# Mitigation Monitoring and Reporting Program

## PIPS Parallel Force Main Project

**Prepared by:**

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# 1. MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires that when a lead agency adopts a Mitigated Negative Declaration (MND), it shall prepare a monitoring or reporting program for all required mitigation measures (CEQA Guidelines Section 15097). This Mitigation Monitoring and Reporting Program (MMRP) describes the monitoring and reporting program for mitigation measures adopted by the City of Petaluma (City) to avoid or substantially reduce impacts related to the Primary Influent Pump Station (PIPS) Parallel Force Main Project ("project", "proposed project") to less than significant levels and has been prepared in accordance with Public Resources Code Section 21081.6 and State CEQA Guidelines Section 15097. The City and its contractors are required to implement the adopted mitigation measures for the proposed project in accordance with the MND. This MMRP will be used by the City to ensure that the mitigation measures identified in the MND are implemented.

## 1.1 Program Administration

The MMRP shall be administered by the City of Petaluma and mitigation measures shall be incorporated into design and construction contracts, as appropriate, to ensure full implementation. The MMRP shall be maintained by the designated City of Petaluma Project Manager and be available for inspection upon request at the City's offices.

## 1.2 Project Description

The proposed project would include construction of an approximately 13,000-foot-long, 36-inch-diameter sewer force main to improve the City's sewer collection system operational efficiency and redundancy. The proposed parallel force main would approximately follow the 12,900-foot-long alignment of the existing City force main from the City's PIPS facility to its termination at the Ellis Creek Water Recycling Facility. The force main would deviate from the existing force main alignment for approximately 1,000 linear feet to avoid construction across the Azure Apartment Homes, located at 1400 Technology Lane. The proposed parallel force main would bypass this property by constructing along Casa Grande Road and Technology Lane.

The proposed project also includes construction and operation of a 2,100-foot-long, Class 1 off-street multi-use pedestrian and bicycle pathway between Baywood Drive and Casa Grande Road.

# 2. MITIGATION MONITORING REQUIREMENTS

## 2.1 Mitigation Measures

A mitigation monitoring and reporting checklist has been developed for the proposed project evaluated in the MND and is intended for use by the City of Petaluma, as lead agency and designated monitoring entity. The checklist is presented in **Table MMRP-1**, which summarizes the mitigation requirements for the proposed project. The table identifies anticipated timing and responsible parties for ensuring implementation of each mitigation measure.

## Table MMRP-1: Mitigation Monitoring and Reporting Checklist

| Mitigation Measure | Impact Statement | Party Responsible for Implementation and Reporting | Review and Approval by: | Monitoring and Reporting Actions | Implementation Schedule | Verification: Status/ Date Completed/ Initials |
|---|---|---|---|---|---|---|
| **Aesthetics** | | | | | | |
| **Mitigation Measure AES-1: Construction Lighting**<br>Should nighttime construction be required, a construction safety lighting plan shall be submitted to the City for review and approval prior to any nighttime construction activities. The Construction Safety Lighting Plan shall require that all construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent sensitive areas (including residential and biologically sensitive areas) and that all lighting shall consist of the minimal wattage necessary to provide safety at the construction site. | **Impact 3.1d –** Potential to create a minor, temporary, new source of light and glare from construction equipment. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. If nighttime construction lighting is expected, confirm that Construction Safety Lighting Plan is submitted for review and approval prior to construction.<br><br>3. Monitor nighttime activities to verify that Construction Lighting Plan is implemented.<br><br>4. Retain copy of Construction monitoring records in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction<br><br>4. Construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____ |
| **Air Quality** | | | | | | |
| **Mitigation Measure AIR-1: Best Management Practices for Construction-Related Fugitive Dust Emissions**<br>The City shall ensure the construction contractor implements the following measures during construction for the proposed project to have a less-than-significant criteria air pollutant impact related to construction-related fugitive dust emissions.<br>• BMP 1: All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.<br>• BMP 2: All haul trucks transporting soil, sand, or other loose material off-site shall be covered.<br>• BMP 3: All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.<br>• BMP 4: All vehicle speeds on unpaved roads shall be limited to 15 mph.<br>• BMP 5: All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.<br>• BMP 6: All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.<br>• BMP 7: All trucks and equipment, including their tires, shall be washed off prior to leaving the site.<br>• BMP 8: Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted wood chips, mulch, or gravel.<br>• BMP 9: Publicly visible signs shall be posted with the telephone number and name of the person to contact at the City of Petaluma regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD General Air Pollution Complaints number (1-800-334-6367) shall also be visible to ensure compliance with applicable regulations. | **Impact 3.3a –** Potential to conflict with or obstruct implementation of the applicable air quality plan.<br><br>**Impact 3.3b –** Potential to 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.<br><br>**Impact 3.3c –** Potential to expose sensitive receptors to substantial pollutant concentrations. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Perform site inspections to verify contractor compliance with Best Management Practices.<br><br>3. Retain copies of inspection records in project file. | 1. Contracting<br><br>2. Construction<br><br>3. Construction | 1._____<br><br>2._____<br><br>3._____ |

