EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 31, 2023

MEMO TO: Serge V. Terentieff, Manager of Design Division
David M. Woodard, Manager of Regulatory Compliance

FROM: David J. Rehnstrom, Manager of Water Distribution Planning Division

SUBJECT: Wildcat Pumping Plant Project – Transfer to Design Memorandum

INTRODUCTION

The Board of Directors adopted the Wildcat Pumping Plant Project (Project) Mitigated Negative Declaration Report (MND) and approved the Project on June 13, 2023 via Resolution 35354-23, which includes the Board Findings, Practices and Procedures Monitoring and Reporting Plan (PPMRP), and Mitigation Monitoring and Reporting Plan (MMRP). The purpose of this memorandum is to 1) transfer responsibility for Project implementation to the Design Division, and ultimately to the Construction Division, and 2) transfer mitigation auditing responsibility to the Regulatory Compliance Division. The Water Distribution Planning Division (WDPD) will remain active in the California Environmental Quality Act (CEQA) interpretation and planning design intent.

REQUEST

Proceed with the design and construction of the Project.

The following key documents are available on DOCS:

- Wildcat Pumping Plant Replacement Project Site Survey (January 2020) – DOCS #3016378
- Wildcat Pumping Plant Hydraulic Design Parameters and Hydraulic Transient Analysis (April 2020) – DOCS #2828839
- Wildcat Pumping Plant Project Radio Path Survey Report (November 2019) – DOCS #3016361
- Wildcat Pumping Plant Project – Design Criteria and Site Plan (August 2020) – DOCS #2853392
- Wildcat Pumping Plant Project – Design Criteria and Site Plan, Revision 1 (September 2022) – DOCS #2984276
- Wildcat Pumping Plant Project Aesthetics Conceptual Design Report (May 2021) – DOCS #2921058
- Wildcat Pumping Plant Project Aesthetics Conceptual Design Report, Appendices (May 2021) – DOCS #3024581
- Wildcat Pumping Plant Project Air Quality Technical Report (June 2021) – DOCS #3016405

- Wildcat Pumping Plant Project Greenhouse Gas Technical Report (June 2021) – DOCS #3016406
- Wildcat Pumping Plant Project Cultural Resources Assessment Report (August 2021) – DOCS #3016410
- Wildcat Pumping Plant Project Noise Technical Report (June 2021) – DOCS #3016407
- Wildcat Pumping Plant Project Transportation Technical Report (May 2021) – DOCS #3016408
- Wildcat Pumping Plant Project Biological Resources Assessment Report (June 2021) – DOCS #3016409
- Wildcat Pumping Plant Project – Feasibility of Integrating Stormwater Treatment Facilities for C.3 Compliance (April 2021) – DOCS #3016429
- Wildcat Pumping Plant Project Final MND (June 2023) – DOCS #3014232
- Board Resolution, Findings, PPMRP and MMRP (June 2023) – DOCS #3016404
- MWA Aesthetic Conceptual Design Report Drawing Files (May 2021) – DOCS #3016421
- Dillingham Associates Landscape Drawing Files (September 2021) – DOCS #3016428

The MMRP and PPMRP are included as Attachments A and B, respectively.

PROJECT DETAILS

Description

The existing 10 million gallon per day (MGD) Road 20 Portable Pumping Plant (PP), located on District owned property at the intersection of Road 20 and El Portal Drive, San Pablo, would be replaced with a new 25 MGD Wildcat PP at the same site. Currently, the site contains the existing Road 20 Rate Control Station (RCS), Road 20 Portable PP, and a parking lot that is leased to the adjacent Kona Apartments. The new Wildcat PP would improve the reliability of water service to major portions of EBMUD's western service area and provide transmission capacity south from the Sobrante Water Treatment Plant (WTP) during planned and unplanned outages of the Orinda WTP, Claremont Tunnel, or Wildcat Aqueduct. The Wildcat PP would also be used to distribute water treated at Sobrante WTP for delivery to EBMUD's West of Hills service area during drought years and when production at Orinda WTP is reduced.

The Project includes construction of a new 25 MGD PP, approximately 725 feet of new storm drain pipeline to connect the site runoff to the City of San Pablo's (City) existing storm drain system, and two below-ground air valves. The location of the new Wildcat PP is shown in Attachment C. The new Wildcat PP will include four approximately 8 mgd variable frequency drive pumps with a total capacity of 25 mgd and space plan for an in-conduit hydroelectricity system. Attachment D shows a conceptual site plan depicting major Project components at the new PP site, all of which are further described below.

The Wildcat PP building will be approximately 40-feet by 80-feet with a footprint of approximately 3,200 square feet. The building needs to be set back on the west by 10 feet and on the south by 15 feet from the fence/CMU wall, to allow FMC a minimum of 6.5 feet of access (after accounting for the bioretention planters and the roof eaves) for future maintenance of the building. The architecture of the new PP will be a California Mission Style concept that utilizes building materials, colors, and features that blend the facility into the predominantly mixed-use residential and commercial neighborhood. The building features beige stucco cladding with contrasting trim over cast-in-place concrete walls. The building is topped by a steel-framed terra cotta-colored standing seam metal roof, which emulates the design of the adjacent Walter T. Helms Middle School and blends the PP building and site into the school campus. The roof will be steel-framed gable form, sloped at 3:12 with the ridgeline (i.e., high point) height approximately 24-feet from ground elevation. The PP building material will be poured-in-place reinforced concrete construction with form liners. To maintain a high level of security and noise control, there are no windows in the walls or doors of the PP building. Lockable access hatches are required in the roof above each pump unit to facilitate the installation and removal of pump units vertically through the roof for future maintenance. Louvers are required for ventilation of the PP building and will be installed on the northern and western façades. Functional louvers include one low-elevation louver along the north façade and one high-elevation louver along the west façade. The louver along the north façade faces El Portal Drive and is set into an arch to imitate a primary building entrance. Small, vertically oriented recesses along the building sides imitate small windows, and an individual canopy over each access door match the roof slope. See Wildcat PP Project Aesthetics Conceptual Design Report (link provided above) for more details and renderings of the new building features and see MWA Aesthetic Conceptual Design Report Drawing Files (link provided above) for native drawing files.

Power for the PP will be supplied by Pacific Gas & Electric (PG&E) and will require the installation of an outdoor transformer and switchgear electrical equipment. The site will also include a generator connection panel and automatic transfer switch for an emergency portable generator and portable diesel tank that may be temporarily staged on site. The PP will be operated and monitored remotely, requiring installation of an antenna attached to the building's roof approximately 25-feet in height from ground elevation.

The existing Road 20 Portable PP connections will remain for emergencies and planned and unplanned outages of the Wildcat PP. However, the Road 20 Portable PP will be removed from the site when the construction of the new Wildcat PP is completed. Similar to existing conditions, an eight-foot-high, black-vinyl-coated security chain link fence and gates will be installed along the property line to enclose the site. An eight-foot-high concrete masonry unit (CMU) wall topped with barbed wires will be installed in place of the chain link fence on the south and southeastern sides of the property, adjacent to the Kona Apartments, for security and privacy.

Consistent with Provision C.3 in the Municipal Regional Permit (MRP) for Contra Costa County, the site is designed to retain a portion of stormwater runoff through existing impervious

surfaces (e.g., gravel area) and new bioretention planters and landscape features, which would be connected by approximately 260 feet of underground drainage pipelines onsite. Plantings were selected that have fast growth rates with low water use, while ensuring visibility into the site from the perimeter for site security. The onsite drainage system will connect to a new manhole and storm drain pipeline on El Portal Drive, which would extend westerly for approximately 725 feet before connecting to an existing curb inlet on the south side of Road 20. Approximately 170 feet of new 36-inch suction and discharge pipelines will be installed onsite to connect the new Wildcat PP to the existing Wildcat Aqueduct. The site will include paved areas for access and parking for operation and maintenance of the PP. Thirteen existing trees on the site will need to be removed for the construction of the PP building and associated equipment and to provide access for maintenance.

A hydraulic transient analysis for the Wildcat PP (link provided above) concluded that installation of surge-protection devices on the discharge side of the PP was necessary to protect portions of the Aqueduct Pressure Zone from pipeline failure and fatigue due to negative pressures following an uncontrolled pump shutdown. The results of the analysis show that the initial downsurge could potentially cause cavitation and column separation at critical high elevations near 1303 Walnut Street in the City of Berkeley and on the suction side of the Crockett PP in the City of San Pablo. An existing 4-inch below-ground air valve is located within a manhole on the roadway near 1303 Walnut Street in the City of Berkeley. Because the transient analysis has identified this as a critical location, this air valve will be replaced with a 4-inch, slow-venting air valve to reliably prevent cavitation. For the same reason, a new 2-inch, slow-venting air valve will be installed at Crockett PP, west of San Pablo Avenue at Robert Miller Drive in the City of San Pablo.

Development of the Project Description was completed with input from staff in the following organizations: Civil Structural, Electrical Engineering, Mechanical and Instrumentation Engineering, Facilities Maintenance, Maintenance Support East, Construction, and SCADA Engineering. More detail about the Project is provided in the Wildcat PP Project – Design Criteria and Site Plan memo (link provided above) and Section 2.3 (Proposed Project) of the Draft MND (link provided above).

SUMMARY OF ENVIRONMENTAL IMPACTS

Consistent with CEQA, the MND evaluated environmental impacts associated with the Project construction and operation. The MND determined that Project-related construction work could generate potentially significant impacts to cultural resources, transportation, and tribal cultural resources by:

- Causing a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5.
- Disturbing any human remains, including those interred outside of formal cemeteries.

