noise control measures would be implemented within 200 feet of noise-sensitive land uses to minimize construction noise levels:

- Limit all construction work, including equipment maintenance and repair within in-street staging areas, to the hours specified above.
- Ensure all internal combustion engines are equipped with the best available noise control devices recommended by the manufacturer (e.g., exhaust mufflers, acoustical lagging, engine enclosures).
- Maintain construction equipment, including vehicles, generators and compressors, in proper operating condition in compliance with all applicable local, State, and Federal noise regulations.
- Prohibit idling engines.
- Limit noise-producing signals, including horns, whistles, alarms, and bells for safety warning purposes only.
- Use quieter equipment for a particular task if feasible (e.g., use a backhoe instead of an excavator, choose a generator specially designed for quiet operation over a standard model).
- Use electrical power from the commercial power supply, wherever feasible, to avoid or minimize the use of engine-driven generators; and use electrically-powered equipment instead of pneumatic or internal-combustion powered equipment, where feasible.
- Erect temporary sound barriers (or curtains) or other effective shielding or enclosures where construction noise would exceed 90 dBA within less than 50 feet from a noise-sensitive receptor.
- Shield stationary equipment (generators, air compressors, cement mixers) would exceed 90 dBA within less than 50 feet from a noise-sensitive receptor behind temporary plywood barriers or similar.
- Locate the in-street staging areas where heavy equipment repair is conducted as far as practical from nearby residences.
- Conduct noisy operations offsite if possible (e.g. rock-crushing).
- Establish a program for receiving questions or complaints about noise and other construction disturbance; develop procedures for responding to callers; identify/provide a public liaison person to respond to concerns.
- Provide advance notice (i.e., 2-4 weeks prior to construction) by mail to all property owners within 200 feet of the alignments stating specifically where and when construction will occur in the area and procedures for reaching the public liaison person via telephone or in person; provide an additional notice by mail if construction delays of more than 7 days occur; publish all notices on the City website.

As discussed above, Project construction activities would not produce sustained changes in ambient noise levels. Therefore, the potential for the Project to substantially create a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.
would be less than significant with incorporation of mitigation measure CSMP NV-1 (consistent with the 2017 CSMP SPEIR findings).

In addition to noise-sensitive human receptors, there is also the potential for nesting birds to be affected by construction activities during the breeding season; refer to #11.4.a. and CSMP BIO-1.

b) Expose persons to or generate excessive groundborne vibration levels?

**City of Vista General Plan Noise Element**

The General Plan Noise Element provides noise standards, goals, objectives, and policies to control excessive or unwanted noise and improve quality of life in the City. The Noise Element states:

Vibration is another source of noise. The most common sources of vibration in the Vista planning area are construction equipment, transit vehicles, and other large vehicles. Several land uses types are sensitive to vibration and therefore have lower vibration thresholds. These include, but are not limited to, theaters and amphitheaters, hospitals, libraries, vibration-sensitive research operations, residential areas, schools, and offices.

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and equipment used. Operation of equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.20 inch/second) appears to be conservative. The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. Typical vibration produced by construction equipment is illustrated in Table 3.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Typical Vibration Levels for Construction Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>Approximate peak particle velocity at 25 feet (inches/second)</td>
</tr>
<tr>
<td>Loaded trucks</td>
<td>0.076</td>
</tr>
<tr>
<td>Small bulldozer</td>
<td>0.003</td>
</tr>
<tr>
<td>Large bulldozer, Auger/drill rigs</td>
<td>0.089</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>0.035</td>
</tr>
</tbody>
</table>

Notes:
1. Calculated using the following formula:

\[ \text{PPV}_{\text{equip}} = \text{PPV}_{\text{ref}} \times (25/D)^{1.5} \]

where:

- \( \text{PPV} \) (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
- \( \text{PPV} \) (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA Transit Noise and Vibration Impact Assessment Guidelines
- \( D \) = the distance from the equipment to the receiver

Source: Federal Transit Administration (FTA) 2006.

Groundborne vibration decreases rapidly with distance. As indicated in Table 4, based on the FTA data, vibration velocities from typical heavy construction equipment operations drop dramatically from
maximums of 0.089 inch-per-second peak particle velocity (PPV) at 25 feet to 0.017 inch-per-second PPV at 75 feet and 0.01 inch-per-second PPV at 100 feet; the vibration levels at these distances are below the 0.20 inch-per-second PPV significance threshold. As such, vibration impacts associated with Project construction activities would be less than significant, and the Project would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (consistent with the 2017 CSMP SPEIR findings).

c) Result in a substantial permanent increase in ambient noise levels in the vicinity above levels existing without the Project? After installation of the pipelines, trench backfill, and roadway re-paving is completed, there would be no above-ground Project features that would result in a permanent increase in ambient noise levels. No impact would occur relative to this issue.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the vicinity above levels existing without the Project? Refer to #11.12.a.

e) Expose people residing or working in the project area to excessive noise levels, where the project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? AND

f) Expose people residing or working in the project area to excessive noise levels, where the project is located within the vicinity of a private airstrip? As stated in #11.8., no public airports or private airstrips are located in the vicinity of the Project alignments. As such, the Project would not expose people residing or working in the area to excessive airport-related noise levels. No impact would occur relative to these issues.

### 11.13 POPULATION & HOUSING

<table>
<thead>
<tr>
<th>POPULATION &amp; HOUSING. Would the Project:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Induce substantial population growth, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</td>
</tr>
<tr>
<td>b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</td>
</tr>
<tr>
<td>c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</td>
</tr>
</tbody>
</table>

a) Induce substantial population growth, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? AND

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? AND

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Project alignments are located within a built-out urban area surrounded primarily by commercial uses. As such, the Project would not directly or indirectly induce population growth because it would not involve the provision of new housing nor extend or expand new roads or major capital infrastructure into areas that are not designated for development in the City’s General Plan. Furthermore, the Project
Vista Village Drive Trunk Sewer Project, CIP 8212
Addendum to the 2017 CSMP SPEIR, SCH#2007091072

City of Vista, California

would not require the removal of existing housing or displace substantial numbers of people that would otherwise necessitate the provision of replacement housing elsewhere. **No impact** would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).

11.14 **PUBLIC SERVICES**

<table>
<thead>
<tr>
<th>PUBLIC SERVICES. Would the Project result in substantial adverse impacts associated with the provision or need for new or physically altered public services, the construction of which could cause significant physical environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Fire protection?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>b) Police protection?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>c) Schools?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>d) Parks?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>e) Other public facilities?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

a)-e) **Would the Project result in substantial adverse impacts associated with the provision or need for new or physically altered fire/police protection services or schools/parks/other public facilities, the construction of which could cause significant physical environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?** The Project does not propose any development that would generate new population that could otherwise substantially increase demand for such public services and facilities, or the provision or need for new or physically altered public services/facilities, the construction of which could cause significant physical environmental impacts. **No impact** would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).
### 14.15 RECREATION

<table>
<thead>
<tr>
<th>RECREATION. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b. Include new recreational facilities or require the construction or expansion of existing recreational facilities, which might have an adverse physical effect on the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

**a)-b) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration would occur or be accelerated; or would it include new recreational facilities, or require the construction or expansion of existing recreational facilities, which might have an adverse physical effect on the environment?** The Project would not increase the use of existing/planned parks/recreational facilities, such that substantial physical deterioration of such facilities would occur or be accelerated; nor does the Project involve the construction or expansion of parks/recreational facilities which could cause significant physical environmental impacts. **No impact** would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).

### 11.16 TRANSPORTATION/TRAFFIC

<table>
<thead>
<tr>
<th>TRANSPORTATION/TRAFFIC. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass-transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b. Conflict with an applicable congestion management program (CMP), including, but not limited to level of service (LOS) standards and travel demand measures (TDMs), or other standards established by the county congestion management agency for designated roads or highways?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Result in a change in air traffic patterns that results in substantial safety risks?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d. Substantially increase hazards due to a design feature (e.g., sharp curves, dangerous intersections)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e. Result in inadequate emergency access?</td>
<td>Potentially Significant Unless Mitigated</td>
<td>Less Than Significant w/ Mitigation</td>
<td>Less Than Significant</td>
<td>No Impact</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------------------------------</td>
<td>-------------------------------------</td>
<td>----------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>f. Conflict with adopted policies, plans, or programs regarding alternative transportation (e.g., bus turnouts, bicycle racks, public transit, bicycle, or pedestrian facilities), or otherwise decrease the performance or safety of such facilities?</td>
<td>Potentially Significant Unless Mitigated</td>
<td>Less Than Significant w/ Mitigation</td>
<td>Less Than Significant</td>
<td>No Impact</td>
</tr>
</tbody>
</table>

a)-b) **Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system (including mass-transit and non-motorized travel components); or would it conflict with applicable CMP (including LOS standards, TDMs, or other standards)?** Due to the nature of the proposed Project (i.e., underground pipelines), there would be no conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system; or no conflict with an applicable CMP (including LOS standards and TDMs for designated roads or highways. **No impact** would occur relative to these issues.

c)-d) **Would the Project result in a change in air traffic patterns that results in substantial safety risks; or substantially increase hazards due to a design feature?** Due to the nature of the proposed Project (i.e., underground pipelines), it would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, nor decrease the performance or safety of public transit, bicycle, or pedestrian facilities. **No impact** would occur relative to these issues.

e) **Result in inadequate emergency access?** As stated in #11.8.g., Project construction activities along heavily used roads, including West Vista Way and Hacienda Drive, would result in temporary reductions in roadway widths (or capacity) and increased volumes of construction-related traffic and/or redistributed traffic which could affect emergency access (i.e., circulation for emergency vehicles) and potentially impair implementation of or physically interfere with adopted City emergency response and evacuation plans. However, such potential impacts would be reduced to **less than significant with incorporation of mitigation measure CSMP TR-1** (consistent with the 2017 CSMP SPEIR findings), as paraphrased below:

**CSMP TR-1:** The construction contractor shall prepare a Traffic Control Plan for approval by the City Engineer in compliance with City requirements including, but not limited to, the relevant elements listed in mitigation measure TR-1 in the 2017 CSMP SPEIR, based on the specific roadway conditions along the Project alignments.

a)-d) **Would the Project conflict with adopted policies, plans, or programs regarding alternative transportation (e.g., bus turnouts, bicycle racks, public transit, bicycle, or pedestrian facilities), or otherwise decrease the performance or safety of such facilities?** Due to the nature of the proposed Project (i.e., underground pipelines), it would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, nor decrease the performance or safety of public transit, bicycle, or pedestrian facilities. **No impact** would occur relative to these issues.
## 11.17 UTILITIES AND SERVICE SYSTEMS

<table>
<thead>
<tr>
<th>UTILITIES AND SERVICE SYSTEMS. Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less Than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Exceed applicable wastewater treatment requirements?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d. Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>e. Result in a determination by the wastewater treatment provider that it has adequate capacity to serve the Project’s projected demand in addition to the providers existing commitments?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>f. Be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>g. Comply with federal, State, and local statutes and regulations related to solid waste?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

### a)-b) Would the Project exceed applicable wastewater treatment requirements; or require (or result in) the construction of new water or wastewater treatment facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?