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| **Mitigation Measure AIR-2: Enhanced Best Management Practices for Construction-Related Fugitive Dust Emissions**<br>The City shall ensure the construction contractor implements the following measures during construction when soil disturbing activities occur within 100 feet of schools, residential areas, or other sensitive land uses for the proposed project to have a less-than-significant air quality impact on sensitive receptors related to construction-related fugitive dust emissions.<br>• EBMP 1: Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.<br>• EBMP 2: Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have a maximum of 50 percent air porosity.<br>• EMMP 3: Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and water appropriately until vegetation is established.<br>• EBMP 4: Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.<br>• EBMP 5: Minimize the amount of excavated material or waste materials stored at the site.<br>• EBMP 6: Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days. | **Impact 3.3c –** Potential to expose sensitive receptors to substantial pollutant concentrations. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Perform site inspections to verify contractor compliance with Enhanced Best Management Practices.<br><br>3. Retain copies of inspection records in project file. | 1. Contracting<br><br>2. Construction<br><br>3. Construction | 1._____<br><br>2._____<br><br>3._____ |
| **Biological Resources** | | | | | | |
| **Mitigation Measure BIO-1a: Steelhead**<br>To avoid impacts to steelhead, crossing of Adobe Creek shall be conducted in the dry season and work shall be performed with appropriate approvals from the National Marine Fisheries Service as well as other applicable state and federal agencies, and the City and contractors shall comply with all required permit conditions for microtunneling at Adobe Creek. No work will be conducted within 100 feet of Adobe Creek, and work areas within 200 feet of Adobe Creek shall be bordered by temporary exclusion fencing. | **Impact 3.4a –** Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, Construction Contractor, Qualified Biologist, NMFS, USACE, USFWS, CDFW | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm appropriate approvals from the National Marine Fisheries Service as well as other applicable state and federal agencies before beginning construction activities.<br><br>3. Confirm contractors comply with all required permit conditions for microtunneling.<br><br>4. Perform site inspections to verify that work areas within 200 feet of Adobe Creek are bordered by temporary exclusion fencing.<br><br>5. Retain copies of inspection records in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Pre-construction<br><br>4. Construction<br><br>5. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____ |