- Conflicting with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- Causing a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: ii. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Appropriate mitigation measures (see Attachment A) are required to be implemented to reduce these potentially significant impacts to less than significant. A **summary** of key mitigation measures include:

- Construction of the off-site storm drain pipeline along Road 20 shall be phased such that at least one crosswalk on Road 20 at Abella Circle adjacent to Walter T. Helms Middle School is accessible at any given time.
- Coordination with the City during the closure of the Road 20-El Portal Drive to provide adequate space for transit vehicles traveling eastbound on Road 20 to turn right onto El Portal Drive and for transit vehicles traveling northbound on El Portal Drive to turn left onto Road 20. The District will also coordinate with AC Transit to temporarily reroute eastbound Line 76 during the closure of the connector between Road 20 and El Portal Drive.
- Coordination with AC Transit and the City to temporarily relocate the eastbound bus stop on the east side of the Road 20/Abella Circle intersection as needed while construction occurs on the roadway segment that includes the existing bus stop.
- Coordination with Walter T. Helms Middle School to restrict construction truck traffic (e.g., material delivery and haul trucks) during the 30 minutes immediately preceding and following the morning and afternoon bell times when school is in regular session, as well as around other major events (e.g., sporting events, parent-teacher conferences) that would bring a substantial number of people to campus.
- During ground-disturbing phases (e.g., initial excavation and grading, suction and discharge pipeline construction, on-site drainage construction, and Road 20 storm drain pipeline installation), a Native American monitor and qualified archaeologist shall visit the site two times per week to inspect unexcavated sediments and soils (i.e., intact soils along trench walls and excavations) for any sign of potential archaeological deposits.

In addition, a number of District standard construction specifications, District Procedures, Design Guides, and Engineering Standard Practices, (District standard practices and procedures) are also required to be incorporated into the Project and are discussed in detail in the PPMRP

(see Attachment B). ***All District standard practices and procedures listed in the PPMRP are required to be included (verbatim) in the Project's final specification document.***

The MND concluded that the Project will not cause any significant and unavoidable impacts from construction and/or operation. To minimize all potential impacts and to ensure that other impacts are not significant, the Board of Directors approved the Project contingent upon the District implementing mitigation measures as outlined in the MMRP and incorporation of standard practices and procedures as outlined in the PPMRP.

OTHER PROJECT CONSIDERATIONS AND BACKGROUND

This section highlights other Project considerations and background information that will need to occur during the design and construction phases.

Carport Roof

An existing carport roof at the Kona Apartment site is located adjacent to the Project's eastern security fence and could potentially be used to hop the security fence. Elliot Ventures, Inc., the property owner of the adjacent Kona Apartments, agreed that the District can cut back the carport roof overhang by 6 feet, for security reasons, at the District's expense during a meeting with the District on October 19, 2019. Refer to Attachment E for details.

Site Drainage

The modification of the site drainage and installation of the CMU wall at the south and southeast corner of the Wildcat PP site will require the District to remove the existing drop inlet on District property, cap/abandon the existing storm drain pipeline, and install a new drop inlet on and/or regrade a small part of Kona Apartments' property next to the CMU wall.

Western Security Fence

There are two pop out areas along the Project's western fence line that extend into the Walter T. Helms Middle School property. Since these areas are enclosed on the west by the Middle School's CMU wall and on the east by the District's security fence, the Middle School agreed for the District to install two gates along the west security fence (as shown in Attachment D) to allow the District to maintain these void areas as needed.

In-Conduit Hydroelectricity System

The in-conduit hydroelectricity system includes a microturbine, control valve, piping, and electrical cable, conduit, and cabinets. The in-conduit hydroelectricity system will generate electricity from excess pressure and has a pressure management feature which enhances water loss control by reducing background leakage and pipeline breaks in the distribution system.

Operations & Maintenance Support and Facilities Maintenance and Construction are expected to confirm the decision to install an in-conduit hydroelectricity system at the new Wildcat PP by December 2023, after a pilot study has been conducted at the Piedmont Regulator.

Work Hour Restrictions

The PPMRP lists work hour restrictions that will be contained in the Project standard construction specification language. Section 1.4 of EBMUD's Standard Construction Specification 01 14 00, Work Restrictions will include the following provisions:

- Work or activity of any kind shall be limited to the hours from 7:00 a.m. to 7:00 p.m. Monday through Friday.
- Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours (between 9:00 a.m. and 4:00 p.m.).

Section 1.8, Construction Noise, of EBMUD's Standard Construction Specification 01 14 00, Work Restrictions will include the following provision:

- Noise-generating activities greater than 90 dBA (impact construction such as concrete breaking, concrete crushing, tree grinding, etc.) shall be limited to the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday.

PUBLIC OUTREACH

During Project planning, WDPD held agency and public outreach meetings. A community meeting was held in January 2021 to review the architectural and landscape design alternatives and receive public feedback. Postcards about the community meeting were sent to affected residents near the Project site and posted on Nextdoor and the City's and District's websites. Outreach meetings were also held with the adjacent neighbors in October 2020, the City in February 2021, and the Indian Canyon Mutsun Band of Costanoan in May 2021 to present the conceptual site and landscape plans, discuss the potential environmental factors to be addressed in the Draft MND, and receive community feedback. Issues and concerns raised by the City and the community at these meetings included aesthetics, noise, and cultural resources, which are addressed in the Final MND. The PowerPoint presentations from the public outreach meetings are located on the Project's web page (www.ebmud.com/wildcatpp).

Following release of the Draft MND, a CEQA-required public meeting was held on January 26, 2023 to review the results of the Draft MND. Postcards and notices were mailed out to notify agencies, businesses, and residents of the release of the Draft MND, and the public meeting date was posted on Nextdoor and the City's and District's websites. Staff also met with the property manager of the adjacent Kona Apartments and principal of the adjacent Walter T. Helms Middle School on January 12, 2023 notifying them of the release of the Draft MND and public meeting; both were aware of the project and public meeting and raised questions on how the project would

affect parking to which staff provided a response. In addition, staff hand delivered postcards to each unit of the apartment complex and provided both English and Spanish versions of the postcard to the school principal to be sent out as part of the school newsletter. Two people attended the public meeting. Attendees had one question on cultural resources and staff provided a response.

One comment letter containing approximately eight individual comments was submitted during the MND public review period by the Contra Costa County Flood Control & Water Conservation District. Key comments focused on hydrology and hydraulics, permitting, and stormwater management. The comment letter in its entirety, responses to the comments, and text edits to be added to the MND are all included in Appendix C, "Response to Comments," of the Final MND (link provided above). The responses to comments and text edits to the MND do not identify new significant impacts, but merely clarify information already presented in the MND.

HYDRAULIC DESIGN PARAMETERS

Hydraulic modeling was completed to prepare hydraulic design parameters for the new PP and to evaluate the need for surge mitigation measures. The results are discussed and detailed in the Wildcat PP Hydraulic Design Parameters and Hydraulic Transient Analysis (link provided above). Based upon the hydraulic design parameters, a preliminary pump was selected by Mechanical and Instrumentation Engineering. The transient analysis concluded that surge protection measures are needed for the new PP as discussed above.

COMMUNICATION REQUIREMENTS

On November 13, 2019, SCADA Engineering Section staff completed a radio path survey at the new PP site and installation of a Yagi antenna (Model No. SCALA TY-900) mounted to the front of the new PP building closest to El Portal Drive, 25-feet from existing ground level is required (see Wildcat PP Project Radio Path Survey Report link provided above). The antenna should be pointed toward the Pearl Reservoir site (southeast). The mast should include a 2-inch conduit with long bending radius from the bottom of the mast to the RTU enclosure, and a new coaxial cable should be pulled from the antenna to the RTU panel. The Project will also install an MDS SD9MDCES radio for the RTU/SCADA communication.

PUMPING PLANT CRITICALITY

The criticality of both the new Wildcat PP and existing Road 20 Portable PP was not evaluated as part of the Distribution System Pumping Plant Criticality Study. However, due to the criticality of the Wildcat PP, a 1500 kW (480V) portable emergency generator and a 12 MGD portable pump are required on site while the PP is in operation for planned outages. The portable generator is sized to operate the PP at 100 percent capacity and will recover full power at the PP in the event of a PG&E power outage. Since the portable generator itself can only hold approximately 1,250 gallons of diesel fuel, a secondary 1,000 gallon portable diesel tank is

planned to provide a combined fuel storage of 2,250 gallons. Based on a burn rate of approximately 60 gallons per hour, approximately 30 hours of fuel storage would be provided, assuming the tanks are left 20 percent full to prevent the engines from running dry and would require refueling once a day. The portable PP is approximately 50 percent capacity of the Wildcat PP and will provide backup support in the event of a mechanical failure or scheduled maintenance of the Wildcat PP. If needed, a portable PP can be deployed at the Crockett PP site to provide additional capacity.

OUTAGE REQUIREMENTS

An outage plan for the Project is not required because the new PP will be constructed, operationally tested, and placed in service before removal of the existing Road 20 Portable PP from service. Furthermore, there are existing pipeline tie-in connections (stub outs) from the Wildcat Aqueduct to the new Wildcat PP that could be utilized to avoid a shutdown of the Wildcat Aqueducts. The Road 20 RCS will need to be out of service during the tie-in to the system; therefore, the tie-in should be completed when Sobrante WTP is in service and the Road 20 RCS is not needed.