The intent of the Project is to increase sewer pipeline capacity and reliability to accommodate existing/projected regional sewer demands to ensure that applicable wastewater treatment requirements/capacity are not exceeded. The Project would not require nor result in the construction of new (or the expansion of existing) water or wastewater treatment facilities. **No impact** would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).

### c) Would the Project require (or result in) the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The Project would not require nor result in the construction of new (or the expansion of existing) stormwater drainage facilities. **No impact** would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).

### d) Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

The intent of the Project is to increase sewer pipeline capacity and reliability to accommodate existing/projected regional sewer demands. As such, this issue is not applicable to the proposed Project. **No impact** would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

### e) Would the Project result in a determination by Buena Sanitation District that it has adequate capacity to serve the Project’s projected demand in addition to the providers existing commitments?

The intent of the Project is to increase sewer pipeline capacity and reliability to accommodate existing/projected...
regional sewer demands. As such, this issue is not applicable to the proposed Project. **No impact** would occur relative to this issue (consistent with the 2017 CSMP SPEIR findings).

f)g) **Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs; or comply with Federal, State, and local statutes and regulations related to solid waste?** Project construction may generate a minor increase in solid waste, and is not expected to result in solid waste disposal needs in excess of the permitted capacity of regional landfills nor result in noncompliance with federal, State, and local statutes and regulations related to solid waste. **No impact** would occur relative to these issues (consistent with the 2017 CSMP SPEIR findings).

### 11.18 MANDATORY FINDINGS OF SIGNIFICANCE

<table>
<thead>
<tr>
<th>MANDATORY FINDINGS OF SIGNIFICANCE: Would the Project:</th>
<th>Potentially Significant Unless Mitigated</th>
<th>Less Than Significant w/ Mitigation</th>
<th>Less than Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to decrease below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California history or prehistory?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Does the Project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Does the Project have impacts which are individually limited, but cumulatively considerable (Cumulatively considerable means the Project’s incremental effects are considerable when compared to the past, present, and future effects of other projects)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d. Does the Project have environmental effects which will have substantial adverse effects on human beings, directly or indirectly?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

a) **Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to decrease below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California history or prehistory?** The Project’s potential impacts to biological resources would be **less than significant with incorporation of mitigation measures CSMP BIO-1 CSMP HWQ-1, and MM BIO-1**. Therefore, the proposed Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to decrease below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

The Project is not expected to disturb any buried historical or archaeological resources or Native American buried remains because trenching for all pipeline alignments, as well as excavation for the proposed trenchless launch/receiving pits, would occur in existing roadway or freeway ROW underlain by a maximum of 10 feet of artificial fill material, including the disturbed area at the receiving pit within Caltrans ROW, for which there is no sensitivity for such cultural resources. Therefore, the proposed Project would not eliminate important examples of major periods of California history or prehistory.
b) **Does the Project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?** The proposed Project would not result in a substantial increase in demand for electricity or other forms of energy during construction, and no disturbance or interruption of electrical service to the public is anticipated with the Project. As such, the Project would not achieve short-term benefits, to the disadvantage of long-term environmental goals. **No impact** would occur relative to this issue.

c) **Does the Project have impacts which are individually limited, but cumulatively considerable?** The incremental contribution of the Project-related direct and indirect impacts to significant cumulative baseline impacts on biological and cultural resources from other cumulative projects in the region would also be **less than significant** with the mitigation measures addressed herein incorporated into the Project.

d) **Does the Project have environmental effects which will have substantial adverse effects on human beings, directly or indirectly?** With implementation of standard dust control procedures and SDAPCD Rules, the Project’s construction-related air quality impacts from fugitive dust emissions would be **less than significant**.

Compliance with applicable federal, State, and local regulations pertaining to the handling, storage, and disposal of toxic and/or hazardous substances would protect human health and safety from potential exposure to hazardous materials from reasonably foreseeable upset and accident conditions involving releases of such materials into the environment associated with routine transport, use, or disposal of such substances. In addition, such potential hazards would be reduced to **less than significant** with incorporation of mitigation measures **CSMP HAZ-1** and **HAZ-2** in the 2017 CSMP SPEIR.

The Project’s potential impacts to emergency response/evacuation/access plans would be **less than significant** with incorporation of mitigation measure **CSMP TR-1** in the 2017 CSMP SPEIR.

The Project’s potential nuisance noise impacts from construction-related activities would be **less than significant** with incorporation of mitigation measure **NV-1** in the 2017 CSMP SPEIR. The potential for Project construction to expose persons to or to generate excessive groundborne vibration levels would be **less than significant**.

In summary, Project construction would have the potential for substantial direct and indirect effects on human beings; however, such impacts would be **less than significant** with the mitigation measures addressed herein incorporated into the Project.
12. PREPARATION. This initial study for the subject Project was prepared by:

Mike Gonzales, Natural Resources Project Manager
Michael Baker International

13. DETERMINATION. (To be completed by lead agency) Based on this initial evaluation:

[X] I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

[ ] I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been included in this Project. A MITIGATED NEGATIVE DECLARATION will be prepared.

[ ] I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

14. DE MINIMIS FEE DETERMINATION (Chapter 1706, Statutes of 1990-AB 3158)

[X] It is hereby found that this Project involves no potential for any adverse effect, either individually or cumulatively, on wildlife resources and that a "Certificate of Fee Exemption" shall be prepared.

[ ] It is hereby found that this Project could potentially impact wildlife, individually or cumulatively, and therefore fees shall be paid to the County Clerk in accordance with Section 711.4(d) of the Fish and Game Code.

15. ENVIRONMENTAL DETERMINATION:

The initial study for this Project has been reviewed and the environmental determination is hereby approved:

John Conley, Director of Community Development and Engineering,
CITY OF VISTA / BUENA SANITATION DISTRICT
12. PREPARATION. This initial study for the subject Project was prepared by:

Mike Gonzales, Natural Resources Project Manager
Michael Baker International

13. DETERMINATION. (To be completed by lead agency) Based on this initial evaluation:

[X] I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

[ ] I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been included in this Project. A MITIGATED NEGATIVE DECLARATION will be prepared.

[ ] I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

14. DE MINIMIS FEE DETERMINATION (Chapter 1706, Statutes of 1990-AB 3158)

[X] It is hereby found that this Project involves no potential for any adverse effect, either individually or cumulatively, on wildlife resources and that a "Certificate of Fee Exemption" shall be prepared.

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15. ENVIRONMENTAL DETERMINATION:

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John Conley, Director of Community Development and Engineering
CITY OF VISTA / BUENA SANITATION DISTRICT
LIST OF PREPARERS

Lead Agency – City of Vista
Jalal Ahmadpour ........................................... Project Manager

Project Consultants
Michael Baker International
Mike Gonzales .............................................. Project Manager
Zach Pekin ................................................. Graphics
Hilary Ellis .................................................. Word Processing

REFERENCES


_____. Municipal Code, Section 8.32.040. Noise Control Regulations (incorporates by reference certain provisions of the San Diego County Code of Regulatory Ordinances (Title 3, Division 6, Chapter 4).


Appendix A

Geotechnical Investigation: Vista Village Drive

Trunk Sewer Improvements (CIP 8212-V2)
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GEOTECHNICAL BASELINE REPORT

VISTA VILLAGE DRIVE TRUNK SEWER IMPROVEMENTS CIP 8212-V2
VISTA, CALIFORNIA

PREPARED FOR
TC CONSTRUCTION COMPANY, INC.
SANTEE, CALIFORNIA

MAY 8, 2018
PROJECT NO. G2133-52-01
In accordance with your request, we have prepared this Geotechnical Baseline Report (GBR) for the proposed Trunk Sewer Improvement project located in Vista, California. The accompanying report presents the results of our study and conclusions and recommendations pertaining to the geotechnical aspects of the trenchless segment of the proposed improvements.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Ali Sadr
CEG 1778

Yong Wang
GE 2775

YW:AS:dmc
(e-mail) Addressee
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GEOTECHNICAL BASELINE REPORT

1. INTRODUCTION

1.1 Purpose of Report

This Geotechnical Baseline Report (GBR) presents baseline ground conditions for the propose Vista Village Drive Trunk Sewer Improvements (CIP 8212-V2) project in Vista, California (see Vicinity Map, Figure 1). The owner of the project is the City of Vista, and the project will be proceeded via a design-build procurement process. The prime contractor is TC Construction Company, Inc., and the lead consultant of the design team is Michael Baker International. Geocon Incorporated is the geotechnical consultant for the project. This GBR has been prepared in general conformance with the guidelines outlined in the ASCE publication entitled: Geotechnical Baseline Reports for Construction, Suggested Guidelines, prepared by Technical Committee on Geotechnical Reports of the Underground Technology Research Council.

This GBR presents the baseline ground conditions for use by the owner and contractor. This GBR applies only to the construction of the trenchless segment of this project and access pits.

The interpretation of soil, rock and groundwater conditions described in this GBR is based on interpretations of stratigraphy from explorations. Predications of ground behavior have been based on the test exploratory data, field observation, laboratory testing data, previous construction activities in the project area, and certain assumptions regarding construction means and methods. The contractor should expect variation in the interpreted contacts between individual strata and some differences in the physical property and behavior of various soil and/or rock strata described in this GBR.

1.2 Scope of the Report

The scope of this GBR is to summarize and reference the results of geotechnical explorations for the proposed trenchless segment as presented in the project Geotechnical Investigation Report and Supplemental Geotechnical Report prepared by Geocon Incorporated, dated September 27, 2017 and February 14, 2018 (Project No. G2133-52-01). In addition, the GBR establishes the geotechnical baseline conditions that are applicable only to the trenchless segment and associated jacking and/or receiving pits related to this project.

Site conditions are discussed in this report in terms of the project geologic setting, subsurface conditions, and seismic consideration. Subsurface conditions are summarized in terms of soil, rock and groundwater conditions that occur above, within, or just below the construction zone for the proposed trenchless segment of pipeline.
The ground characterization sections establish the geologic engineering interpretation of the ground from the data obtained from the geotechnical explorations and establishes the basis for the baseline ground conditions provided for the contractor.

### 1.3 Project Description

Based on the current project plans, we understand that the entire proposed improvements consist of the installation of approximately 3,600 lineal feet of new sewer trunk via both cut-and-cover trenching and trenchless construction methods in the City of Vista, California. The trenchless segment of the pipeline is the subject of this GBR. The trenchless segment consists of approximately 245 lineal feet of the sewer line that extends northward from Hacienda Drive west of La Tortuga Drive, and crosses under State Route 78 (SR 78) to West Vista Way. This proposed 24-inch-diameter PVC sewer line will be installed within a 36-inch-diameter steel casing installed using pipe jacking and/or microtunneling methods. The existing surface elevation along the proposed trenchless segment ranges from approximately 290 feet above Mean Sea Level (MSL) at the roadside ditch south of the paved portion of SR 78 to approximately 300 feet (MSL) near the northern end of the segment. The proposed invert elevation of this segment ranges between approximately 277.6 feet and 282.6 feet (MSL). In addition, jacking and receiving pits are planned at the north and south ends of the segment.