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| **Mitigation Measure BIO-1b: Terrestrial Species**<br>To avoid impacts to western pond turtle, foothill yellow-legged frog, California red-legged frog, or salt marsh harvest mouse, if present, ground disturbance to marsh habitat (including emergent vegetation such as bulrush and cattails) will be avoided to the extent feasible.<br><br>Work areas within 200 feet of potential habitat for western pond turtle, foothill yellow-legged frog, California red-legged frog, and salt marsh harvest mouse shall be bordered by temporary exclusion fencing. The fence shall be made of a smooth material that does not allow mice to climb or pass through, of a minimum above-ground height of 30 inches, and the bottom shall be buried to a depth of at least 6 inches so that mice cannot crawl under the fence. Installation of the fence shall be monitored by an approved biologist with experience with these species, who will check the fence alignment prior to vegetation clearing and fence installation to ensure no sensitive species are present.<br><br>Where marsh habitat cannot be avoided, vegetation shall be removed from the ground disturbance work area, plus a 10-foot buffer around the area, with mechanized hand tools or by another method approved by the USFWS and CDFW. Vegetation height shall be maintained at or below 5 inches above ground. Vegetation removal in wetland habitat shall be conducted under the supervision of a qualified biologist. If impacts cannot be avoided an Incidental Take Permit shall be obtained from CDFW. | **Impact 3.4a –** Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, Qualified Biologist, Construction Contractor, USFWS, CDFW | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm contractor establishes temporary exclusion fencing around work areas within 200 feet of potential habitat for special-status species.<br><br>3. Confirm qualified biologist monitors the installation of the fencing to ensure no sensitive species is present.<br><br>4. If marsh habitat cannot be avoided, confirm vegetation removal is conducted appropriately and monitored by a qualified biologist.<br><br>5. If impacts cannot be avoided, the City shall obtain an Incidental Take Permit from CDFW.<br><br>6. Retain copies of all surveys and reports in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction<br><br>4. Construction<br><br>5. Construction<br><br>6. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____<br><br>6._____ |
| **Mitigation Measure BIO-1c: Rails**<br>To avoid disturbing nesting Ridgway's rail and California black rail the following measure shall be implemented:<br>• Prior to construction, protocol-level surveys shall be conducted in all suitable habitat for Ridgway's (California clapper) rail or California black rail, following the methods detailed in the USFWS Site-Specific Protocol for Monitoring Marsh Birds (2017). No work activities, visual disturbance (direct line of sight) and/or increase in the ambient noise level shall occur within 700 feet [215 meters] of areas where rails have been detected and are likely to be nesting during the breeding season (January 15 – August 31), or a distance determined in coordination with U.S. Fish and Wildlife [USFWS] or the California Department of Fish and Wildlife [CDFW]).<br>• If surveys are not conducted, nesting rails shall be assumed present in suitable marsh habitat adjacent to the alignment and proposed multi-use path, and mitigation described above shall be implemented.<br>• As the California black rail, Ridgway's rail and salt marsh harvest mouse are all California fully protected species, as well as state and/or federal listed species, the City shall avoid all take of these species, by implementing the mitigation described above requiring avoidance of all work within 700 feet of areas where rails have been detected or, if surveys are not conducted, where habitat is present. | **Impact 3.4a –** Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. | City of Petaluma, Construction Contractor, Qualified Biologist, USFWS, CDFW | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm protocol-level surveys are conducted in all suitable habitat following the methods detailed in the USFWS Site-Specific Protocol for Monitoring Marsh Birds.<br><br>3. If rails are identified in the protocol-level surveys, verify no work occurs within 700 feet where rails have been detected or are likely to be nesting during the breeding season.<br><br>4. If surveys are not conducted verify no work occurs within 700 feet of potential habitat.<br><br>5. Retain copies of all surveys and reports in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction<br><br>4. Construction<br><br>5. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____ |