PROPERTY

The Wildcat PP will be located on District property on the south side of El Portal Drive just east of its intersection with Road 20 in the City of San Pablo. The southern part of the Project site is leased to the adjacent Kona Apartments, belonging to Elliot Ventures, Inc. The current lease is set to expire on September 30, 2023. However, upon request from Elliot Ventures, Inc. and Facilities Maintenance and Construction, Real Estate is currently working on extending the lease until construction of the new Wildcat PP commences in 2026.

SCHEDULE

Design of the Project is scheduled from 2023 through 2025, followed by construction from 2026 through 2028. After successful testing and startup of the new PP, the existing Road 20 Portable PP would be removed from the site.

COST ESTIMATE

The estimated cost for Design and Construction is $27 million.

CONSULTANT CONTRACT

On July 24, 2019, the Board of Directors approved a contract with Panorama Environmental, Inc. (Panorama) in the amount of $1,421,140 (Purchase Order BRD-12519-AX) to complete aesthetic conceptual designs and technical reports for specific environmental factors for the Project as well as for the Fontaine and Montclair PP projects. Each PP project budget has been tracked

separately, including lump sums for Optional Services tasks which were divided evenly amongst the three PP projects. For the Project, there is a total of $155,543 of unspent budget available for the design and construction phases of the Project for preparation of architecture plans and specifications during design, attending coordination meetings, and support during construction. The work includes 10, 90, and 100 percent design submittals and design-level cost estimates, assistance with bidding, and providing architectural services during construction including submittal review, responding to Requests for Information, site visits, pre-maintenance walk-through, color review, final walk-through and punch list for architectural and landscape features. The contract administration authority will be transferred to the Design Division so that Panorama's services may continue to be used during design through construction.

ROLE OF WDPD IN DESIGN AND CONSTRUCTION PHASES

WDPD will remain active in design and construction phases including, but not limited to, the following:

- CEQA interpretation and planning design intent.
- Participate in all District design review meetings.
- Review ten percent and 90 percent design drawings.

For further questions please contact Anna Lau, Associate Civil Engineer, Distribution System Planning Section, at extension 9662.

DJR:ATL:sjp
wdpd23_081q Wildcat PP Transfer Memo

Attachments: A. MMRP
B. PPMRP
C. Wildcat Pumping Plant Project Location Map
D. Wildcat Pumping Plant Project Site Plan and Landscape Plan
E. Kona Apartment Carport Roof

cc: Denise Cicala
Emily Sing
Paul Franceschi
Sharon Hu
Munano Kaguchia
Jon Lee
Marshall McLeod
Michiko Mares
Chandra Johannesson
Y'Anad Burrell
Jose Rios

Anna Lau
Carlton Chan
Ke'Anya Kennedy
Matt Elawady
WDPD's Environmental Document Web Page
DOCS: Pressure Zone = Central, Central North; Facility = Wildcat Pumping Plant

APPENDIX A
MITIGATION MONITORING AND REPORTING PROGRAM

Impact Area	Mitigation Measure	Responsible for Implementation	Responsible for Monitoring and/or Enforcement	Timing of Implementation
Transportation				
Impact Transportation a): Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	**Mitigation Measure TRA-1: Road 20 Crosswalk Access.** Construction of the off-site storm drain installation along Road 20 shall be phased such that at least one crosswalk on Road 20 at Abella Circle adjacent to Walter T. Helms Middle School is accessible at any given time. Pedestrian access plans shall be reviewed and approved by the City of San Pablo prior to construction and included in the Project's Traffic Control Plan.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to and during construction
	Mitigation Measure TRA-2: Temporary Road 20 Centerline Adjustment and Line 76 Rerouting. EBMUD shall coordinate with the City of San Pablo to the extent feasible for the temporary adjustment of the centerline on Road 20 at the signalized intersection with El Portal Drive during the closure of the Road 20-El Portal Drive through-connection to provide adequate space for transit vehicles traveling eastbound on Road 20 to turn right onto El Portal Drive and for transit vehicles traveling northbound on El Portal Drive to turn left onto Road 20. EBMUD shall coordinate with AC Transit for the temporary rerouting of eastbound Line 76 during the closure of the Road 20-El Portal Drive through-connection. Centerline adjustment and transit rerouting plans shall be reviewed and approved by the City of San Pablo and reviewed by AC Transit prior to construction and included in the Project's Traffic Control Plan.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to and during construction
	Mitigation Measure TRA-3: Road 20 Temporary Bus Stop Relocation. EBMUD shall coordinate with AC Transit and the City of San Pablo, to the extent feasible, to temporarily relocate the eastbound bus stop on the east side of the Road 20/Abella Circle intersection as needed while construction occurs on the roadway segment that includes the existing bus stop. Any parking obstruction, sidewalk obstruction, travel lane obstruction, or other accommodation required for the temporary bus stop shall be reviewed and approved by the City of San Pablo and reviewed by AC Transit prior to construction and included in the Project's Traffic Control Plan.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to and during construction
	Mitigation Measure TRA-4: Construction Truck Travel Restriction. EBMUD shall coordinate with Walter T. Helms Middle School to restrict construction truck traffic (e.g., material delivery and haul trucks) during the 30 minutes immediately preceding and 30 minutes immediately following the morning and afternoon bell times when school is in regular session, as well as around other major events (e.g., sporting events, parent-teacher conferences) that would bring a substantial number of people to campus. Bell times and other major events affecting the period of construction truck travel shall be documented in the Project's Traffic Control Plan.	EBMUD and EBMUD's Construction Contractor	EBMUD	Prior to and during construction

Impact Area	Mitigation Measure	Responsible for Implementation	Responsible for Monitoring and/or Enforcement	Timing of Implementation
Cultural Resources				
Impact Cultural Resources b): Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	**CR-1: Periodic Archaeological Inspections and Construction Monitoring**. During ground-disturbing phases of Project construction (initial excavation and grading, suction and discharge pipeline construction, on-site drainage construction, and Road 20 storm drain pipeline installation), a Native American monitor and a qualified archaeologist shall visit the site two times per week to inspect unexcavated sediments and soils (i.e., intact soils along trench walls and excavations) for any sign of potential archaeological deposits. If the Native American monitor and archaeologist have observed excavation to a final depth in sufficient areas to adequately characterize the Project site and the underlying sediments appear disturbed or other evidence to suggest that archaeological deposits are highly unlikely, the Native American monitor and qualified archaeologist may cease bi-weekly inspections, in consultation with EBMUD. If during bi-weekly inspections the Native American monitor and archaeologist identify sensitive intact sediments that are likely to contain archaeological deposits, ground-disturbing activities shall be halted, and the qualified archaeologist shall develop an appropriate Archaeological Monitoring Plan in consultation with the Native American monitor and EBMUD. Depending on the type and condition of the sediments, the Archaeological Monitoring Plan may include, but not be limited to, increased frequency of periodic archaeological inspections, full-time archaeological construction monitoring, or presence/absence testing in areas of heightened archaeological sensitivity. The Archaeological Monitoring Plan shall detail the methods, schedule, and thresholds for returning to bi-weekly archaeological inspections.	EBMUD and EBMUD's Construction Contractor	EBMUD	For the duration of ground-disturbing phases of Project construction
Impact Cultural Resources c): Disturb any human remains, including those interred outside of formal cemeteries.	**CR-1: Periodic Archaeological Inspections and Construction Monitoring**. (Details as listed under Impact Air Quality b))	EBMUD and EBMUD's Construction Contractor	EBMUD	For the duration of ground-disturbing phases of Project construction
Tribal Cultural Resources				
Impact Tribal Cultural Resources a): ii. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public	**CR-1: Periodic Archaeological Inspections and Construction Monitoring**. (Details as listed under Impact Air Quality b))	EBMUD and EBMUD's Construction Contractor	EBMUD	For the duration of ground-disturbing phases of Project construction

Impact Area	Mitigation Measure	Responsible for Implementation	Responsible for Monitoring and/or Enforcement	Timing of Implementation
Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe				