Our geotechnical exploration along the trenchless segment consists of two test trenches (T3 and T4). The alignment of the trenchless segment together with the approximate locations of test trenches are shown on Figure 2, Site Plan.

The site description and proposed improvement are based on a site reconnaissance and review of the currently available project plans titled: Plans for the Improvement of: Vista Village Drive Trunk Sewer Improvements, Sheets 1 through 18 of 18 Sheets (100% Final Design Submittal), undated, received on May 2, 2018. If final project plans differ from those described herein, Geocon Incorporated should be contacted for review of the plans and possible revisions to this report.

### 2. PROJECT SETTING AND GEOLOGY

#### 2.1 Project Setting

The entire pipeline is located in Vista, California. The proposed trenchless segment crosses SR 78 as depicted on Figure 2, Site Plan. The alignment extends approximately 245 lineal feet from approximately Station 1+00 at Hacienda Drive and rises at a grade of approximate 4.08 percent until reaching the approximately Station 3+45 at West Vista Way. The existing ground surface elevations along the alignment are between approximately 290 and 300 feet above mean sea level (MSL). Refer to Figure 3, Geologic Profile of Trenchless Segment.
2.2 Regional and Site Geology

The site is located in the Peninsular Ranges of the geomorphic provinces of California. Cretaceous-age Granitic Rock (Tonalite) associated with the Peninsular Range Batholith underlies the surficial materials in the area.

3. GEOLOGIC HAZARDS

3.1 Faulting and Seismicity

A review of the referenced geologic materials and our knowledge of the general area indicate that the site is not underlain by active, potentially active, or inactive faults. An active fault is defined by the California Geological Survey (CGS) as a fault showing evidence for activity within the last 11,000 years. The site is not located within a State of California Earthquake Fault Zone.

According to the computer program EZ-FRISK (Version 7.65), ten known active faults are located within a search radius of 50 miles from the property. We used the 2008 USGS fault database that provides several models and combinations of fault data to evaluate the fault information. Based on this database, the nearest known active fault is the Newport-Inglewood and Rose Canyon Fault system, located approximately 10 miles west of the site, and is the dominant source of potential ground motion. Earthquakes that might occur on the Newport-Inglewood and Rose Canyon Faults or other faults within the southern California and northern Baja California area are potential generators of significant ground motion at the site. The estimated deterministic maximum earthquake magnitude and peak ground acceleration for the Newport-Inglewood Fault are 7.5 and 0.25g, respectively. Table 3.3.1 lists the estimated maximum earthquake magnitude and peak ground acceleration for the most dominant faults in relationship to the site location. We calculated peak ground acceleration (PGA) using Boore-Atkinson (2008) NGA USGS2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2007) NGA USGS2008 acceleration-attenuation relationships.
### TABLE 3.3.1
**DETERMINISTIC SITE PARAMETERS**

<table>
<thead>
<tr>
<th>Fault Name</th>
<th>Distance from Site (miles)</th>
<th>Maximum Earthquake Magnitude (Mw)</th>
<th>Peak Ground Acceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Boore-Atkinson 2008 (g)</td>
</tr>
<tr>
<td>Newport-Inglewood</td>
<td>10</td>
<td>7.5</td>
<td>0.24</td>
</tr>
<tr>
<td>Rose Canyon</td>
<td>10</td>
<td>6.9</td>
<td>0.19</td>
</tr>
<tr>
<td>Elsinore</td>
<td>18</td>
<td>7.85</td>
<td>0.20</td>
</tr>
<tr>
<td>Coronado Bank</td>
<td>26</td>
<td>7.4</td>
<td>0.13</td>
</tr>
<tr>
<td>Palos Verdes Connected</td>
<td>26</td>
<td>7.7</td>
<td>0.15</td>
</tr>
<tr>
<td>San Joaquin Hills</td>
<td>37</td>
<td>7.1</td>
<td>0.08</td>
</tr>
<tr>
<td>Palos Verdes</td>
<td>39</td>
<td>7.3</td>
<td>0.09</td>
</tr>
<tr>
<td>Earthquake Valley</td>
<td>39</td>
<td>6.8</td>
<td>0.07</td>
</tr>
<tr>
<td>San Jacinto</td>
<td>42</td>
<td>7.88</td>
<td>0.11</td>
</tr>
<tr>
<td>Chino</td>
<td>47</td>
<td>6.8</td>
<td>0.06</td>
</tr>
</tbody>
</table>

It is our opinion the site could be subjected to moderate to severe ground shaking in the event of an earthquake along any of the faults listed on Table 3.3.1 or other faults in the southern California/northern Baja California region. We do not consider the site to possess a greater risk than that of the surrounding developments.

We used the computer program *EZ-FRISK* to perform a probabilistic seismic hazard analysis. The computer program *EZ-FRISK* operates under the assumption that the occurrence rate of earthquakes on each mappable Quaternary fault is proportional to the faults slip rate. The program accounts for fault rupture length as a function of earthquake magnitude, and site acceleration estimates are made using the earthquake magnitude and distance from the site to the rupture zone. The program also accounts for uncertainty in each of following: (1) earthquake magnitude, (2) rupture length for a given magnitude, (3) location of the rupture zone, (4) maximum possible magnitude of a given earthquake, and (5) acceleration at the site from a given earthquake along each fault. By calculating the expected accelerations from considered earthquake sources, the program calculates the total average annual expected number of occurrences of site acceleration greater than a specified value. We utilized acceleration-attenuation relationships suggested by Boore-Atkinson (2008) NGA USGS 2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2007) NGA USGS2008 in the analysis. Table 2.3.2 presents the site-specific probabilistic seismic hazard parameters including acceleration-attenuation relationships and the probability of exceedence.
TABLE 3.3.2
PROBABILISTIC SEISMIC HAZARD PARAMETERS

<table>
<thead>
<tr>
<th>Probability of Exceedence</th>
<th>Peak Ground Acceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boore-Atkinson 2008 (g)</td>
</tr>
<tr>
<td>2% in a 50 Year Period</td>
<td>0.41</td>
</tr>
<tr>
<td>5% in a 50 Year Period</td>
<td>0.31</td>
</tr>
<tr>
<td>10% in a 50 Year Period</td>
<td>0.24</td>
</tr>
</tbody>
</table>

While listing peak accelerations is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including the frequency and duration of motion and the soil conditions underlying the site. Seismic design of the structures should be evaluated in accordance with the 2016 California Building Code (CBC) guidelines or guidelines currently adopted by the City of Vista.

3.2 Liquefaction

Liquefaction typically occurs during seismic shaking in relatively loose, cohesionless soil that exists below the groundwater surface. Under these conditions, a seismic event could result in a rapid pore water pressure increase from the earthquake-generated ground accelerations. The potential for liquefaction at the site is considered low due to the presence of shallow dense rock and the lack of a permanent, near-surface groundwater.

3.3 Landslides

We did not encounter landslides during the site investigations and none are known to exist on the property or at a location that would impact the proposed improvements.

3.4 Ground Rupture

Ground surface rupture occurs when movement along a fault is sufficient to cause a gap or rupture where the upper edge of the fault zone intersects the earth surface. The potential for ground rupture is considered to be very low due to the absence of active or potentially active faults at the subject site.

3.5 Storm Surge, Tsunamis, and Seiches

Storm surges are large ocean waves that sweep across coastal areas when storms make landfall. Storm surges can cause inundation, severe erosion, and backwater flooding along the bay front.
A tsunami is a series of long period waves generated in the ocean by a sudden displacement of large volumes of water. Causes of tsunamis include underwater earthquakes, volcanic eruptions, or offshore slope failures.

A seiche is a run-up of water within a lake or embayment triggered by fault- or landslide-induced ground displacement. The existing alignment has elevations of approximately 300 feet above Mean Sea Level (MSL). Based on historic and predicated wave heights and runout lengths, it is our opinion that the site elevation is sufficient to mitigate the risk. Therefore, the potential of storm surges, tsunamis, or seiches affecting the site is low.

4. SUBSURFACE EXPLORATION AND TESTING PROGRAM

We performed our field investigation on November 8 and 9, 2017, and on February 5 and 6, 2018, which consisted of a site reconnaissance, and excavating 4 test trenches. Specifically, the Trenches T3 and T4 were excavated near the proposed jacking pit and receiving pit as depicted on Figure 3. The logs of these 2 test trenches are included with this GBR.

We performed laboratory testing to evaluate the physical and mechanical properties of the soil and formational materials encountered at the site, and in accordance with the current versions of the generally accepted American Society for Testing Materials (ASTM) procedures or other suggested procedures. We tested selected soil samples for in-situ dry density and moisture content, maximum dry density and optimum moisture content, shear strength, water-soluble sulfate, pH and resistivity, chloride content, sand equivalent, R-value, plasticity index, and grain size characteristics. Refer to our Geotechnical Investigation Report, dated September 27, 2017 (Project No. G2133-52-01) for detailed results.

5. GROUND CHARACTERIZATION

5.1 Geologic Units

We identified the soil and geologic conditions at the site by reviewing published geologic literature for the general area, observations of the exploratory data, and our experience in the general area. The trenchless sewer segment is underlain by undocumented fill, alluvium, and granitic rock. The occurrence and distribution of the units are presented on the attached trench logs. The surficial soil types and geologic units are described below in order of increasing age.

5.2 Undocumented Fill (Qudf)

We encountered undocumented fill within Trenches T3 and T4. The thickness of the undocumented fill encountered ranges from approximately 3 to 5 feet. The fill was likely placed during the original
roadway construction. The fill is composed of medium dense, silty sand and clayey sand with varying amounts of gravel.

5.3 Alluvium (Qal)

We encountered alluvium underlying undocumented fill in both trenches. The thickness of the alluvium encountered in these trenches ranges from approximately 9½ feet to more than 11 feet. This material generally consists of loose to medium dense, silty sand and clayey sand with little gravel and occasional cobbles.

5.4 Granitic Rock (Kgr)

Cretaceous-age Granitic Rock (Tonalite) associated with the Peninsular Range Batholith underlies the surficial materials in the area. As encountered in Trench T4 and other exploration in the area, the mostly-massive granitic rock is characterized as medium- to coarse-grained, moderately to completely weathered, and weak to moderately strong. The near surface materials are highly to moderately weathered and can be excavated using heavy excavation effort. The soil derived from excavations within the decomposed granitic rock typically possesses a “very low” to “low” expansion potential (expansion index of 50 or less). The rock generally excavates as silty, medium- to coarse-grained sand.

5.5 Groundwater Conditions

We encountered heavy seepage at a depth of approximately 17 feet in Trench T4, or an elevation of approximately 277 feet (MSL). Trench T4 is located approximately 70 feet east of the proposed receiving pit. At the location of Boring B-1 (approximately 420 feet east of Trench T4), we also encountered perched groundwater within the alluvial soils of the Buena Vista Creek at a depth of approximately 12 feet, or elevation 283 feet (MSL). Heavy seepage and/or perched groundwater along the trenchless segment, if any, is likely between elevations 277 and 283 feet (MSL). Construction excavations above the elevation of 283 feet (MSL) generally are not expected to encounter heavy seepage and/or perched groundwater; however, it is common for groundwater or seepage conditions to develop where none previously existed. Groundwater elevations are dependent on seasonal precipitation; irrigation, land use, among other factors, and vary as a result. If heavy seepage and/or groundwater accumulates in the pit excavation, it should be pumped out prior to the installation of the pipeline.