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| **Mitigation Measure BIO-1d: Nesting Birds**<br>If construction is scheduled to start during the bird nesting season (February 1 through August 31), no more than two weeks prior to construction in a given area, a qualified biologist shall perform preconstruction surveys for nesting birds within 250 feet of construction areas, where access is available. If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further avoidance is required.<br><br>If active nests are detected during preconstruction surveys, workers shall create a no disturbance buffer around active raptor nests and nests of other special status birds during the breeding season, or until it is determined that young birds have fledged. Buffers shall be at least 250 feet for raptors and at least 150 feet for other nesting birds. Nests initiated within the active construction area may have reduced buffer sizes due to the increased tolerance of disturbance. Reductions to nest buffer distances may be allowed on a case by case basis in coordination with the CDFW based on site specific factors such as the existing disturbance levels, the species of nesting bird, and the magnitude of the proposed disturbance. A lapse of greater than 10 days in construction activity shall trigger the need for additional nesting bird surveys. | **Impact 3.4a –** Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, Qualified Biologist, Construction Contractor, CDFW | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm construction starts outside of February 1 – August 31.<br><br>3. If construction starts between February 1 – August 31, confirm pre-construction nesting bird survey is completed no more than two weeks prior to the start of clearance/construction work.<br><br>4. If an active nest is identified in the pre-construction survey, verify that a no disturbance buffer is established and that ground-disturbing activities do not occur in buffer until biologist determines that breeding/nesting is completed.<br><br>5. Retain copies of all surveys and reports in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Pre-construction<br><br>4. Construction<br><br>5. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____ |
| **Mitigation Measure BIO-1e: Bats**<br>Before any ground-disturbing activity, a qualified biologist shall conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula. Surveys of potential bat habitats shall be conducted within 2 weeks prior to construction. Removal or trimming of trees or demolition of buildings showing evidence of bat hibernation or maternity activity shall occur during the period least likely to affect inactive wintering bats and active bat maternity roosts (i.e., avoid roost disturbance from October 15 to February 15 for winter hibernacula, and April 15 to August 15 for maternity roosts). Tree removal or demolition may occur during sensitive bat roosting periods if a qualified bat biologist confirms the absence of overwintering habitat or maternity roosts. If active day or night (non-maternity) roosts are found, the bat biologist shall supervise tree removal or building demolition over two days, in order to allow individual bats to depart prior to tree removal or building demolition. If bats are found the City will report occurrences to CDFW. | **Impact 3.4a –** Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, Qualified Biologist | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm that a qualified biologist conducts surveys of all potential bat habitat two weeks prior to any ground-disturbing activity.<br><br>3. Confirm that the removal or trimming of trees showing evidence of bat hibernation or maternity activity does not occur between October 15 to February 15 or April 15 to August 15.<br><br>4. If active day or night roosts are found, confirm that a qualified biologist supervises tree removal or building demolition over two days.<br><br>5. If bats are found, occurrences are reported to CDFW.<br><br>6. Retain copies of all surveys and reports in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Pre-construction<br><br>4. Construction<br><br>5. Construction<br><br>6. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____<br><br>6._____ |

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| **Mitigation Measure BIO-2: Minimize Impact to Wetlands and Riparian Woodlands**<br>Wetlands, waters and riparian areas shall be avoided to the greatest extent feasible during project construction of the pipeline and multi-use path. Before construction begins, the project engineer and a qualified biologist shall identify locations for equipment and personnel access and materials staging that will minimize sensitive vegetation disturbance. When heavy equipment is required, unintentional soil compaction shall be minimized by using equipment with a greater reach or using low-pressure equipment. Temporary and permanent impacts on sensitive natural communities, including wetlands and riparian woodlands, from construction of the pipeline and multi-use path shall be mitigated by revegetation with native species as described in Mitigation Measures BIO-3a and 3b.<br><br>Vegetation management activities would be limited to areas outside of marshland and riparian habitat to the greatest extent possible. For vegetation management activities adjacent to wetland or riparian habitat, the only herbicides to be used would be EPA-certified for use in/adjacent to aquatic environments. | **Impact 3.4b –** Potential to have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plan, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4c –** Potential to have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, Qualified Biologist, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Verify that the project engineer and a qualified biologist identify suitable staging locations that will minimize sensitive vegetation disturbance.<br><br>3. Confirm revegetation of any wetlands or riparian areas affected by construction.<br><br>4. Retain copies of all surveys and reports in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Post-construction<br><br>4. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____ |