APPENDIX B
EBMUD PRACTICES AND PROCEDURES MONITORING AND REPORTING PLAN

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
Aesthetics				
Aesthetics d): Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.4, Lighting Used During Nighttime Work* A. Ensure that temporary stationary lighting used during nighttime construction is only used when needed. All lighting used for nighttime construction shall be designed, installed, and operated to minimize glare that affects traffic near the work zone or that causes annoyance or discomfort for residences near the work zone. Lighting fixtures shall be located and aimed to provide the required level of illumination and uniformity in the work zone without the creation of unnecessary glare.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Air Quality				
Air Quality a): Conflict with or obstruct implementation of the applicable air quality plan**.**	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.E, Dust Control and Monitoring Plan* 1. Submit a plan detailing the means and methods for controlling and monitoring dust generated by demolition and other work on the site for the Engineer's acceptance prior to any work at the jobsite. The plan shall comply with all applicable regulations including but not limited to the Bay Area Air Quality Management District (BAAQMD) visible emissions regulation and Public Nuisance Rule. The plan shall include items such as mitigation measures to control fugitive dust emissions generated by construction activities. The Plan shall outline best management practices for preventing dust emissions, provide guidelines for training of employees, and procedures to be used during operations and maintenance activities. The plan shall also include measures for the control of paint overspray generated during the painting of exterior surfaces. The plan shall detail the equipment and methods used to monitor compliance with the plan. The handling and disposal of water used in compliance with the Dust Control Plan shall be addressed in the Water Control and Disposal Plan. 2. Containment, as described in Article 3.3, shall be utilized during any abrasive blasting of the exterior of structures. *Section 3.3., Dust Control and Monitoring* B. Dust Control 1. Contractor shall implement all necessary dust control measures, including but not limited to the following:	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	a. All exposed surfaces with the potential of dust-generating shall be watered at least twice daily, or be covered with coarse rock, or as directed by the Engineer to reduce the potential for airborne dust from leaving the site. b. The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time, as appropriate. c. Cover all haul trucks entering/leaving the site and trim their loads as necessary. d. Using wet power vacuum street sweepers to: *1)* Sweep all paved access road, parking areas and staging areas at the construction site daily or as often as necessary. *2)* Sweep public roads adjacent to the site at least twice daily or as often as necessary. e. The use of dry power sweeping is prohibited. f. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. g. Gravel or apply non-toxic soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. h. Water and/or cover soil stockpiles daily. i. Site accesses to a distance of 100 feet from the paved road shall be treated with 12-inches layer of compacted coarse rock. j. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. k. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. l. Building pads shall be laid as soon as possible after grading. m. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. n. Wind breaks (e.g., fences) shall be installed on the windward sides(s) of actively disturbed areas of construction. Wind breaks should have a maximum 50 percent air porosity. o. All vehicle speeds shall be limited to fifteen (15) mph or less on the construction site and any adjacent unpaved roads. C. Dust Monitoring During Demolition and Construction 1. Provide air monitoring per the Dust Control and Monitoring Plan along the perimeter of the job site. A minimum of 4 stations, one on each side of the District property, shall be established, capable of continuous measurement of total particulate concentration when any dust generating activity is occurring.			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	a. Ringelmann No. 1 Limitation: Contractor shall not emit from any source for a period or periods aggregating more than three minutes in any hour, a visible emission which is as dark or darker than No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree. b. Opacity Limitation: Contractor shall not emit from any source for a period or periods aggregating more than three minutes in an hour an emission equal to or greater than 20% opacity as perceived by an opacity sensing device, where such device is required by Air Quality Management District regulations. c. All environmental and personal air sampling equipment shall be in conformance with the Association of Industrial Hygiene and National Institute of Safety and Health (NIOSH) standards. d. All analysis shall be completed by a California Department of Health Services certified laboratory for the specific parameters of interest. e. The Contractor shall provide to the Engineer, within 72 hours of sampling all test results. D. The dust control system shall comply with the Dust Control and Monitoring Plan, the requirements of this section, and any applicable laws and regulations *Section 3.5., Emissions Control* A. Air Quality and Emissions Control 1. The Contractor shall ensure that line power is used instead of diesel generators at all construction sites where line power is available. 2. The Contractor shall ensure that for operation of any stationary, compression-ignition engines as part of construction, comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards. 3. Fixed temporary sources of air emissions (such as portable pumps, compressors, generators, etc.) shall be electrically powered unless the Contractor submits documentation and receives approval from the Engineer that the use of such equipment is not practical, feasible, or available. All portable engines and equipment units used as part of construction shall be properly registered with the California Air Resources Board or otherwise permitted by the appropriate local air district, as required. 4. Contractor shall implement standard air emissions controls such as: a. Minimize the use of diesel generators where possible. b. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations. Clear signage shall be provided for construction workers at all access points.			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	c. Follow applicable regulations for fuel, fuel additives, and emission standards for stationary, diesel-fueled engines. d. Locate generators at least 100 feet away from adjacent homes and ball fields. e. Perform regular low-emission tune-ups on all construction equipment, particularly haul trucks and earthwork equipment. 5. Contractor shall implement the following measures to reduce greenhouse gas emissions from fuel combustion: a. On road and off-road vehicle tire pressures shall be maintained to manufacturer specifications. Tires shall be checked and re-inflated at regular intervals. b. Construction equipment engines shall be maintained to manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. c. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of Oxide of Nitrogen (NOx) and Particulate Matter (PM). d. Demolition debris shall be recycled for reuse to the extent feasible. See the Construction and Demolition Waste Disposal Plan paragraphs above for requirements on wood treated with preservatives. B. Architectural Coatings 1. Architectural coatings used shall comply with appropriate Volatile Organic Compound limits as established in the Bay Area Air Quality Management District's Regulation 8, Rule 3 and/or the San Joaquin Valley Air Pollution Control District's Regulation IV, Rule 4601, and any amendments thereto.			
Air Quality b): 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.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.5.A, Air Quality and Emissions Control* (Details as listed under Impact Air Quality a) *Section 3.5.B, Architectural Coatings* (Details as listed under Impact Air Quality a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Air Quality c): Expose sensitive receptors to substantial pollutant concentrations.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.5.A, Air Quality and Emissions Control* (Details as listed under Impact Air Quality a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Air Quality d): Result in other emissions (such as those leading to odors) adversely affecting a	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.I, Tune-up Logs*	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
substantial number of people.	1. The Contractor shall submit a log of required tune-ups for all construction equipment, particularly haul and delivery trucks, on a quarterly basis for review. *Section 3.5.A, Air Quality and Emissions Control* (Details as listed under Impact Air Quality a)			
Biological Resources				
Biological Resources a): Have a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Dept. of Fish & Game or U.S. Fish & Wildlife Service.	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.9, Protection of Birds Protected Under the Migratory Bird Treaty Act and Roosting Bats* A. The District will conduct biological reconnaissance in advance of construction and will conduct biologic monitoring during construction as necessary. B. Protected Species 1. If protected species or suitable habitat for protected species is found during biological reconnaissance surveys: a. Before beginning construction, all Contractor construction personnel are required to attend an environmental training program provided by the District of up to one-day for site supervisors, foreman and project managers, and up to 30-minutes for non-supervisory contractor personnel. The training program will be completed in person or by watching a video at a District-designated location, conducted by a qualified biologist provided by the District. The program will discuss all sensitive habitats and sensitive species that may occur within the project work limits, including the responsibilities of Contractor's construction personnel, applicable mitigation measures, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to the District. Prior to accessing or performing construction work, all Contractor personnel shall: 1) Sign a wallet card provided by the Engineer verifying that all Contractor construction personnel have attended the appropriate level of training relative to their position; have read and understood the contents of the environmental training: and shall comply with all project environmental requirements. 2) Display an environmental training hard hat decal (provided by the District after completion of the training) at all times. b. Birds Protected under the Migratory Bird Treaty Act (MBTA): 1) It is unlawful to pursue, hunt, take, capture, or kill any migratory bird without a permit issued by the U.S. Department of the Interior. 2) If construction commences between February 1 and August 31, during the nesting season, the District will conduct a preconstruction survey for nesting birds within 7 days prior to construction to ensure that no nest will be disturbed during construction.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	3) If active nests of migratory bird species (listed in the MBTA) are found within the project site, or in areas subject to disturbance from construction activities, an avoidance buffer to avoid nest disturbance shall be constructed. The buffer size will be determined by the District in consultation with California Department of Fish and Wildlife (CDFW) and is based on the nest location, topography, cover and species' tolerance to disturbance. 4) If an avoidance buffer is not achievable, a qualified biologist provided by the District will monitor the nest(s) to document that no take of the nest (nest failure) has occurred. Active nests shall not be taken or destroyed under the MBTA and, for raptors, under the CDFW Code. If it is determined that construction activity is resulting in nest disturbance, work should cease immediately, and the Contractor shall notify the Engineer who will consult with the qualified biologist and appropriate regulatory agencies. 5) If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further action is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the avoidance buffer for active nests may be removed. Nests initiated during construction (while significant disturbance from construction activities persist) may be presumed to be unaffected, and only a minimal buffer, determined by District's biologist, would be necessary.			
Cultural Resources				