6. DESIGN CONSIDERATIONS

6.1 General

6.1.1 From a geotechnical engineering standpoint, it is our opinion that subsurface conditions along the project alignment are suitable for the proposed pipeline improvement, provided
the recommendations presented herein are implemented in design and construction of the project.

6.1.2 Our field investigation indicates undocumented fill, alluvium, and granitic rock underlie the proposed trenchless sewer alignment. The proposed trenchless segment of the sewer trunk will likely be installed within alluvium, the transition zone between alluvium and granitic rock, and within the granitic bedrock with various stages of weathering. In general, the weathered granitic rock within a few feet of the proposed pipeline invert as currently planned is considered rippable or excavatable based on the subsurface conditions encountered within our test trenches and other exploratory borings advanced along the entire pipeline alignment. The depth to the top of unrippable or unexcavatable granitic rock should be expected 5 or more feet below the proposed pipeline invert elevation as currently planned based on subsurface data at the jacking and receiving pits. However, a mixed-face condition when the cutting tool encounters both soil and weathered granitic rock should be expected.

6.1.3 Heavy seepage and/or perched groundwater along the trenchless segment, if any, is likely between elevations 277 feet and 283 feet (MSL).

6.1.4 With the exception of possible strong seismic shaking, significant geologic hazards were not observed or are known to exist on the site that would adversely affect the proposed improvement.

6.1.5 The Contractor’s means and methods of excavation and construction should be compatible with the expected soil, rock, and groundwater conditions.

6.2 Excavation and Soil Characteristics

6.2.1 Excavation of the in-situ soil should be possible with moderate to heavy effort using conventional heavy-duty equipment. Corestones are common within the granitic bedrock, and could require special excavation equipment and very heavy effort if encountered. Some oversized rock fragments may be generated during excavation into the granitic rock.

6.2.2 The soil encountered in the field investigation is considered to be “non-expansive” (expansion index less than 20) to “expansive” (expansion index greater than 20), as defined by 2013 California Building Code (CBC) Section 1803.5.3. Table 6.2 presents soil classifications based on the expansion index. Based on our experience in the area, we expect the on-site materials will possess a “very low” to “medium” expansion potential (Expansion Index of 50 or less).
### TABLE 6.2
EXPANSION CLASSIFICATION BASED ON EXPANSION INDEX

<table>
<thead>
<tr>
<th>Expansion Index (EI)</th>
<th>Expansion Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 20</td>
<td>Very Low</td>
</tr>
<tr>
<td>21 – 50</td>
<td>Low</td>
</tr>
<tr>
<td>51 – 90</td>
<td>Medium</td>
</tr>
<tr>
<td>91 – 130</td>
<td>High</td>
</tr>
<tr>
<td>Greater Than 130</td>
<td>Very High</td>
</tr>
</tbody>
</table>

#### 6.3 Temporary Slope and Excavation Support

6.3.1 Temporary excavations should be made in conformance with OSHA requirements. The undocumented fill and alluvium should be considered a Type B (Type C soil if seepage or groundwater is encountered) soil and the granitic rock should be considered a Type A soil (Type B soil if seepage or groundwater is encountered) in accordance with OSHA requirements. In general, special shoring requirements will not be necessary if temporary excavations will be less than 5 feet in height. Temporary excavations greater than 5 feet in height, however, should be sloped back at an appropriate inclination. These excavations should not be allowed to become saturated or to dry out. Surcharge loads should not be permitted to a distance equal to the height of the excavation from the top of the excavation. The top of the excavation should be a minimum of 15 feet from the edge of existing improvements. Excavations steeper than those recommended or closer than 15 feet from an existing surface improvement should be shored in accordance with applicable OSHA codes and regulations.

6.3.2 Temporary, unsupported cuts in undocumented fill and alluvium should not be steeper than 1:1 (horizontal:vertical) up to 20 feet in height. Excavations in the granitic rock can be made with slopes of \( \frac{1}{2} : 1 \). Excavation slopes should be checked by an engineering geologist or geotechnical engineer to evaluate the existence of zones of weakness, groundwater seepage, or adversely oriented fractures that could form local areas of slope instability. Flatter slopes, shoring or safety shields will be needed in areas where sloughing, raveling or running is encountered. The contractor should be made aware of this potential and have the equipment available on site to flatten slopes or install shoring if necessary. Loose or easily erodible soils may be present locally and should be removed from the faces of excavation side slopes before personnel begin work below the slopes.

6.3.3 Where a portable safety shield is used to protect workers, the sidewall of the trench is not directly supported. Therefore, use of a shield generally should be limited to open areas to
minimize the effects on adjacent improvements or settlement of the ground surface behind the shield. Shields should be sized to minimize clearance between trench and shield walls. Unsupported trenches should be backfill immediately after removal of the shield.

6.3.4 Temporary cantilevered shoring can be designed for an active soil pressure equivalent to the pressure exerted by a fluid density of 25 pcf. Temporary multi-braced shoring should be designed using a lateral pressure envelope acting uniformly on the back of the shoring and applying a pressure equal to 16H, where H is the height of the shoring in feet (resulting pressure in pounds per square foot). Also, lateral earth pressure due to the surcharging effects of adjacent improvements or traffic loads should be considered where appropriate during design of the shoring system.

6.3.5 Passive soil pressure resistance for embedded portions of soldier piles can be estimated based on an equivalent fluid weight of 300 pounds per cubic foot (pcf) for undocumented fill and alluvium, and 400 pcf for granitic rock.

6.3.6 Lateral movement of shoring is associated with vertical ground settlement outside of the excavation. It is important that the shoring system allow limited amounts of lateral displacement. We recommend that horizontal movements of the shoring wall be accurately monitored and recorded during excavation if adjacent settlement sensitive improvements are present.

6.3.7 Lagging should keep pace with excavation. The excavation should not be advanced deeper than three feet below the bottom of lagging at any time. These unlagged gaps of up to 3 feet should only be allowed to stand for short periods of time in order to decrease the probability of soil instability and should never be unsupported overnight. Backfilling should be conducted when necessary between the back of lagging and excavation sidewalls to reduce sloughing in this zone, and all voids should be filled by the end of each day.

6.3.8 The condition of existing streets and other structures around the perimeter of the planned excavation should be documented prior to the start of shoring and excavation work. Special attention should be given to documenting existing cracks or other indications of differential settlement within these adjacent pavements and other improvements.

6.3.9 Difficult drilling should be expected where shoring extends into the granitic rock.
6.4 Jacking Pit and Thrust Block

6.4.1 We understand that trenchless construction methods including jack and bore (pipe jacking) and/or microtunneling are being considered.

6.4.2 Shoring for the excavation of jacking and receiving pits, if applicable, should be designed utilizing the parameters in Section 6.3. Shoring should generally be extended 10 feet or more below the excavation bottoms if sheet piles or similar systems are used in soil sites. Sealing sheet-pile into weathered rock may also be utilized to accommodate bottom heave if groundwater is encountered and rock is competent. If dewatering is used to drain only the interior of the pit, inclusion of hydrostatic pressure is considered necessary.

6.4.3 Excavated soil should not be placed within a horizontal distance equal to the depth of excavation from the edge of the excavation. If soil is stored within this zone, a vertical surcharge pressure of 130H psf (where H equals the height of the stockpiled soils) should be added to the above active pressures.

6.4.4 If groundwater is encountered, bottom heave should be taken into consideration if the shoring system represents an impermeable barrier to water. A layer of freely draining gravel or crushed rock (2 or more feet thick) would assist in reducing the potential for piping as well as to provide a working pad for tunneling construction.

6.4.5 Thrust blocks used to resist lateral loads from the connecting pipes can be designed with an allowable lateral bearing pressure of 300 psf per foot of depth for undocumented fill and alluvium, and 400 psf per foot for granitic rock. Frictional resistance between the thrust restraint system and the supporting soil can be calculated using an ultimate friction factor of 0.4. Allowable lateral loads and friction values should be determined by the designer using factors of safety appropriate to the load conditions.

6.4.6 The design and construction of thrust block should take into account the potential for settlement behind the supports, including settlement resulting from deflection of bracing.

6.4.7 Any fill associated with the jacking/receiving pits should be mechanically compacted in layers to the finish ground surface. Backfill should be compacted to at least 90 percent of maximum dry density as determined by ASTM D1557 at or slightly above optimum moisture content.
6.5 **Bearing Capacity for Pipeline**

6.5.1 Our exploration indicated that on-site soils generally have adequate bearing capacity for support of the proposed pipeline. Consequently, pipeline settlement should be negligible.

6.5.2 We encountered heavy seepage and perched groundwater between elevations 277 feet and 283 feet (MSL) in Trench T4 and Boring B-1 located approximately 70 feet and 490 feet east of the proposed receiving pit. If groundwater encountered above the proposed pipeline invert elevation, uplift buoyance forces should be considered in design and construction.

6.6 **Design of Flexible Pipe**

6.6.1 Loading on the pipeline will depend on the depth of cover and the unit weight of compacted backfill. An average total unit weight of 130 pounds per cubic feet (pcf) can be used to calculate the overburden pressure on the pipe. The modulus of soil reaction (E') used in determination of pipe deflection depends mainly on the compacted densities of bedding and backfill materials. It also varies slightly with the depth of pipe and the soil type. The estimated soil modulus for the subject pipeline is approximately 1,700 pounds per square inch (psi), assuming bedding materials will be imported and the backfill materials will be derived locally and compacted to a minimum relative compaction of 90 percent (based on ASTM D 1557).

6.7 **Dewatering**

6.7.1 Groundwater along the trenchless segment, if any, is likely between elevations 277 and 283 feet (MSL). Significant amounts of groundwater, if encountered during pit excavation, should be pumped away to facilitate the installation of pipeline.

7. **CONSTRUCTION CONSIDERATIONS**

7.1 **Trenchless Construction**

7.1.1 Pipe jacking and/or microtunneling should be constructed in accordance with the *Greenbook Standard Specifications for Public Works Construction*, Sections 306-2 and/or 306-8, to maintain the line and grade of the proposed pipe. All underground openings should be constructed in strict compliance with the California Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit, OSHA, and Cal-OSHA for work safety and public liability.

7.1.2 Along the proposed trenchless pipeline segment, alluvium and granitic rock with varying degrees of weathering were encountered in our test Trench T4. The contractor should select
the appropriate drill bits or tunneling machine cutting tools suitable to accommodate mixed-face conditions and cemented zones and resistant materials.

7.1.3 The line friction load acting on the pipeline as it is jacked behind the shield is influenced by many factors and is therefore difficult to estimate. However, line friction load during jacking operation can be reduced by the application of lubricating fluids, such as bentonite-based lubricants or polymer-based lubricants. The selection and application of such a lubricant should be determined by the contractor.