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| **Mitigation Measure BIO-3a: Habitat Restoration and Monitoring**<br>Before the start of construction, the City shall prepare a Habitat Restoration and Monitoring Plan that provides for the restoration of any impacted riparian or wetland habitat. If no direct impacts are anticipated to wetland or riparian woodland habitats, then no such plan would be required. The plan shall describe required salvage and replanting protocols prior to and after construction is complete and shall thereby reduce the long-term amount of losses of these natural communities. This plan shall include, but not be limited to, protocols for replanting of vegetation removed prior to or during construction, and management and monitoring of the plants to ensure replanting success pursuant to requirements included in permits issued for the project.<br><br>The plan shall specify monitoring and performance criteria for the species planted, invasive species control criteria, as well as the best time of year for seeding to occur, pursuant to requirements of permits from the various resource agencies with regulatory purview over the project. Revegetated areas shall be monitored for a five-year period after planting to track progress toward performance criteria.<br><br>Native riparian vegetation within the project construction footprint shall be salvaged prior to construction and replanted after construction is completed. Areas impacted by construction-related activity shall be replanted or reseeded with native trees, shrubs, and herbaceous perennials and annuals from the watershed under guidance from a qualified biologist. Local plant materials shall be used for revegetation of the disturbed area. The plant materials shall include local cuttings from the local watershed or from adjacent watersheds.<br><br>The Habitat Restoration and Monitoring Plan shall also address restoration of jurisdictional wetlands and waters. Temporary impacts to wetlands shall be restored on site with native wetland species under guidance from a qualified biologist. Permanent impacts to jurisdictional wetlands shall be mitigated by replacement on- or off-site at an equal ratio or whatever more stringent requirements are included in the permits to be issued for the project.<br><br>The plan shall contain vegetation management protocols, protocols for monitoring replanting success (e.g., 70 percent plants in good condition) and an adaptive management plan if success criteria are not being met. The adaptive management plan shall include interim thresholds for replanting success and alternative management approaches, such as weed control, additional replanting, or extending the monitoring term to undertake if thresholds are not met. | **Impact 3.4b –** Potential to have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plan, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4c –** Potential to have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, Construction Contractor, Qualified Biologist, USFWS, CDFW, RWQCB | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Verify preparation of Habitat Restoration and Monitoring Plan prior to construction if there are any direct impacts to wetland or riparian woodland habitats.<br><br>3. Obtain written confirmation/approval of the Habitat Restoration and Monitoring Plan from applicable federal, state, and regional agencies.<br><br>4. Confirm restoration plan meets thresholds for success.<br><br>5. Retain copies of the Habitat Restoration and Monitoring Plan in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Pre-construction<br><br>4. Post-construction<br><br>5. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____ |

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| **Mitigation Measure BIO-3b: Permanent Impacts**<br>Any permanently impacted riparian or wetland acreage shall be mitigated by compensatory mitigation, with replacement of like habitat on- or off-site, at a 1:1 ratio, and in accordance with specifications of applicable regulatory agency permits). | **Impact 3.4b –** Potential to have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plan, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.<br><br>**Impact 3.4c –** Potential to have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.<br><br>**Impact 3.4d –** Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. | City of Petaluma, USFWS, CDFW, RWQCB | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm any permanently impacted riparian or wetland acreage is mitigated by compensatory mitigation at a 1:1 ratio. | 1. Contracting<br><br>2. Post-construction | 1._____<br><br>2._____ |