Cultural Resources b): Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.10, Protection of Cultural and Paleontological Resources* A. Confidentiality of Information on Cultural and Paleontological Resources 1. In conjunction with Contractor's performance under this contract, the Contractor may obtain information as to the location and/or nature of certain cultural or paleontological resources, including Native American artifacts and remains. This information may be provided to the Contractor by the District or a third party or may be discovered directly by the Contractor through its performance under the contract. All such information shall be considered "Confidential Information" for the purposes of this Article. 2. Pursuant to California Government Code Section 6254.10, cultural resource information is protected from public disclosure. The Contractor agrees that the Contractor, its subcontractors, and their respective agents and employees shall not publish or disclose any Confidential Information to any person, unless specifically authorized in advance, in writing by the Engineer. B. Conform to the requirements of statutes as they relate to the protection and preservation of cultural and paleontological resources. Unauthorized collection of	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	prehistoric or historic artifacts or fossils along the Work Area, or at Work facilities, is strictly prohibited. C. Before beginning construction, all Contractor construction personnel shall attend a cultural and paleontological resources training course provided by the District of up to two hours for site supervisors, foreman, project managers, and non-supervisory contractor personnel. The training program will be completed in person or by watching a video, at a District designated location, conducted by a qualified archaeologist and/or paleontologist provided by the District, or by District staff. The program will discuss cultural and paleontological resources awareness within the project work limits, including the responsibilities of Contractor's construction personnel, applicable mitigation measures, confidentiality, and notification requirements. The Contractor is responsible for ensuring that all workers requiring training are identified to the District. Prior to accessing the construction site, or performing site work, all Contractor personnel shall: 1. Sign an attendance sheet provided by the Engineer verifying that all Contractor construction personnel have attended the appropriate level of training; have read and understood the contents of the training; have read and understood the contents of the "Confidentiality of Information on Cultural and Paleontological" and shall comply with all project environmental requirements. D. In the event that potential cultural or paleontological resources are discovered at the site of construction, the following procedures shall be instituted: 1. Discovery of prehistoric or historic-era archaeological resources requires that all construction activities shall immediately cease at the location of discovery and within 100 feet of the discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified archaeologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer and shall not recommence work until authorized to do so by the Engineer. b. The District will retain a qualified archaeologist to inspect the findings within 24 hours of discovery. If it is determined that the Project could damage a historical resource as defined by CEQA (or a historic property as defined by the National Historic Preservation Act of 1966, as amended), construction shall cease in an area determined by the archaeologist until a management plan has been prepared, approved by the District, and implemented to the satisfaction of the archaeologist (and Native American representative if the resource is prehistoric, who shall be identified by the Native American Heritage Commission [NAHC]). In consultation with the District, the archaeologist (and Native American representative) will determine when construction can resume. 2. Discovery of human remains requires that all construction activities immediately cease at, and within 100 feet of the location of discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified archaeologist provided by the District to evaluate the find. The			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	Contractor is responsible for stopping work and notifying the Engineer and shall not recommence work until authorized to do so by the Engineer. b. The District will contact the County Coroner, who will determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC). The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the District for the appropriate means of treating the human remains and any associated funerary objects. 3. Discovery of paleontological resources requires that all construction activities immediately cease at, and within 100 feet of the location of discovery. a. The Contractor shall immediately notify the Engineer who will engage a qualified paleontologist provided by the District to evaluate the find. The Contractor is responsible for stopping work and notifying the Engineer and shall not recommence work until authorized to do so by the Engineer. b. The District will retain a qualified paleontologist to inspect the findings within 24 hours of discovery. The qualified paleontologist, in accordance with Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010), will assess the nature and importance of the find and recommend appropriate salvage, treatment, and future monitoring and management. If it is determined that construction activities could damage a paleontological resource as defined by the Society of Vertebrate Paleontology guidelines (Society of Vertebrate Paleontology 2010), construction shall cease in an area determined by the paleontologist until a salvage, treatment, and future monitoring and management plan has been prepared, approved by the District, and implemented to the satisfaction of the paleontologist. In consultation with the paleontologist, the District will determine when construction can resume. E. If the District determines that the find requires further evaluation, at the direction of Engineer, the Contractor shall suspend all construction activities at the location of the find and within a larger radius, as required.			
Cultural Resources c): Disturb any human remains, including those interred outside of formal cemeteries?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.10, Protection of Cultural and Paleontological Resources* (Details as listed under Impact Cultural Resources b)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Energy				
Energy a): Result in potentially significant environmental impact due to wasteful,	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.5.A, Air Quality and Emissions Control* (Details as listed under Impact Air Quality a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
inefficient, or unnecessary consumption of energy resources during project construction or operation?				
Geology and Soils				
Geology and Soils a): Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides?	**EBMUD's Pumping Plant Design Guide** EBMUD's Pumping Plant Design Guide establishes the minimum requirements to follow in the design of EBMUD drinking water pumping plants. The Pumping Plant Design Guide details design criteria, conditions for PPs, outlines applicable codes and design standards, and requires the completion of a geotechnical investigation during design and incorporation of geotechnical design recommendations in project plans and specifications. **EBMUD's Engineering Standard Practice 550.1, Seismic Design Requirements and 512.1, Water Main and Services Design Criteria** EBMUD uses two primary Engineering Standard Practices for the design of water pipelines in its distribution system to address geologic hazards. Engineering Standard Practice 512.1, Water Main and Services Design Criteria, establishes basic criteria for the design of water pipelines and establishes minimum requirements for pipeline construction materials. Engineering Standard Practice 550.1, Seismic Design Requirements, addresses seismic design of the pipelines to withstand seismic hazards, including fault rupture, ground shaking, liquefaction-related phenomena, landslides, seiches and tsunamis and requires that EBMUD establish project-specific seismic design criteria for pipelines with a diameter of greater than 12 inches. Engineering Standard Practice 550.1, Seismic Design Requirements, includes basic requirements for structures and design standard for structures to withstand seismic hazards including compliance with applicable seismic design standards found in the latest editions of the California Building Code and American Society of Civil Engineers 7, Minimum Design Loads for Buildings and Other Structures.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Geology and Soils b): Result in substantial soil erosion or the loss of topsoil?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.1.B, Site Activities* B. Site Activities 1. No debris including, but not limited to, demolition material, treated wood waste, stockpile leachate, soil, silt, sand, bark, slash, sawdust, asphalt, rubbish, paint, oil, cement, concrete or washings thereof, oil or petroleum products, or other organic or earthen materials from construction activities shall be allowed to enter into storm drains or surface waters or be placed where it may be washed by rainfall or	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	runoff outside the construction limits. When operations are completed, excess materials or debris shall be removed from the work area as specified in the Construction and Demolition Waste Disposal Plan. 2. Excess material shall be disposed of in locations approved by the Engineer consistent with all applicable legal requirements and disposal facility permits. 3. Do not create a nuisance or pollution as defined in the California Water Code. Do not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board, as required by the Clean Water Act. 4. Clean up all spills and immediately notify the Engineer in the event of a spill. 5. Stationary equipment such as motors, pumps, and generators, shall be equipped with drip pans. 6. Divert or otherwise control surface water and waters flowing from existing projects, structures, or surrounding areas from coming onto the work and staging areas. The method of diversions or control shall be adequate to ensure the safety of stored materials and of personnel using these areas. Following completion of Work, ditches, dikes, or other ground alterations made by the Contractor shall be removed and the ground surfaces shall be returned to their former condition, or as near as practicable, in the Engineer's opinion. 7. Maintain construction sites to ensure that drainage from these sites will minimize erosion of stockpiled or stored materials and the adjacent native soil material. 8. Furnish all labor, equipment, and means required and shall carry out effective measures wherever, and as often as necessary, to prevent Contractor's operations from causing visible dust emissions to leave the work areas. These measures shall include, but are not limited to, providing additional watering equipment, reducing vehicle speeds on haul roads, restricting traffic on haul roads, covering haul vehicles, and applying a dust palliative to well-traveled haul roads. The Contractor shall provide the specifications of the dust palliative for Engineer approval prior to use. The Contractor shall be responsible for damage resulting from dust originating from its operations. The dust abatement measures shall be continued for the duration of the Contract. Water the site in the morning and evening, and as often as necessary, and clean vehicles leaving the site as necessary to prevent the transportation of dust and dirt onto public roads. Dust control involving water shall be done in such a manner as to minimize waste and runoff from the site. 9. Construction staging areas shall be graded, or otherwise protected with Best Management Practices (BMPs), to contain surface runoff so that contaminants such as oil, grease, and fuel products do not drain towards receiving waters including wetlands, drainages, and creeks. 10. All construction equipment shall be properly serviced and maintained in good operating condition to reduce emissions. Contractor shall make copies of equipment service logs available upon request.			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	11. Any chemical or hazardous material used in the performance of the Work shall be handled, stored, applied, and disposed of in a manner consistent with all applicable federal, state, and local laws and regulations. 12. Contaminated materials excavated and/or removed from the construction area shall be disposed of in a manner consistent with all applicable local, state, and federal laws and regulations. *Section 1.3.A, Storm Water Management* A. Storm Water Management 1. Construction General Permit a. The Contractor shall create a user account on the SWRCB's Storm Water Multi-Application & Report Tracking System (SMARTS). The Engineer will link the Contractor to the District's account as a Data Submitter. The Contractor shall prepare and upload to SMARTS Permit Registration Documents (PRDs), including, but not limited to, a Notice of Intent, a Site Specific Risk Assessment, a Site Map, and a Storm Water Pollution Prevention Plan (SWPPP) for the Engineer's review which meets the requirements of the SWRCB, for coverage under the General Construction Stormwater Permit (Order No. 2009-0009-DWQ) and amendments thereto. Upon acceptance by the Engineer, the Engineer will electronically certify and file the PRDs to gain permit coverage and the Contractor shall submit the registration and the subsequent annual fees as required by the SWRCB. b. The Contractor shall be responsible for complying with the requirements of the Construction General Permit. The Contractor's responsibilities include, but are not limited to, providing qualified professionals as described in the permit to prepare and certify all permit-required documents/submittals and to implement effective stormwater/non-stormwater management practices, and conducting inspections and monitoring as required by the permit. The Contractor shall, in compliance with the permit, prepare and upload to SMARTS all required documents, photos, data, and/or reports (including the Annual Reports) and ensure permit coverage termination upon construction completion by preparing a Notice of Termination on SMARTS. The Contractor shall inform the Engineer when documents/reports are available on SMARTS for Engineer certification and submittal. 2. Storm Water Pollution Prevention Plan Submit a Stormwater Pollution Prevention Plan that describes measures that shall be implemented to prevent the discharge of contaminated storm water runoff from the jobsite. Contaminants to be addressed include, but are not limited to, soil, sediment, concrete residue, pH less than 6.5 or greater than 8.5, and chlorine residual and all other contaminants known to exist at the jobsite location as described in Document 00 31 24 - Material Assessment Information. *Section 3.3., Dust Control and Monitoring* (Details as listed under Impact Air Quality a)			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	EBMUD's Pumping Plant Design Guide (Details as listed under Impact Geology and Soils a)			