7.2 **Ground Control and Improvement**

7.2.1 Earth pressure counter-balance tunneling systems are available which rely on mechanical systems to balance earth pressures. By reducing changes in pressures experienced by the ground as tunneling proceeds, potential deflections at the ground surface can be reduced. The type of tunneling, drilling, or pipe jacking system used can be selected by the contractor. It is important that the contractor be provided with complete soil, underground utility, and groundwater information so that appropriate equipment can be mobilized. In addition, providing adequate information before the project starts will be vital if claims for changed conditions are filed during construction.

7.2.2 The contractor should monitor existing pavement areas and adjacent improvements for surface deflection (settlement or heave) during construction so that appropriate modification to the excavation and shoring system as well as pipe jacking, pipe-bursting, directional drilling, and microtunneling equipment are implemented to minimize the surface deflection in a timely manner.

7.2.3 In addition to existing improvements, other underground utilities may exist near and above the proposed pipe. The actual depths and locations of some of these pipes may not be known accurately. The bedding for these pipes may also carry significant quantities of water. To reduce the settlement potential and avoid damaging adjacent pipelines (by undermining the pipe if the bedding material is encountered in the heading), the bedding material supporting the overlying pipe can be stabilized locally using cement grout from the ground surface.

7.3 **Plan Review**

7.3.1 We recommend that the final plans and specifications be reviewed by Geocon Incorporated to evaluate if the plans and details have been prepared in substantial conformance with the recommendations contained within this report.
LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
THE GEOGRAPHICAL INFORMATION MADE AVAILABLE FOR DISPLAY WAS PROVIDED BY GOOGLE EARTH, SUBJECT TO A LICENSING AGREEMENT. THE INFORMATION IS FOR ILLUSTRATIVE PURPOSES ONLY; IT IS NOT INTENDED FOR CLIENT'S USE OR RELIANCE AND SHALL NOT BE REPRODUCED BY CLIENT. CLIENT SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS GEOCON FROM ANY LIABILITY INCURRED AS A RESULT OF SUCH USE OR RELIANCE BY CLIENT.

VICINITY MAP

VISTA VILLAGE DRIVE
TRUNK SEWER V2
VISTA, CALIFORNIA

GEOCON INCORPORATED
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
6960 FLANDERS DRIVE • SAN DIEGO, CALIFORNIA 92121 • 2974
PHONE 858.558-6900 • FAX 858.558-6159

AS / RA  DSK/GTYPD  DATE 05 - 08 - 2018  PROJECT NO. G2133 - 52 - 01  FIG. 1

Plotted:05/08/2018 1:50PM | By:RUBEN AGUILAR | File Location:PROJECTS/G2133-52-01 Vista Village Drive Trunk Sewer/DETAILS/G2133-52-01 VicinityMap.png
### TRENCH T 3

**ELEV. (MSL.)** | **DATE COMPLETED** | **02-05-2018**
--- | --- | ---
**EQUIPMENT** | **BY:** | **A. SADR**
--- | --- | ---

<table>
<thead>
<tr>
<th>DEPTH IN FEET</th>
<th>SAMPLE NO.</th>
<th>SOIL CLASS (USCS)</th>
<th>GROUNDWATER</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td></td>
<td>SM</td>
<td>±6&quot; ASPHALT CONCRETE</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>GP</td>
<td>MONDOCUENTED FILL (Qudf)</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>SC-SM</td>
<td>ALLUVIUM (Qal)</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td>Medium dense, wet, dark brown, Silty and Clayey, fine to medium SAND</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td>- Becomes fine to coarse, trace pinholes and chunks black clayey sand</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td>- Subrounded gravel and cobble (basal gravel)</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td>GRANITIC ROCK (Kgr)</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td>Highly weathered, dark reddish brown, weak, coarse grained GRANITE</td>
</tr>
</tbody>
</table>

**TRENCH TERMINATED AT 15 FEET**

---

**Figure A-3,**
Log of Trench T 3, Page 1 of 1

**SAMPLE SYMBOLS**

- .. SAMPLING UNSUCCESSFUL
- .. STANDARD PENETRATION TEST
- .. DRIVE SAMPLE (UNDISTURBED)
- .. DISTURBED OR BAG SAMPLE
- .. CHUNK SAMPLE
- .. WATER TABLE OR SEEPAGE

**NOTE:** THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.
### Material Description

#### Asphalt Concrete
- Undocumented Fill (Qudf)
  - Medium dense, moist, grayish brown, Silty, fine to coarse SAND; little gravel

#### Alluvium (Qal)
- Loose to medium dense, wet, very dark brown mottled black, Silty, Clayey SAND
  - Becomes firm, very dark brown, sandy clay
  - Becomes dark grayish brown

#### Trench Terminated at 18 Feet

---

**Figure A-4,**

Log of Trench T 4, Page 1 of 1

---

**Sample Symbols**
- \( \square \) Sampling unsuccessful
- \( \blacksquare \) Standard Penetration test
- \( \equiv \) Drive sample (undisturbed)
- \( \equiv \equiv \) Disturbed or bag sample
- \( \nabla \) Chunk sample
- \( \nabla \equiv \) Water table or seepage

**Note:** The log of subsurface conditions shown hereon applies only at the specific boring or trench location and at the date indicated. It is not warranted to be representative of subsurface conditions at other locations and times.
LIST OF REFERENCES


2. Boore, D. M., and G. M Atkinson, Ground Motion Prediction Equations for the Average Horizontal Component of PGA, PVG, and 5%-Ramped PSA at Spectral Periods Between 0.01s and 10.0s, Earthquake Spectra, Vol. 24, Issue 1, February 2008.


4. Campbell, K. W., and Y. Bozorgnia, NGA Ground Motion Model for the Geometric Mean Horizontal Component of PGA, PGV, PGD and 5% Damped Linear Elastic Response Spectra for Periods Ranging from 0.01 to 10 s, Preprint of version submitted for publication in the NGA Special Volume of Earthquake Spectra, Volume 24, Issue 1, pages 139-171, February 2008.


8. Kennedy, M. P., and S. S. Tan, 2005, Geologic Map of the Oceanside 30'x60' Quadrangle, California, USGS Regional Map Series, Scale 1:100,000.


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APPENDIX B
Water Pollution Control Plan for West Vista Way Upsize and Realignment
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WATER POLLUTION CONTROL PROGRAM (WPCP)

For
Vista Village Trunk Sewer Improvements, CIP 8212

Caltrans Encroachment Permit Number for Local Agency / Private Entity:
Caltrans Encroachment Permit Number for Contractor:

Prepared for:
City of Vista
200 Civic Center Dr
Vista, CA 92084
Elmer Alex
760-643-5416

Submitted by:
TC Construction CO, Inc
10540 Prospect Ave
Santee, CA 92071
619-448-4560
Elan Schier

Project Site Address
Pipe Undercrossing of SR78, Milepost 5.74 Near Brass Lane

Contractor’s Water Pollution Control (WPC) Manager
Rocky Anderson
619-448-4560

Contractor’s Designated Water Pollution Control Inspector (if different from WPC Manager)

WPCP Prepared by:
Michael Baker International
9755 Clairemont Mesa Blvd
San Diego, CA 92124
858-614-5000
Carlos Mendoza Project Manager

*WPCP Preparation Date*

07/06/2017

Less than 1 acre of soil disturbance.
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Appendix B .................................................................CEM-2009 SWPPP/WPCP Amendments Log
Appendix C .................................................................CEM-2023 Stormwater Training Record
Appendix D .................................................................CEM-2024 Stormwater Training Log - Optional
Appendix E .......................................................................No longer needed
Appendix G .................................................................CEM-2030 Stormwater Site Inspection Report
Appendix H .................................................................CEM-2035 Stormwater Corrective Actions Summary
Appendix I .................................................................CEM-2061 Notice of Discharge Report
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SECTION 10
WPCP Certification and Acceptance

10.1 Contractor’s Certification and Acceptance by the Resident Engineer

WPCP PREPARER CERTIFICATION OF WPCP

“I certify that I have the qualifications and certifications specified for a Qualified SWPPP Developer (QSD) or Qualified SWPPP Practitioner (QSP) shown in the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No.CAS000002, Section VII, Training Qualifications and Certification Requirements.

I certify that this WPCP meets the requirements set forth in the contract special provisions, Caltrans Standard Specifications, and the Caltrans SWPPP/WPCP Preparation Manual.

I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Carlos Mendoza

WPCP Preparer Signature

11/02/2017

Date

858-614-5000

Telephone Number

WPCP Preparer Name

Project Manager

WPCP Preparer Title

CONTRACTOR’S CERTIFICATION OF WPCP

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Elan Schier

Contractor’s Signature

11/02/2017

Date

619-448-4560

Telephone Number

Contractor’s Name

Project Manager

Contractor’s Title
For Use by Local Agency / Private Entity Only

LOCAL AGENCY / PRIVATE ENTITY RESIDENT ENGINEER'S ACCEPTANCE OF WPCP

"I certify under a penalty of law that this document and all attachments were reviewed under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

This WPCP is accepted based on a review performed by myself or personnel acting under my direction, that determined that the WPCP meets the requirements set forth in the contract special provisions, Caltrans Standard Specifications, and the Caltrans SWPPP/WPCP Preparation Manual.

Resident Engineer’s Signature
Elmer Alex
Resident Engineer’s Name

Date
760-643-5416
Resident Engineer’s Name Telephone Number

For Use by Caltrans Only

CALTRANS OVERSIGHT ENGINEER’S CONCURRENCE OF WPCP

I, and/or personnel acting under my direction and supervision, have reviewed this WPCP and concur with the Resident Engineer’s findings that it meets the requirements set forth in the contract special provisions, Caltrans Standard Specifications, and the Caltrans SWPPP/WPCP Preparation Manual.

Caltrans Oversight Engineer’s Signature
Caltrans Oversight Engineer’s Name

Date of WPCP Concurrence
Date
Resident Engineer’s Name Telephone Number

10.2 Amendments

The WPCP shall be amended whenever there is a change in construction or operations that may cause the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems, or when deemed necessary by the Resident Engineer. The WPCP must be amended when:

- changes in work activities could affect the discharge of pollutants
Water Pollution Control Program (WPCP)

Vista Village Trunk Sewer Improvements, CIP 8212

- WPC practices are added by contract change order
- WPC practices are added at the contractor’s discretion

Amendments to WPCP shall be documented in letter format and include revised Water Pollution Control Drawing sheets, as appropriate. WPCP amendments shall be certified by the contractor and require acceptance by Caltrans or Local Agency / Private Entity Resident Engineer. For encroachment permit projects, Caltrans Oversight Engineer concurrence is required. Documentation of WPCP amendment certification, acceptance and Caltrans Oversight Engineer concurrence, if required will be documented using CEM-2008 SWPPP/WPCP Amendment Certification and Acceptance form in Appendix A.