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| **Mitigation Measure BIO-4: Tree Preservation**<br>Before the start of construction the City shall retain an arborist to complete an arborist report and prepare a tree preservation plan. Trees shall be protected by implementing the following measures:<br>• Locations of trees to be removed and protected shall be shown in the construction drawings. Pruning and trimming shall be completed by the Contractor and approved by the City. Pruning shall adhere to the Tree Pruning Guidelines of the International Society of Arboriculture.<br>• Erect exclusion fencing five feet outside of the drip lines of trees to be protected. Erect and maintain a temporary minimum 3-foot-high orange plastic mesh exclusion fence at the locations as shown in the drawings. The fence posts shall be six-foot minimum length steel shapes, installed at 10-feet minimum on center, and be driven into the ground. The Contractor shall be prohibited from entering or disturbing the protected area within the fence except as directed by the City. Exclusion fencing shall remain in place until construction is completed and the City approves its removal.<br>• No grading, construction, demolition, trenching for irrigation, planting or other work, except as specified herein, shall occur within the tree protection zone determined by arborist and established by exclusion fencing installed shown in the drawings. In addition, no excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the tree protection zone.<br>• In areas that are within the tree drip line and outside the tree protection zone that are to be traveled over by vehicles and equipment, the areas shall be covered with a protective mat composed of a 12-inch thickness of wood chips or gravel and covered by a minimum ¾-inch-thick steel traffic plate. The protective mat shall remain in place until construction is completed and the City approves its removal.<br>• Tree roots exposed during trench excavation shall be pruned cleanly at the edge of the excavation and treated to the satisfaction of a certified arborist provided by the City.<br>• Any tree injured during construction shall be evaluated as soon as possible by a certified arborist provided by the City and replaced as deemed necessary by the certified arborist.<br>• Any trees that must be removed shall be replaced in kind. | **Impact 3.4e –** Potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. | City of Petaluma, Qualified Arborist | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm that a qualified arborist completes an arborist report and prepares a tree preservation plan.<br><br>3. Confirm that the location of trees to be removed and protected are shown in construction drawings.<br><br>4. Perform site inspections to verify that exclusion fencing is erected five feet outside of the drop lines of trees to be protected, or as otherwise recommended by a Qualified Arborist, and that protection measures are implemented during construction .<br><br>5. Retain copies of all surveys and reports in project file.<br><br>6. Confirm that any trees removed are replaced in kind. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Pre-construction<br><br>4. Pre-construction<br><br>5. Post-construction<br><br>6. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____<br><br>6._____ |
| **Cultural Resources** | | | | | | |
| **Mitigation Measure CUL-1: Cultural Resource Awareness Training**<br>Before any ground-disturbing and/ or construction activities, the City shall require an archaeologist meeting or under the supervision of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology to conduct a training program for all construction and field personnel involved in project-related ground disturbance prior to such personnel conducting any on-site activities. The Federated Indians of Graton Rancheria (FIGR) shall be invited to participate in the training program. The training shall outline the general archaeological sensitivity of the area and the procedures to follow if an archaeological resource and/ or human remains are inadvertently discovered during project-related activities. | **Impact 3.5b –** Potential to cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.<br><br>**Impact 3.18a –** Potential to cause 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. | City of Petaluma, Qualified Archaeologist, Consulting Tribe(s) | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm Worker Environmental Awareness Training (WEAT) is conducted by a qualified archaeologist, attended by all on-site personnel, and that FIGR is invited to participate.<br><br>3. Retain copies of WEAT participant signatures in the project file. | 1. Contracting<br><br>2. Pre-Construction<br><br>3. Post-Construction | 1._____<br><br>2._____<br><br>3._____ |