Geology and Soils c): Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	**EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements** *Section 1.3.K, Excavation Safety Plan* 1. Section 6705 of the Labor Code requires that the excavation of any trench 5 feet or more in depth shall not begin until the Contractor has received from the Engineer notification of the Engineer's acceptance of the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation of such trench. a. The plan shall show the details of the design of shoring, bracing, sloping or other provisions to be made for worker protection during such excavation. b. The plan shall meet the requirements of the Construction Safety Orders, Title 8, California Code of Regulations. 2. Contractor shall obtain an excavation permit per Cal/OSHA Title 8, CCR § 341(a)(1). 3. California Government Code § 4216 describes the requirements and procedures for excavation notifications and utility excavation.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Geology and Soils d): Be located on expansive soil as defined in Table 18-1-B of the Uniform Building Code 1994, creating substantial risks to life or property?	**EBMUD's Engineering Standard Practice 550.1, Seismic Design Requirements and 512.1, Water Main and Services Design Criteria** (Details as listed under Geology and Soils a)			
Geology and Soils f): Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.10, Protection of Cultural and Paleontological Resources* (Details as listed under Impact Cultural Resources a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Greenhouse Gas Emissions				
Greenhouse Gas Emissions a): Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.5.A, Air Quality and Emissions Control* (Details as listed under Impact Air Quality a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
Greenhouse Gas Emissions b): Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.5.A, Air Quality and Emissions Control* (Details as listed under Impact Air Quality a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Hazards and Hazardous Materials				
Hazards and Hazardous Materials a and b): Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or 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?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.A.2, Storm Water Pollution Prevention Plan* 2. Storm Water Pollution Prevention Plan a. Submit a Stormwater Pollution Prevention Plan that describes measures that shall be implemented to prevent the discharge of contaminated storm water runoff from the jobsite. Contaminants to be addressed include, but are not limited to, soil, sediment, concrete residue, pH less than 6.5 or greater than 8.5, and chlorine residual and all other contaminants known to exist at the jobsite location as described in Document 00 31 24 - Material Assessment Information. *Section 1.3.B, Water Control and Disposal Plan* B. Water Control and Disposal Plan 1. The Contractor shall submit a detailed Water Control and Disposal Plan for the Engineer's acceptance prior to any work at the jobsite. a. Plan shall comply with all requirements of the Specification and applicable discharge permits. Table 1 summarizes discharge permits that may be applicable to District projects. b. Contractor shall maintain proper control of the discharge at the discharge point to prevent erosion, scouring of bank, nuisance, contamination, and excess sedimentation in the receiving waters. 2. Drinking Water System Discharges a. Plan shall include the estimated flow rate and volume of all proposed discharges to surface waters, including discharges to storm drains. All receiving waters shall be clearly identified. a. Contractor shall track all discharges directly to a surface water body or a storm drain system that drains to a surface water body. A record consisting of discharge locations and volumes shall be submitted to the Engineer prior to Contract Acceptance. b. A monitoring program is required for drinking water system discharges greater than 325,850 gallons in conformance with Attachment E, Monitoring and Reporting Program, of the General Drinking Water Discharges Permit, when	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	the water will be discharged either directly into a surface water body or a storm drain system that drains to a surface water body. A record consisting of discharge locations, volumes and Water Quality (WQ) data shall be submitted to the Engineer. The Planned Discharge Tracking Form, attached to the end of this section, may be used to fulfill this requirement. All monitoring results shall be submitted to the Engineer prior to Contract Acceptance. 1. Contractor shall notify the Engineer, at least one week prior to the start of a planned discharge equal to or greater than 325,850 gallons, of the following: a) The discharge start date; b) The discharge location and the applicable receiving water; c) The flow rate and volume to be discharged; and d) The reason(s) for discharge. c. Contractor shall dechlorinate all drinking water system discharges to achieve a total chlorine residual concentration of < 0.1 mg/L measured with a handheld chlorine meter utilizing a US EPA approved method and provide effective erosion & sediment control to achieve a visual turbidity concentration of ≤ 100 NTU by implementing BMPs which meet the District minimum standards (see Figure 1 attached to the end of this section) or better. d. Instead of discharging to surface waters, where feasible, Contractor shall beneficially reuse water derived from drinking water systems as defined in the General Drinking Water Discharges Permit. Potential reuse strategies include, but are not limited to, landscape irrigation, agricultural irrigation, dust control, and discharge to stormwater capture basins or other groundwater recharge systems. Contractor shall do so without impacting property or the environment. Contractor shall provide a record of reuse location(s) and volume(s) and submit it to the Engineer prior to Contract Acceptance. e. Contractor shall ensure that the pH level of any discharges shall not be depressed below 6.5, nor elevated above 8.5. If there is potential for discharges to be below 6.5 or above 8.5, Contractor shall employ pH adjustment best management practices to ensure discharges are within the range of 6.5 and 8.5. Contractor shall conduct onsite field measurements for pH per quality assurance and quality control (QA/QC) protocol that conform to U.S. EPA guidelines, or procedures approved by the American Water Works Association or other professional drinking water industry association. Contractor shall submit all monitoring results to the Engineer prior to Contract Acceptance. 3. Non-Stormwater Discharges a. Plan shall describe measures for containment, handling, treatment (as necessary), and disposal of discharges such as groundwater (if encountered), runoff of water used for dust control, stockpile leachate, tank heel water, wash water, sawcut slurry, test water and construction water or other liquid that has been in contact with any interior surfaces of District facilities. Contractor shall			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	provide the Engineer with containment, handling, treatment and disposal designs and a sampling & analysis plan for approval before commencing the Work. Sampling and analysis shall be in conformance with Sections 1.3 (K) Analytical Test Results and 3.1 SAMPLING AND ANALYSIS. 4. Sanitary Sewer Discharges a. It is District policy to send superchlorinated discharges from pipeline disinfection to the sanitary sewer system. Plan shall include a sampling and analytical program for superchlorinated discharges in conformance with the Sanitary Sewer Discharge Permit. All monitoring results shall be submitted to the Engineer prior to the end of the Work. b. Obtain and provide to the Engineer documentation from the agency (e.g., wastewater treatment plant, local sewer owner) having jurisdiction, authorizing the Contractor to dispose of the liquid and describing the method of disposal. Discharges destined for the District's main wastewater treatment plant in Oakland can reference Special Discharge Permit (SDP) #50333261, issued to the District's Regulatory Compliance Office, when obtaining authorization from the pertinent local jurisdiction that owns the sewers to be used. Contractor shall, prior to the end of the Work, report to the Engineer the volumes of all discharges performed pursuant to the said SDP along with copies of any profile forms and/or correspondence between Contractor and disposal facility. *Section 1.3.C, Construction and Demolition Waste* C. Construction and Demolition Waste Disposal Plan 1. Prepare a Construction and Demolition Waste Disposal Plan and submit a copy of the plan for the Engineer's acceptance prior to disposing of any material (except for water wastes which shall be addressed in the Water Control and Disposal Plan). a. The plan shall identify how the Contractor will remove, handle, transport, and dispose of all materials required to be removed under this contract in a safe, appropriate, and lawful manner in compliance with all applicable regulations of local, state, and federal agencies having jurisdiction over the disposal of removed materials. b. The Contractor shall procure the necessary permits required by the local, state, and federal agencies having jurisdiction over the handling, transportation, and disposal of construction and demolition waste. c. Include a list of reuse facilities, recycling facilities and processing facilities that will be receiving recovered materials. d. Identify materials that are not recyclable or not recovered which will be disposed of in a landfill (or other means acceptable by the State of California and local ordinance and regulations). e. Identify how the Contractor will comply with The California Department of Toxic Substances Control's (DTSC) Alternative Management Strategies			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	(AMS) when handling and disposing of treated wood waste (TWW) in compliance with 22 CCR 66261.9.5. f. TWW records including but not limited to manifests, bills of lading should be submitted to the Engineer within 5 working days of off-haul. Records should include: (1) name and address of the TWW facility to which the TWW was sent; (2) estimated weight of TWW, or the weight of the TWW as measured by the receiving TWW facility; and (3) date of the shipment of TWW. (Cal. Code Regs., tit. 22, §§ 67386.8(a) and (e)(1)). g. List the permitted landfill, or other permitted disposal facilities, that will be accepting the disposed waste materials. h. Identify each type of waste material to be reused, recycled or disposed of and estimate the amount, by weight. i. Plan shall include the sampling and analytical program for characterization of any waste material, as needed, prior to reuse, recycle or disposal. 2. Materials or wastes shall only be recycled, reused, reclaimed, or disposed of at facilities approved of by the District. 3. Submit permission to reuse, recycle, reclaim, or dispose of material from reuse, recycling, reclamation, or disposal site owner along with any other information needed by the District to evaluate the acceptability of the proposed reuse, recycling, or disposal site and obtain acceptance of the Engineer prior to removing any material from the project site. 4. All information pertinent to the characterization of the material or waste shall be disclosed to the District and the reuse, recycling, reclamation, or disposal facility. Submit copies of any profile forms and/or correspondence between the Contractor and the reuse, recycling, reclamation, or disposal facility. 5. Submit name and Environmental Laboratory Accreditation Program Certificate number of laboratory that will analyze samples for suspected hazardous substances. Include statement of laboratory's certified testing areas and analyses that laboratory is qualified to perform. Submit prior to any laboratory testing. *Section 1.3.D, Spill Prevention and Response Plan* D. Spill Prevention and Response Plan 1. Submit plan detailing the means and methods for preventing and controlling the spilling of known hazardous substances used on the jobsite or staging areas. The plan shall include a list of the hazardous substances proposed for use or generated by the Contractor on site, including petroleum products, and measures that will be taken to prevent spills, monitor hazardous substances, and provide immediate response to spills. Spill response measures shall address notification of the Engineer and appropriate agencies including phone numbers; spill-related worker, public health, and safety issues; spill control, and spill cleanup. 2. Submit a Safety Data Sheet (SDS) for each hazardous substance proposed to be used prior to delivery of the material to the jobsite			