All WPCP amendments shall be documented on CEM-2009 SWPPP/WPCP Amendments Log which includes:

- amendment number
- amendment date
- brief description of the amendment
- name of individual requesting amendment
- amendment acceptance date.

All WPCP amendments shall be logged on CEM-2009 SWPPP/WPCP Amendment Log form, in Appendix B. Accepted amendments with an updated amendment log shall be attached to the contractor's on-site WPCP in

10.3 Contractor’s Annual Certification and Acceptance by the Resident Engineer

Each year by July 15 the contractor shall certify that the water pollution control measures are being implemented in accordance with the accepted WPCP for the project, including accepted WPCP amendments. The contractor shall submit the annual certification to the Resident Engineer for acceptance. Documentation of annual certification shall be on CEM-2070 SWPPP/WPCP Annual Certification of Compliance form, in Appendix K.
SECTION 20
Project and Contractor Information

20.1 Project Description

The construction project is located in San Diego County, in Vista City, on West Vista Way and across SR78 at postmile 5.74. The project consists of over 3,300 feet of new 24" sewer pipe. Project runoff is expected to remain consistent with pre-construction. Currently, flow travels east and west from a high point at Melrose Dr along W Vista Way (parallel to the construction site) to a series of curb inlets that lead into existing culverts. The total disturbed area is 0.275 acres.

20.2 Unique Site Features

The sewer pipe will cross SR78 at postmile 5.74 and under Buena Vista Creek to Hacienda Dr via horizontal directional drilling. There is a minimum of 3.5 feet of clearance between the creek bed and top of proposed pipe.

20.3 Contact Information for Responsible Parties

Resident Engineer

Name: Elmer Alex  
Title: Resident Engineer  
Company: City of Vista  
Address: 200 Civic Center Dr  
Vista, CA 92084  
Phone Number: 760-643-5416  
Emergency Phone Number (24/7) 760-643-5416  
Email address: ealex@ci.vista.ca.us

Contractor

Name: Elan Schier  
Title: Project Manager  
Company: TC Construction CO, Inc  
Address: 10540 Prospect Ave  
Santee, CA 92071
20.4 Training

Rocky Anderson, the WPC Manager for this project, meets the Qualified SWPPP Practitioner (QSP) registration or certification requirement of Section VII., “Training Qualifications and Certification Requirements,” of the Construction General Permit based on:

- QSP/ CESSWI Certification

The WPC Manager has received the following training:
The WPC Manager has the following WPCP development and implementation experience:

- Has 7 years of experience as a WPC Manager
- Has 15 years of experience working on construction sites

The WPCP for this project was developed by [Name], who meets the Qualified SWPPP Practitioner (QSP) registration or certification requirement of Section VII., “Training Qualifications and Certification Requirements,” of the Construction General Permit based on:

- temporary soil stabilization
- temporary sediment control
- tracking control
- wind erosion control
- material pollution prevention control
- waste management
- non-storm water management
- identifying and handling hazardous substances
- potential dangers to humans and the environment from spills and leaks or exposure to toxic or hazardous substances

Contractor or subcontractor employees responsible for water pollution control best management practices (BMPs) installation, maintenance and repair have received the following training:

- Contractor & Subcontractor employees have been/will be trained by our QSP Inspectors monthly at jobsite tailgate meetings.

Contractor and subcontractor employees shall be trained prior to working on the site in the following subjects:

- water pollution control rules and regulations.
- implementation and maintenance for:
  - temporary soil stabilization
  - temporary sediment control
  - tracking control
  - wind erosion control
  - material pollution prevention control
  - waste management
  - non-storm water management
- identifying and handling hazardous substances
Informal employee training shall include tailgate site meetings to be conducted weekly and address the following topics:

- water pollution control best management practices (BMPs) deficiencies and corrective actions
- BMPs that are required for work activities during the week
- spill prevention and control
- material delivery, storage, use, and disposal
- waste management
- non-stormwater management

A summary of formal and informal training of various personnel is shown in Attachment D. A copy of all training certificate(s) for the WPC Manager and the WPCP Preparer are included in Attachment D.

Stormwater training for project personnel shall be documented on form CEM-2023 Stormwater Training shown in Appendix C. For each training occurrence, both a training record and an updated training log, form CEM-2024 Stormwater Training Log shown in Appendix D, must be completed. A copy of the training log, training record and copies of all training certificates for project personnel will be kept in WPCP file category 20.23 Contractor Personnel Training Documentation. An updated training log and documentation of new training shall be submitted to the RE within 5 days of training.
SECTION 30
Pollution Sources and Control Measures

30.1 Pollutant Sources

30.1.1 Inventory of Materials and Activities that May Pollute Stormwater

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to stormwater runoff:

- Vehicle fluids, including oil, grease, petroleum, and coolants
- Asphalitic emulsions associated with asphalt-concrete paving operations
- Base and subbase material
- BMP materials (sandbags, liquid copolymer)
- General Litter
- Drilling Fluids

The following is a list of construction activities that have the potential to contribute sediment to stormwater discharges include:

- Excavation
- Stockpiling
- Soil Import
- Slurry seal sand
- Horizontal Directional Drilling

30.1.2 Potential Pollutants from Site Features or Known Contaminants

Existing site features that, as a result of past usage, may contribute pollutants to stormwater (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- None

The following contaminants are known to exist at the project site locations identified:

- None

30.2 Soil Stabilization (Erosion Control) and Sediment Control
30.2.1 Soil Stabilization BMPs

The following soil stabilization BMP implementation table indicates the BMPs that shall be implemented to control erosion on the construction site. Implementation and locations of temporary soil stabilization BMPs are shown on the WPCDs in Attachment A and described in this section. Any additional BMP detail drawing necessary to convey site specific BMP configurations can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

<table>
<thead>
<tr>
<th>CONSTRUCTION BMP ID NO.(1)</th>
<th>BMP NAME</th>
<th>CONTRACT MIN REQUIREMENT(2)</th>
<th>CONTRACT BID ITEM</th>
<th>BMP USED</th>
<th>IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-1</td>
<td>Scheduling</td>
<td>✔</td>
<td>✔</td>
<td>⊗</td>
<td>○</td>
</tr>
<tr>
<td>SS-2</td>
<td>Preservation of Property/Preservation of Existing Vegetation</td>
<td>✔</td>
<td>✔</td>
<td>⊗</td>
<td>○</td>
</tr>
<tr>
<td>SS-3 Bonded</td>
<td>Temporary Hydraulic Mulch (Bonded Stabilized Fiber Matrix)</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
<tr>
<td>SS-3 Polymer</td>
<td>Temporary Hydraulic Mulch (Polymer Stabilized Fiber Matrix)</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
<tr>
<td>SS-4</td>
<td>Temporary Erosion Control (With Temporary Seeding)</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
<tr>
<td>SS-5</td>
<td>Temporary Soil Stabilizer</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
<tr>
<td>SS-6</td>
<td>Temporary Erosion Control (Straw Mulch with Stabilizing Emulsion)</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
<tr>
<td>SS-7 Slope</td>
<td>Temporary Erosion Control Blanket (On Slope)</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
<tr>
<td>SS-7 Swale</td>
<td>Temporary Erosion Control Blanket (In swale or ditch)</td>
<td>☐</td>
<td>☐</td>
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<td>♦</td>
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<tr>
<td>SS-7 Geotextile</td>
<td>Temporary Cover (Geotextiles and Mats)</td>
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<td>♦</td>
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<td>SS-8</td>
<td>Temporary Mulch (Wood)</td>
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<td>SS-9</td>
<td>Earth Dikes / Drainage Swales &amp; Lined Swales</td>
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<td>☐</td>
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<td>♦</td>
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<tr>
<td>SS-10</td>
<td>Outlet Protection / Velocity Dissipation Devices</td>
<td>☐</td>
<td>☐</td>
<td>○</td>
<td>♦</td>
</tr>
</tbody>
</table>
Soil Stabilization BMPs

The following sediment control BMP implementation table indicates the BMPs that shall be implemented to control sediment on the construction site. Implementation and locations of temporary sediment control BMPs are shown on the WPCDs in Attachment A and described in this section. Any additional BMP detail drawings necessary to convey site specific BMP configurations can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

### TEMPORARY SEDIMENT CONTROL BMPs

<table>
<thead>
<tr>
<th>BMP ID NO.</th>
<th>BMP NAME</th>
<th>CONTRACT MIN REQUIREMENT</th>
<th>CONTRACT BID ITEM</th>
<th>BMP USED</th>
<th>IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-1</td>
<td>Temporary Silt Fence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-2</td>
<td>Temporary Sediment Basin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-4</td>
<td>Temporary Check Dam</td>
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<tr>
<td>SC-5</td>
<td>Temporary Fiber Rolls</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-6</td>
<td>Temporary Gravel Bag Berm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-7</td>
<td>Street Sweeping</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC-8</td>
<td>Temporary Sandbag Barrier</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site Best Management Practices (BMPs) Reference Manual is a required contract document.
(2) Minimum requirements are based on the required contract plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the WPCP Preparer or WPC Manager.
(3) Use of alternative BMPs will require written approval by the Resident Engineer.
### Tracking Control BMPs

The following tracking control BMP implementation table indicates the BMPs that shall be implemented to reduce sediment tracking from the construction site onto private or public roads. Implementation and locations of tracking control BMPs are shown on the WPCDs in Attachment A and described in this section. Any additional BMP detail drawings necessary to convey site specific BMP configurations can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

#### TEMPORARY TRACKING CONTROL BMPs

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<tr>
<th>CONSTRUCTION BMP ID NO.</th>
<th>BMP NAME</th>
<th>CONTRACT MIN REQUIREMENT</th>
<th>CONTRACT BID ITEM</th>
<th>BMP USED</th>
<th>IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-7</td>
<td>Street Sweeping</td>
<td>✗</td>
<td>No</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>TC-1</td>
<td>Temporary Construction Entrance</td>
<td>✗</td>
<td>No</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>TC-2</td>
<td>Stabilization Construction Roadway</td>
<td>✗</td>
<td>No</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>TC-3</td>
<td>Temporary Entrance / Outlet Tire Wash</td>
<td>No</td>
<td>No</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

**ALTERNATIVE TRACKING CONTROL BMPs USED**

Notes:
1. The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site Best Management Practices (BMPs) Reference Manual is a required contract document.
2. Minimum requirements are based on the required contract plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the WPCP Preparer or WPC Manager.
3. Use of alternative BMPs will require written approval by the Resident Engineer.

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**Notes:**
1. The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site Best Management Practices (BMPs) Reference Manual is a required contract document.
2. Minimum requirements are based on the required contract plans and specifications. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the WPCP Preparer or WPC Manager.
3. Use of alternative BMPs will require written approval by the Resident Engineer.
30.2.4 Wind Erosion Control BMPs

The following wind erosion control BMP implementation table indicates the BMPs that shall be implemented to control wind erosion on the construction site. Implementation and locations of wind erosion control BMPs are shown on the WPCDs in Attachment A and/or described in this section. The following list of BMPs and narrative explain how the selected BMPs shall be incorporated into the project.