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| **Mitigation Measure CUL-2: Inadvertent Discovery of Archaeological Resources**<br>If pre-contact or historic-era archaeological resources are encountered during project implementation, all construction activities within 100 feet shall halt, and a qualified archaeologist, defined as an archaeologist meeting Secretary of the Interior's Professional Qualifications Standards for Archeology, shall inspect the find within 24 hours of discovery and notify the City of their initial assessment. Work shall be conducted in coordination with a Tribal monitor from the Federated Indians of Graton Rancheria. Pre-contact archaeological materials might include: obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools (e.g., hammerstones, pitted stones). Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse.<br><br>If the City determines, based on recommendations from the archaeologist that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) and/or a tribal cultural resource (as defined in PRC Section 21080.3), the resource shall be avoided, if feasible. If the resource is indigenous, the recommendations of the FIGR tribe shall also be considered. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.<br><br>If avoidance is not feasible, the City shall consult with FIGR (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3). | **Impact 3.5b –** Potential to cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.<br>**Impact 3.18a –** Potential to cause 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. | City of Petaluma, Qualified Archaeologist, Consulting Tribe(s) | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. If a significant archaeological resource is discovered, confirm attempts are made to avoid and preserve in place<br><br>3, If a significant archaeological resource is discovered and avoidance and preservation in place is infeasible, confirm the resource(s) are inventoried and analyzed by qualified archaeologist (and tribal monitor(s), as needed) and a data recovery report is prepared.<br><br>4. Retain copies of any monitoring reports in the project file. | 1. Contracting<br><br>2. Construction<br><br>3. Construction<br><br>4. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____ |
| **Mitigation Measure CUL-3: Inadvertent Discovery of Human Remains**<br>In the event of discovery or recognition of any human remains during construction activities, all such activities within 100 feet of the find shall cease until the Sonoma County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission (NAHC) shall be contacted within 24 hours if the Coroner determines that the remains are Native American. The NAHC shall 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 City for the appropriate means of treating the human remains and any grave goods. | **Impact 3.5c –** Potential to disturb any human remains, including those interred outside of dedicated cemeteries.<br><br>**Impact 3.18a –** Potential to cause 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. | City of Petaluma, Sonoma County Coroner, NAHC | City of Petaluma | 1. Confirm mitigation measure is included in contract documents.<br><br>2. If human remains are found, document notification of Sonoma County Coroner.<br><br>3. If Native American human remains are found, verify adequate consultation with NAHC or MLD has occurred, as applicable, and that proper treatment and reburial has occurred, as applicable.<br><br>4. Document and retain records regarding discovery of human remains in project file. | 1. Contracting<br><br>2. Construction<br><br>3. Construction<br><br>4. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____ |

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| **Geology and Soils** | | | | | | |
| **Mitigation Measure GEO-1: Geotechnical Report**<br>The City shall prepare a preconstruction design-level geotechnical report which includes geotechnical-related recommendations for design of the project and all applicable geologic report standards, reconnaissance and subsurface exploration data, laboratory test results, and conclusions and recommendations, including but not limited to:<br>• Site preparation, excavation, fill placement and compaction, temporary and permanent cut and fill slope inclinations (including whether slopes steeper than 3:1 can be used at the site), slope stability, slope erosion mitigation, and landslide movement mitigation<br>• Surface and subsurface drainage systems, including drainage associated with grading for landslide movement mitigation and new cut and fill slopes<br>• Pavement design for pathways where applicable<br>• Utility trench backfill, including check dams and trench drainage, if appropriate<br>• Geologic/geotechnical construction monitoring, testing, and certification requirements<br>• Trail construction and long-term maintenance requirements, including criteria for inspecting and maintaining culverts and pathway surfaces, as appropriate<br><br>The geotechnical report shall include measures, as necessary, to reduce the potential for static and earthquake-induced slope movements that may adversely impact the project. Engineering analyses shall estimate the factors of safety against slope movements in the development area.<br>All recommendations outlined in the preconstruction design-level geotechnical report are herein incorporated by reference and shall be adhered to in order to ensure that appropriate measures are incorporated into the design and construction of the project. Nothing in this mitigation measure shall preclude the City from requiring additional information to be provided to determine compliance with applicable standards. The project plans and specifications shall be prepared in accordance with the geotechnical recommendations for the project. The project geotechnical engineer or personnel under their direct supervision shall inspect the construction of geotechnical and/or geologic aspects of the project to ensure the geotechnical and geologic aspects of the project plans and specifications have been appropriately constructed at the site and are acceptable to the project. | **Impact 3.7a.ii–** Potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Strong seismic ground shaking.<br><br>**Impact 3.7a.iii –** Potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction.<br><br>**Impact 3.7a.iv –** Potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Landslides.<br><br>**Impact 3.7c –** Potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.<br><br>**Impact 3.7d –** Potential to be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. | City of Petaluma | City of Petaluma | 1. Confirm that geotechnical report has been completed.<br><br>2. Confirm that recommendations are included in plans and specifications, as applicable. | 1. Design<br><br>2. Design | 1._____<br><br>2._____ |
| **Mitigation Measure GEO-2: Erosion Control Plan:** An erosion control plan shall be submitted to the City Engineer for review. All earthwork, grading, trenching, backfilling, and compaction operations shall be conducted in accordance with the City of Petaluma's Grading and Erosion Control Ordinance #1567, Title 17, Chapter 17.31 of the Petaluma Municipal Code. Plans shall detail erosion control measures such as site watering, sediment capture, equipment staging and laydown pad, and other erosion control measures to be implemented during all construction activity. | **Impact 3.7b -** Potential to result in substantial soil erosion or the loss of top soil. | City of Petaluma, Constructor Contractor | City of Petaluma | 1. Confirm that mitigation measure is included in contract documents.<br><br>2. Confirm that plan is submitted to City Engineer.<br><br>3. Confirm that measures are implemented during construction | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction | 1._____<br><br>2._____<br><br>3._____ |