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	Section 1.3.E, Dust Control and Monitoring Plan (Details as listed under Impact Air Quality a) **EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements** *Section 1.3.B, Project Health and Safety Plan* B. Project Health and Safety Plan 1. Submit a Project Health & Safety Plan for the Work to be performed prior to start of the Notice to commence field work (NTCFW) and/or prior to any limited notice to commence field work (LNTCFW). 2. The Project Health & Safety Plan shall implement applicable Title 8, California Code of Regulations for the work performed. *Section 1.3.J, Electrical Safety Plan* 1. Submit a detailed electrical safety plan that is in accordance with NFPA 70E Article 110. The plan shall include at a minimum: a. Electrical hazard potential b. Electrical safety program principles per Annex E.1 of NFPA 70E c. Electrical safety program controls per Annex E.2 of NFPA 70E d. Electrical safety program procedures per Annex E.3 of NFPA 70E e. Risk assessment and risk control procedures per Annex F of NFPA 70E f. Job briefing and planning checklists per Annex I of NFPA 70E g. Auditing effectiveness of project electrical safety program **EBMUD's Engineering Standard Practice 514, Identifying Buried Conflicts** *Section V, Requirements and Guidelines of Planning, Design, and Construction* **Procedure 711, Hazardous Waste Removal**			
Hazards and Hazardous Materials c): Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	**EBMUD's Standard Construction Specification 01 35 24, Project Safety Requirements** *Section 1.3.B, Project Health and Safety Plan* (Details as listed under Impact Hazards and Hazardous Materials a) **EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.D, Spill Prevention and Response Plan* (Details as listed under Impact Hazards and Hazardous Materials a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Hazards and Hazardous Materials f): Impair implementation of or physically interfere with an adopted emergency response plan or	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** *Section 1.2, Submittals* A. Submit at least 15 calendar days prior to work a detailed traffic control plan, that is approved by all agencies having jurisdiction and that conforms to all requirements of these specifications and the most recently adopted edition of the California Manual on Uniform Control Devices. Traffic Control Plan shall include:	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
emergency evacuation plan?	1. Circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. 2. A description of emergency response vehicle access. If the road or area is completely blocked, preventing access by an emergency responder, a contingency plan must be included. 3. Procedures, to the extent feasible, to schedule construction of project elements to minimize overlapping construction phases that require truck hauling. 4. Designated Contractor staging areas for storage of all equipment and materials, in such a manner to minimize obstruction to traffic. 5. Locations for parking by construction workers.			
Hydrology and Water Quality				
Hydrology and Water Quality a): Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.A.2, Storm Water Pollution Prevention Plan* (Details as listed under Impact Hazards and Hazardous Materials a) *Section 1.3.B, Water Control and Disposal Plan* (Details as listed under Impact Hazards and Hazardous Materials a) *Section 1.3.D, Spill Prevention and Response Plan* (Details as listed under Impact Hazards and Hazardous Materials a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Hydrology and Water Quality c): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i. Result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.1.B, Site Activities* (Details as listed under Impact Geology and Soils b) *Section 1.3.A.2, Storm Water Pollution Prevention Plan* (Details as listed under Impact Hazards and Hazardous Materials a) *Section 1.3.B, Water Control and Disposal Plan* (Details as listed under Impact Hazards and Hazardous Materials a) *Section 1.3.D, Spill Prevention and Response Plan* (Details as listed under Impact Hazards and Hazardous Materials a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
iii. 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; or iv. impede or redirect flood flows?				
Hydrology and Water Quality e): Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.A.2, Storm Water Pollution Prevention Plan* (Details as listed under Impact Hazards and Hazardous Materials a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Noise				
Noise a): Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3, Submittals* G. Noise Control and Monitoring Plan 1. Submit a plan detailing the means and methods for controlling and monitoring noise generated by construction activities, including demolition, alteration, repair or remodeling of or to existing structures and construction of new structures, as well as by items of machinery, equipment or devices used during construction activities on the site for the Engineer's acceptance prior to any work at the jobsite. The plan shall detail the equipment and methods used to monitor compliance with the plan. *Section 3.7, Noise Control* A. Comply with sound control and noise level rules, regulations and ordinances as required herein and in the CEQA documents which apply to any work performed pursuant to the contract. B. Contractor is responsible for taking appropriate measures, including muffling of equipment, selecting quieter equipment, erecting noise barriers, modifying work operations, and other measures as needed to bring construction noise into compliance.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	C. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler. D. Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) shall be used for all equipment and trucks, as necessary. E. Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours specified in Section 01 14 00. F. Stationary noise sources (e.g., chippers, grinders, compressors) shall be located as far from sensitive receptors as possible. If they must be located near receptors, adequate muffling (with enclosures) shall be used. Enclosure opening or venting shall face away from sensitive receptors. Enclosures shall be designed by a registered engineer regularly involved in noise control analysis and design. G. Material stockpiles as well as maintenance/equipment staging and parking areas (all on-site) shall be located as far as practicable from residential receptors. **EBMUD's Standard Construction Specification 01 14 00, Work Restrictions** *Section 1.7, Construction Noise* A. Noise-generating activities greater than 90 dBA (impact construction such as concrete breaking, concrete crushing, tree grinding, etc.) shall be limited to the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday. **Procedure 600, Public Outreach and Community Relations**			
Noise b): Generation of excessive groundborne vibration or groundborne noise levels?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.H, Vibration Control and Monitoring Plan* H. Vibration Control and Monitoring Plan 1. Submit a plan detailing the means and methods for controlling and monitoring surface vibration generated by demolition and other work on the site for the Engineer's acceptance prior to any work at the jobsite. The plan shall detail the equipment and methods used to monitor compliance with the plan. *Section 3.6, Vibration Control* A. Limit surface vibration to no more than 0.5 in/sec Peak Particle Velocity (PPV), measured at the nearest residence or other sensitive structure. See Section 01 14 00.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Transportation				
Transportation a): Conflict with a program plan, ordinance or policy addressing the circulation system, including transit,	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** *Section 1.2, Submittals* (Details as listed under Impact Hazards and Hazardous Materials f) *Section 3.4, Temporary Traffic Control*	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
roadway, bicycle, and pedestrian facilities?	A. All traffic control devices shall conform to the latest edition of the MUTCD, and as amended by the latest edition of the MUTCD California supplement. Electronic signage board with changeable message shall be placed on a street in both direction 2 weeks in advance. B. The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction. Any work that disturbs normal traffic signal operations and ensure proper temporary traffic control (lane shifts, lane closures, detours etc.) shall be coordinated with the agency having jurisdiction, at least 72 hours prior to commencing construction. C. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved. D. Access to driveways will be maintained at all times unless other arrangements are made. E. All traffic control devices shall be removed from view when not in use. F. Before leaving a work area, ensure the area is left orderly. Trenches must be backfilled or plated during non-working hours. G. Sidewalks for pedestrians will remain open if safe for pedestrians. Alternate routes and signing will be provided if pedestrian routes are to be closed.			
Transportation c): Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** *Section 2.1, Traffic Control Devices* A. Traffic signs, flashing lights, barricades and other traffic safety devices used to control traffic shall conform to the requirements of the most recently adopted edition of the MUTCD and the agency having jurisdiction. 1. Portable signals shall not be used unless permission is given in writing by the agency having jurisdiction. 2. Warning signs used for nighttime conditions shall be reflectorized or illuminated. "Reflectorized signs" shall have a reflectorized background and shall conform to the current State of California Department of Transportation specification for reflective sheeting on highway signs.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Transportation d): Result in inadequate emergency access?	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** *Section 1.2, Submittals* (Details as listed under Impact Hazards and Hazardous Materials f) *Section 3.0, Execution* 3.1 GENERAL A. Except where public roads have been approved for closure, traffic shall be permitted to pass through designated traffic lanes with as little inconvenience and delay as possible. B. Install temporary traffic markings where required to direct the flow of traffic. Maintain the traffic markings for the duration of need and remove by abrasive blasting when no longer required.	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
	C. Convenient access to driveways and buildings in the vicinity of work shall be maintained as much as possible. Temporary approaches to, and crossing of, intersecting traffic lanes shall be provided and kept in good condition. D. When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic. E. Provide temporary signs as required by the traffic control plan and remove signs when no longer required. F. Haul routes for each construction phase shall be provided to all trucks serving the site during the construction period. G. For complete road closures, immediate emergency access to be provided if needed to emergency response vehicles. H. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved. 3.2 ALTERNATING ONE-WAY TRAFFIC A. Where alternating one-way traffic has been authorized, the following shall be posted at each end of the one-way traffic section at least one week prior to start of work: 1. The approximate beginning and ending dates that traffic delays will be encountered. 2. The maximum time that traffic will be delayed. B. The maximum delay time shall be approved by the agency having jurisdiction. 3.3 FLAGGING A. Provide flaggers to control traffic where required by the approved traffic control plan. 1. Flaggers shall perform their duties and shall be provided with the necessary equipment in accordance with the current "Instructions to Flaggers" of the California Department of Transportation. 2. Flaggers shall be employed full time on traffic control and shall have no other duties. 3.4 TEMPORARY TRAFFIC CONTROL (Details as listed under Impact Transportation a)			
Tribal Cultural Resources				
Tribal Cultural Resources a): Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 3.10, Protection of Cultural and Paleontological Resources* (Details as listed under Impact Cultural Resources b)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or ii. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe				
Utilities and Service Systems				