<table>
<thead>
<tr>
<th>TEMPORARY WIND EROSION CONTROL BMPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE-1</td>
</tr>
<tr>
<td>TC-1</td>
</tr>
<tr>
<td>TC-2</td>
</tr>
<tr>
<td>Allocated</td>
</tr>
</tbody>
</table>

Notes:
1. The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site Best Management Practices (BMPs) Reference Manual is a required contract document.
2. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the contractor and approved by the Resident Engineer.
3. Use of Alternative BMPs will require written approval by the Resident Engineer.

30.3 Construction Site Management

30.3.1 Non-Stormwater Management BMPs

The following BMP implementation table indicates the BMPs that have been selected to control non-stormwater pollution on the construction site. Implementation and locations of non-stormwater control BMPs are shown on the WPCDs in Attachment A and described in this section. Any additional BMP detail drawings necessary to convey site specific BMP configurations can also be found in Attachment A of this WPCP.
<table>
<thead>
<tr>
<th>BMP ID NO.</th>
<th>MIN REQUIREMENT</th>
<th>BID ITEM</th>
<th>REQUIREMENT BUT NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS-1</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-2</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-3</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-4</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-5</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-6</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-7</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-8</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-9</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-10</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-11</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-12</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-13</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-14</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
<tr>
<td>NS-15</td>
<td>![Checkmark]</td>
<td>![Checkmark]</td>
<td>Yes</td>
</tr>
</tbody>
</table>

ALTERNATIVE NON-STORMWATER POLLUTION CONTROL BMPs USED

- Yes
- No
### 30.3.2 Waste Management and Materials Pollution Control BMPs

The following BMP implementation table indicates the BMPs that have been selected to control pollutants from construction site wastes and materials. Implementation and locations of materials handling and waste management BMPs are shown on the WPCDs in Attachment A. Any additional BMP detail drawings necessary to convey site specific BMP configurations can also be found in Attachment A of this WPCP. The following list of BMPs and narrative explain how the selected BMPs will be incorporated into the project.

<p>| Construction Site Management Waste Management and Materials Pollution Control BMPs |
|-----------------------------------------------|---------------------------------|-------------------|-----------------|----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>CONSTRUCTION BMP ID NO.</th>
<th>BMP NAME</th>
<th>CONTRACT MIN REQUIREMENT</th>
<th>CONTRACT BID ITEM</th>
<th>BMP USED</th>
<th>IF A CONTRACT MINIMUM REQUIREMENT BUT NOT USED, STATE REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>WM-1</td>
<td>Material Delivery and Storage</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>WM-2</td>
<td>Material Use</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-3</td>
<td>Stockpile Management</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-4</td>
<td>Spill Prevention and Control</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-5</td>
<td>Solid Waste Management</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-6</td>
<td>Hazard Waste Management (3)</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-7</td>
<td>Contaminated Soil Management (3)</td>
<td>✓</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-8 managed</td>
<td>Concrete Waste Management</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-8 temporary</td>
<td>Temporary Concrete Washout Facility</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>WM-8 portable</td>
<td>Temporary Concrete Washout (Portable)</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes:
1. The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site Best Management Practices (BMPs) Reference Manual is a required contract document.
2. Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be determined by the contractor and approved by the Resident Engineer.
3. The BMPs listed above are incidental and do not include operations included as separated line items in the contract.
4. Use of alternative BMPs will require written approval by the Resident Engineer.
WM-9  | Sanitary/Septic Waste Management | ☑ | ☐ | ☐ | ☐
WM-10 | Liquid Waste Maintenance        | ☐ | ☐ | ☐ | ☐

ALTERNATIVE WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs USED (4)
- Yes
- No

Notes:
(1) The BMP designations (SS-1, SC-3, etc.) are solely for maintaining continuity with existing Caltrans documents and are not provided to imply that the Construction Site Best Management Practices (BMPs) Reference Manual is a required contract document.
(2) Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor and approved by the Resident Engineer.
(3) The BMPs listed above are incidental and do not include operations included as separated line items in the contract.
(4) Use of alternative BMPs will require written approval by the Resident Engineer.

30.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings (WPCDs) show the necessary BMPs by project phase/stage for the project to be in compliance with water pollution control requirements. The WPCDs provide field staff with the information on where to install BMPs so that they are effective. The WPCDs and Water Pollution Control Schedule provide the necessary tools for a contractor to plan and implement BMPs to meet the requirements of the project WPCP.

The WPCD cover sheet(s) shall include a listing of the BMPs that will be used along with the associated BMP symbols used on the WPCDs.

WPCDs are provided for all areas that are directly related to the construction activity, including but not limited to staging areas, storage yards, material borrow areas and storage areas, access roads, etc., whether or not they reside within the Caltrans rights-of-way.

The WPCDs shall show the construction project site in detail, including:
- construction site perimeter
- geographic features within or immediately adjacent to the site, including surface waters such as lakes, streams, springs, wetlands, estuaries, ponds, and the ocean
- site topography before and after construction, including roads, paved areas, buildings, slopes, drainage facilities, and areas of known or suspected contamination
- permanent (post-construction) BMPs

The WPCDs shall show the following site information:
- discharge points from the project to offsite storm drain systems or receiving waters
- tributary areas and drainage patterns across the project area (show using flow arrows) into each onsite stormwater inlet or receiving water
- tributary areas and drainage patterns to each onsite stormwater inlet, receiving water or discharge point
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- offsite tributary drainage areas that generate run-on to the project
- temporary onsite drainage(s) to carry concentrated flows
- drainage patterns and slopes anticipated after major grading activities are completed
- outline of all areas of existing vegetation, soil cover, or native vegetation that will remain undisturbed during the project
- outline of all areas of planned soil disturbance (disturbed soil areas, DSAs)
- known location(s) of contaminated or hazardous soils
- any potential non-stormwater discharges and activities, such as dewatering operations, concrete saw-cutting or coring, pressure washing, waterline flushing, diversions, cofferdams, and vehicle and equipment cleaning. If operations can’t be located on the WPCDs, a narrative description is provided.

The WPCDs show proposed locations of all construction site BMPs. Additional detail drawings are provided if necessary to convey site-specific BMP configurations. The WPCDs shall show construction site BMPs including the following:

- temporary soil stabilization and temporary sediment control BMPs that will be used during construction. Any temporary onsite drainage(s) to carry concentrated flows, BMPs implemented to divert offsite drainage around or through the construction site, and BMPs that protect stormwater inlets
- construction entrances used for site ingress and egress entrance and exit points and any proposed temporary construction roads
- BMPs to mitigate or eliminate non-stormwater discharges
- BMPs for waste management and materials pollution control, including, but not limited to storage of soil or waste; construction material loading, unloading, storage and access areas; and areas designated for waste handling and disposal
- BMPs for vehicle and equipment storage, fueling, maintenance, and cleaning

The WPCDs are included as Attachment A to this WPCP.

### 30.5 Water Pollution Control Schedule

The Water Pollution Control Schedule (WPCS) is the component of the project WPCP that shows the timeline for when BMPs will be installed so that the project is in compliance with water pollution control requirements. The WPCS provides field staff with the information necessary to plan for adequate materials and crews to install BMPs at the right time so that they are effective. The Water Pollution Control Schedule and Water Pollution Control Drawings provide the necessary tools for a contractor to plan and implement BMPs to meet the requirements of the project WPCP.

The WPCS shall contain an adequate level of detail to show major activities sequenced with implementation of construction site BMPs, including:

- project start and finish dates, including each stage of the project
- WPCP review and acceptance
● mobilization dates
● mass clearing and grubbing/roadside clearing dates
● major grading/excavation dates
● dates named in other permits such as Fish and Game and Army Corps of Engineers Permits

The WPCS shall show implementation dates by location for deployment of:

● temporary soil stabilization BMPs
● temporary sediment control BMPs
● wind erosion control BMPs
● tracking control BMPs
● non-stormwater BMPs
● waste management and materials pollution control BMPs

The WPCS shall include:

● paving, saw-cutting, and any other pavement related operations
● major planned stockpiling operations
● dates for other significant long-term operations or activities that may cause non-stormwater discharges such as dewatering, grinding, etc.
● final stabilization activities for each disturbed soil area of the project

The WPCS when updated shall be filed in WPCP File Category 20.03 Water Pollution Control Schedule Updates.

The WPCS is included as Attachment B to this WPCP.
SECTION 40
WPCP Implementation

40.1 Water Pollution Control Manager Responsibilities

The Water Pollution Control Manager (WPC Manager) shall have primary responsibility and authority to implement the WPCP. The WPC Manager is responsible for WPCP implementation and amending the WPCP when any of the conditions specified in Section 10 are met. The Contractor has assigned authority to the WPC Manager to mobilize crews and subcontractors as necessary for WPCP compliance. The WPC Manager will be available at all times throughout duration of the project.

Duties of the contractor’s WPC Manager include but are not limited to:

- ensuring compliance with the WPCP
- implementing all elements of the WPCP and contract specifications, including but not limited to implementing:
  - prompt and effective erosion and sediment control measures
  - non-stormwater management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities, which will have an adverse effect on receiving waters or storm drain systems, etc.
- overseeing and ensuring that the following site inspections and visual monitoring is conducted:
  - daily required BMP inspections
  - weekly routine stormwater site BMP inspections
  - quarterly non-stormwater site inspections
  - pre-storm inspections for forecasted storm events
  - daily inspections during forecasted storm events
  - post-storm inspections for qualified rain events that produce project site runoff
- monitoring NWS Forecast Office forecasts for both storm events and qualified rain events; these events are defined as follows:
  - a forecasted storm event is defined as a 50% or greater likelihood that 0.10 inches or more of precipitation will fall within a 24-hour period
  - a qualifying rain event is defined as a rain event that may produce or has produced 1/2 inch or more of precipitation
- preparing Amendments to the WPCP when required
- ensuring elimination of all unauthorized discharges
- mobilizing crews in order to make immediate repairs to the control measures
• coordinating with the Resident Engineer to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the WPCP and approved plans at all times
• preparing and submitting Notices of Discharge Reports
• preparing and submitting Illicit Connections or Illegal Discharge Reports

40.2 Weather Forecast Monitoring

The Water Pollution Control Manager (WPC Manager) shall have primary responsibility to monitor the National Weather Service Forecast Office for forecasted precipitation based on project site location. Precipitation forecast information shall be obtained from the National Weather Service Forecast Office available at:

http://www.srh.noaa.gov/

The project site location to be used for obtaining forecast from National Weather Forecast Office website is

The WPC Manager shall monitor the weather forecast on a daily basis for predicted precipitation within the following 96 hours. The WPC Manager shall monitor the forecast for the next 24, 48, 72 and 96 hours to determine if the forecast for precipitation is 50 percent or greater for any 6-hour period. If the forecast for precipitation is 50 percent or greater, the WPC Manager shall calculate the amount of precipitation forecasted for each 24-hour period and the total precipitation for the forecasted storm event and record the information.

When there is a forecasted fifty percent (50%) or greater chance of likely precipitation of 0.10 inch” or more then a pre-storm stormwater site inspection is required and the WPC Manager shall ensure that the site is prepared for the forecasted storm event. Site preparation for a forecasted storm event shall include, but is not limited to, the installation of soil stabilization and sediment best management practices on active disturbed soil areas and stockpiles.