Impact Area	EBMUD Practices and Procedures[1]	Responsibility for Implementation	Responsibility for Monitoring and/or Enforcement	Timing of Implementation
Utilities and Service Systems d and e): Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, or comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**EBMUD's Standard Construction Specification 01 35 44, Environmental Requirements** *Section 1.3.C, Construction and Demolition Waste* (Details as listed under Impact Hazards and Hazardous Materials a)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction
Wildfire				
Wildfire a): Substantially impair an adopted emergency response plan or emergency evacuation plan?	**EBMUD's Standard Construction Specification 01 55 26, Traffic Regulation** *Section 1.2, Submittals* (Details as listed under Impact Hazards and Hazardous Materials f)	EBMUD and EBMUD's Contractor	EBMUD	Prior to and During Construction

NOTES:

1 In EBMUD Standard Specifications, "District" = EBMUD; "Engineer" = EBMUD Engineer; "Contractor" = EBMUD Contractor; "Work" = Scope of Work for the Project

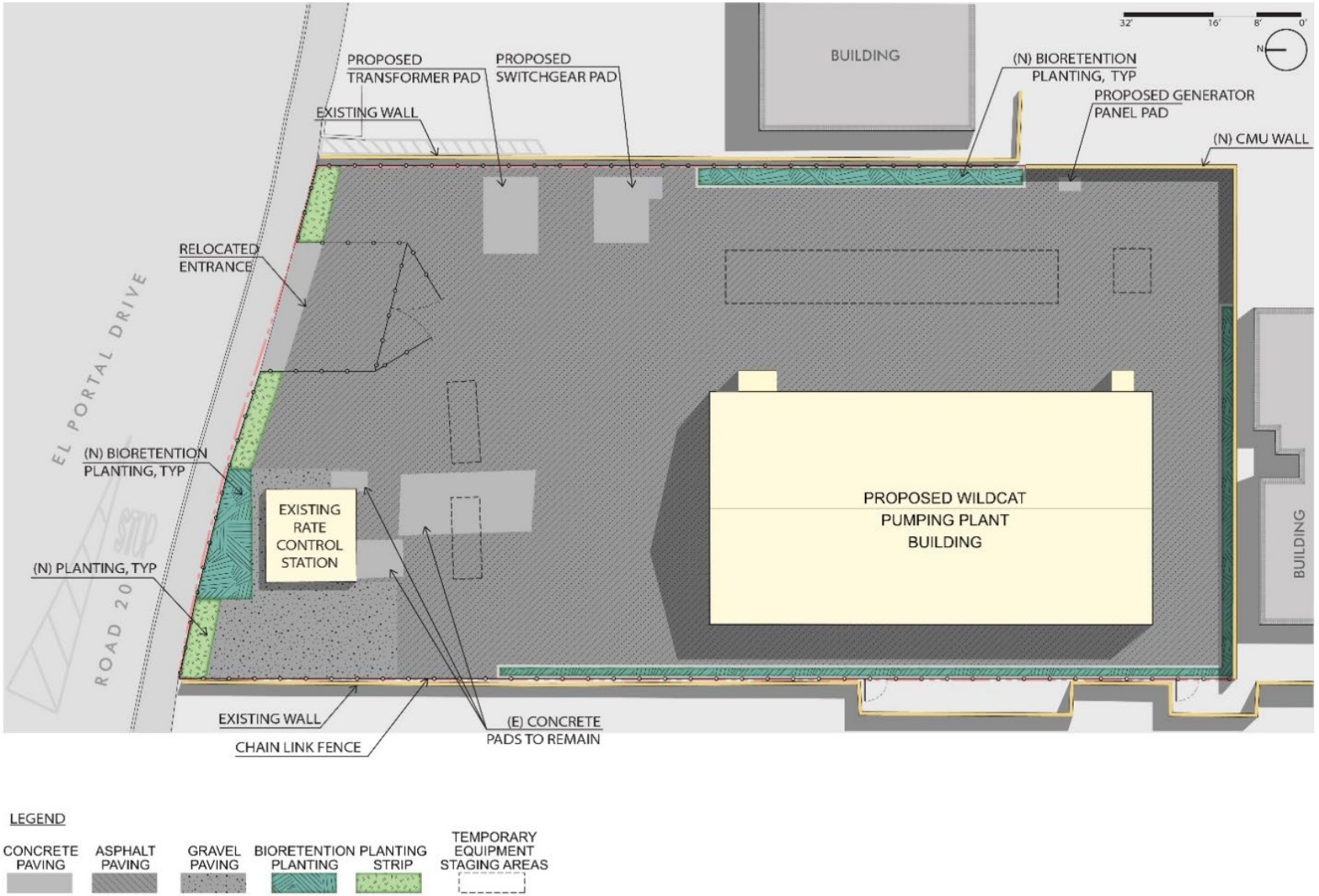
Attachment C

Wildcat Pumping Plant Project Location Map


SAN DOMINGO CT
CORTE ST
ADOBE CT
SAN FERNANDO ST
SANTA BARBARA ST
EL PORTAL DR
SAN PEDRO ST
ABELLA CIR
ABELLA CIR
ROAD 20
EL PORTAL DR
WILDCAT PUMPING PLANT
PROJECT LOCATION MAP
San Pablo, CA
Wildcat Pumping Plant Site
Storm Drain Pipeline
MAP NOT TO SCALE

Attachment D

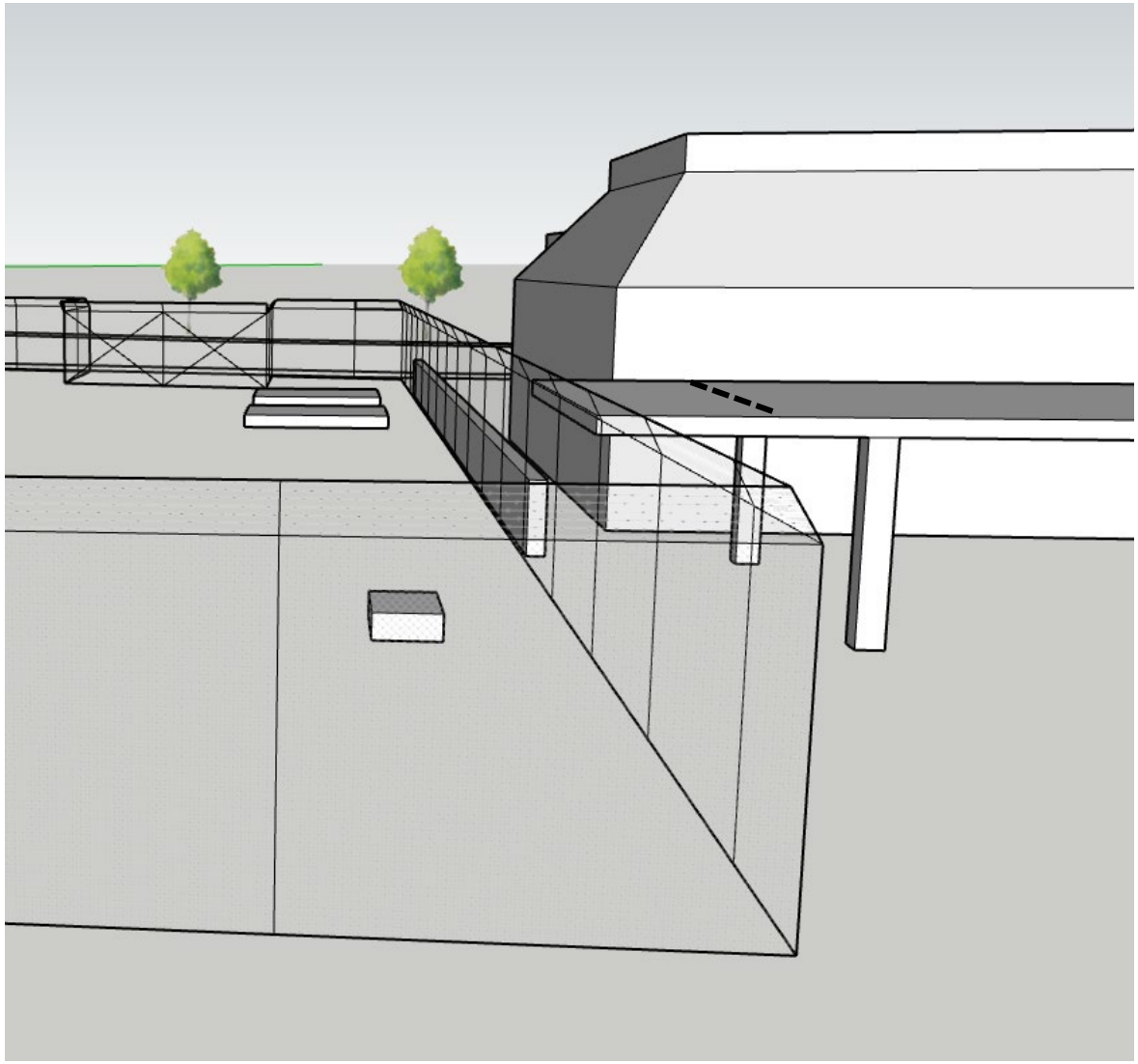
Wildcat Pumping Plant Project Site Plan and Landscape Plan



Wildcat Pumping Plant Project Site Plan and Landscape Plan

Attachment E

Kona Apartment Carport Roof



Kona Apartment Carport Roof