40.3 Best Management Practices Status Report

The Water Pollution Control Manager (WPC Manager) shall prepare a weekly status report of the water pollution control best management practices installed on the project site and best management practices that will be deployed the following week. Because the WPCP and WPCDs are based on the entire project site and all construction activities, the weekly BMP status report should be a “snapshot” of what best management practices could be expected to be seen on the project site that week. The weekly status report will be used by stormwater inspectors and contractor personnel to ensure WPCP compliance.

The weekly status report will be used to ensure that weekly training meetings cover BMPs that are required for work activities during the week. The weekly status report will be provided to regulatory agency staff who visit the project site to indicate which BMPs should be in place and which are scheduled to be implemented during the week.

The weekly status of stormwater BMPs will be documented on CEM-2034 Stormwater Best Management Practices Status Report form, in Appendix F. Completed weekly status reports shall be submitted to the RE 48 hours prior to the beginning of the work week. Copies of the completed reports will be kept in WPCP File Category 20.34: Best Management Practices Weekly Status Reports.

40.4 Stormwater Site Inspections and Site Visual Monitoring
Stormwater site inspections and visual monitoring are necessary to ensure that the project is in compliance with WPCP.

### 40.5 Stormwater Site Inspections

Project site inspections of stormwater BMPs are conducted to identify and record:

- that BMPs are properly installed
- what BMPs need maintenance to operate effectively
- what BMPs have failed
- what BMPs could fail to operate as intended

Routine stormwater site inspections shall be conducted by the Contractor’s WPC Manager or other 24-hour trained staff at the following minimum frequencies:

- daily for required BMPs
- weekly
- daily for projects within the Lake Tahoe Hydrologic Unit.

Stormwater site inspections will be documented on CEM-2030 Stormwater Site Inspection Report in Appendix G. Completed inspection reports shall be submitted to the RE within 24 hours of inspection. Copies of the completed reports will be kept in WPCP File Category 20.31: Contractor Stormwater Site Inspection Reports.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix H. Corrections summaries shall be submitted to the RE when corrections are completed but must be submitted within 5 days of a site inspection. Copies of the completed correction summary reports shall be attached to the corresponding Stormwater Site Inspection Report and shall be kept in WPCP File Category 20.31: Contractor Stormwater Site Inspection Reports.

### 40.6 Site Visual Monitoring

Stormwater site visual monitoring inspections shall be conducted at the following minimum frequencies:

- Prior to a forecasted storm event
- At 24-hour intervals during extended forecasted storm events
- Post qualifying rain event that generated site runoff
- Quarterly for non-stormwater discharges

Site visual monitoring inspections for non-stormwater discharges will be conducted once during each of the following periods: January-March, April-June, July-September, and October-December.

If visual monitoring of the site is unsafe because of dangerous weather conditions, such as flooding and electrical storms, the stormwater site inspector shall document the reason for the exception. Documentation that the site visual monitoring inspection could not be performed shall be filed in WPCP File Category 20.33: Site Visual Monitoring Inspection Reports.
40.6.1 Visual Monitoring Prior To a Forecasted Storm Event

Visual monitoring of the project site is required when the forecast for precipitation is greater than 50 percent within the next 24, 48, 72, or 96 hours and the amount of precipitation forecasted for any 24-hour period during the forecasted storm event is 0.10 inch or greater. Site visual monitoring for precipitation events shall be conducted within 48 hours prior to a forecasted storm event. The pre-storm site visual monitoring inspection shall visual observe:

- all stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources
- any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard
- all BMPs for proper installation and adequate maintenance

Observations of the site and any recommended corrective actions will be documented on CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on stormwater site inspection report.

40.6.2 Visual Monitoring During Extended Forecasted Storm Event

Stormwater visual monitoring site inspections shall be conducted at least once each 24-hour period during extended forecasted storm events. The during storm site visual monitoring inspection shall visual observe:

- stormwater discharges at all discharge locations
- any stored or contained stormwater that is derived from and discharged subsequent to the forecasted storm event. Stored or contained stormwater that will likely discharge after working hours due to anticipated precipitation shall be observed prior to the discharge during working hours.

Stormwater discharges and stored or contained stormwater will be observed for the presence or absence of floating and suspended materials, sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

A during forecasted storm event visual monitoring site inspection will include observation of all site BMPs for:

- proper installation
- maintenance
- failure
- BMPs that could fail to operate as intended
- effectiveness so that design changes can be implemented as soon as feasible

Observations of the site and any recommended corrective actions will be documented on CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on stormwater site inspection report.

Required corrective actions will be initiated within 72 hours after they are identified and completed as soon as possible.

40.6.3 Visual Monitoring Within 48 Hours After A Qualifying Rain Event Generating Site Runoff

Site visual monitoring post precipitation events shall be conducted within 48 hours of any qualifying rain event that causes site runoff. The post-storm site visual monitoring inspection shall visual observe:
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- Stormwater discharges at all discharge locations
- Any stored or contained stormwater that is derived from and discharged subsequent to the qualifying rain event. Stored or contained stormwater that will likely discharge after working hours due to anticipated precipitation shall be observed prior to the discharge during working hours.

Stormwater discharges and stored or contained stormwater will be observed for the presence or absence of floating and suspended materials, sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

Post qualifying rain event stormwater visual monitoring site inspection will include observation of all site BMPs for:

- proper installation
- maintenance
- failure
- BMPs that could fail to operate as intended
- effectiveness so that design changes can be implemented as soon as feasible

Observations of the site and any recommended corrective actions will be documented on fCEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on stormwater site inspection report.

Any corrective actions will be completed as soon as possible but if BMPs require design changes the implementation of changes will begin within 72 hours of identification and the changes will be completed as soon as possible.

40.6.4 Visual Monitoring Non-Stormwater Discharges

Visual monitoring and observations for non-stormwater discharges will be conducted for the presence or indications of prior unauthorized and authorized non-stormwater discharges and their sources. The presence or absence of non-stormwater discharges based on site observations will be documented on CEM-2030 Stormwater Site Inspection Report. Documentation of observed non-stormwater discharges will include presence or absence of floating and suspended materials, sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

Observations of the site and the response taken to eliminate any unauthorized non-stormwater discharges and to reduce or prevent pollutants from contacting non-stormwater discharges shall be documented on CEM-2030 Stormwater Site Inspection Report. Any photographs used to document observations will be referenced on stormwater site inspection report.

If a discharge or evidence of a prior discharge is discovered, reporting will comply with the requirements in Section 50-2 Discharge Reporting Requirements.

If an illicit connection or illegal discharge is discovered, reporting will comply with the requirements in Section 50-4 Illicit Connection/Illegal Discharge Reporting.

40.6.5 Visual Monitoring Documentation, Follow-up and Tracking Procedures

Site visual monitoring site inspections will be documented on CEM-2030 Stormwater Site Inspection Report, in Appendix G. Completed inspection reports shall be submitted to the Resident Engineer within 24 hours of inspection. Copies of the completed reports will be kept in WPCP File Category 20.33: Site Visual Monitoring Inspection Reports.
For deficiencies identified by site visual monitoring inspections the required repairs or maintenance of BMPs shall begin and be completed as soon as possible. For deficiencies identified by visual site inspections that require design changes, including additional BMPs, the implementation of changes will begin within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required the WPCP shall be amended, including Water Pollution Control Drawings.

Deficiencies identified in site visual monitoring inspection reports and correction of deficiencies will be tracked on CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary, in Appendix H. Corrections summaries shall be submitted to the RE when corrections are completed and must be submitted within 5 days of the site inspection.

Completed CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary forms shall be filed in WPCP File Category 20.35: Corrective Actions Summary. A copy of the completed CEM-2035 Stormwater Site Inspection Report Corrective Actions Summary form will also be attached to the corresponding visual monitoring inspection report and shall be kept in the WPCP File Category 20.33.
SECTION 50

WPCP Reporting Requirements

50.1 Record Keeping

To manage the various documents required to by the WPCP and to provide easy access to the documents the following WPCP file categories will be used to file WPCP compliance documents:

- File Category 20.01 Water Pollution Control Program (WPCP)
- File Category 20.03 Water Pollution Control Schedule Updates
- File Category 20.10 Correspondence
- File Category 20.23 Stormwater Training Documentation
- File Category 20.31 Contractor Stormwater Site Inspection Reports
- File Category 20.33 Site Visual Monitoring Inspection Reports
- File Category 20.40 Weather Monitoring Logs
- File Category 20.61 Notice of Discharge Reports

Records shall be retained for a minimum of three years for the following items:

- Accepted WPCP and Amendments
- Stormwater Site Inspection Reports
- Site Inspection Report CorrectiveActions Summary
- Notice of Discharge Reports

50.2 Discharge Reporting

If a discharge or evidence of a prior discharge is discovered by the contractor, the contractor shall notify the Resident Engineer within 6 hours of the discharge event or discovery, and will file a written report to the Resident Engineer within 48 hours of the discharge event or discovery of evidence of a prior discharge. The written report to the Resident Engineer will contain the following items:

- the date, time, location, and type of unauthorized discharge
- nature of operation that caused the discharge
- initial assessment of any impacts caused by the discharge
- the BMPs deployed before the discharge event
- the date of deployment and type of BMPs deployed after the discharge event, including additional measures installed or planned to reduce or prevent re-occurrence
steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Reporting of discharges shall be documented on CEM-2061 Notice of Discharge Report, in Appendix I. Completed CEM-2061 Notice of Discharge Report shall be submitted to the Resident Engineer within 24 hours of discharge event or discovery of evidence of a prior discharge. Copies of the CEM-2061 Notice of Discharge Report will be kept in WPCP File Category 20.61: Notice of Discharge Reports.

50.3 Regulatory Agency Notice or Order Reporting

If the project receives a written notice or order from any regulatory agency, the contractor will notify the Resident Engineer within 6 hours of receiving the notice or order and will file a written report to the Resident Engineer within 48 hours of receiving the notice, or order. Corrective measures will be implemented immediately following the notice or order.

The report to the Resident Engineer will contain the following items:

- date, time, location, and cause or nature of the notice or order
- BMPs deployed prior to receiving notice or order
- date of deployment and type of BMPs deployed after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent re-occurrence
- an implementation and maintenance schedule for any affected BMPs

50.4 Illicit Connection/Illegal Discharge Reporting

If the contractor discovers an illicit connection to a storm drain system or any pipe discharging on to the project site not shown on the project plans the contractor shall notify the Engineer within 6 hours of the discovery and will file a written report to the Engineer within 48 hours of the discovery.

If the contractor discovers any illegal discharge including illegal dumping of material on the project site the contractor shall immediately notify the Engineer and will file a written report to the Engineer within 3 days of discovery.

The report to the Engineer will contain the following items:

- date, time, and location of the discovery
- details of the illicit connection or illegal discharge, including any photographs taken
- any actions taken to contain illegal discharge
- any sampling and testing to determine material dumped or discharged