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| **Mitigation Measure PALEO-1: Paleontological Resource Protection**<br>Prior to the start of ground-disturbing activities, a paleontological resource awareness training overseen by a Paleontological Resource Specialist who meets the minimum or equivalent qualifications for a qualified professional paleontologist, shall be required for all construction personnel participating in ground-disturbing construction to alert them to the paleontological sensitivity of the area and provide protocols to follow in the event of a discovery of paleontological materials. If paleontological resources are encountered during project-related excavations, construction shall be halted or diverted to allow a qualified paleontological resources specialist (PRS) an opportunity to assess the resource and determine measures needed to preserve or record any site determined to be potentially significant. The PRS will meet the minimum or equivalent qualifications for a qualified professional paleontologist, as described in the SVP guidelines (2010). The assessment of the resource and measures shall be developed in accordance with professional guidelines, consistent with those issued by SVP (2010), and designed to avoid impacts on paleontological resources through salvage and curation. The PRS will also prepare a Paleontological Resources Report describing the treatment of any paleontological resources unearthed during construction. | **Impact 3.7f –** Potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. | City of Petaluma, Constructor Contractor, Qualified Professional Paleontologist | City of Petaluma | 1. Confirm that mitigation measure is included in contract documents.<br><br>2. Confirm Worker Environmental Awareness Training (WEAT) is conducted by a qualified professional paleontologist and attended by all construction personnel.<br><br>3. In the event of a fossil discovery, confirm work is stopped in immediate vicinity until authorization to resume construction is given.<br><br>4. Confirm fossils, if determined to be significant, are salvaged and curated by qualified experts.<br><br>5. Confirm a final paleontological mitigation report is prepared by the qualified professional paleontologist.<br><br>6. Retain copies of WEAT participant signatures, construction monitoring report(s), and final paleontological mitigation report in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction<br><br>4. Construction<br><br>5. Post-construction<br><br>6. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____<br><br>6._____ |

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| **Greenhouse Gas Emissions** | | | | | | |
| **Mitigation Measure GHG-1. Best Management Practices for Construction-Related GHG Emissions.** The City shall ensure the construction contractor implements the feasible measures in the list below during construction in order for the proposed project to have a less-than-significant impact related to construction-related GHG emissions.<br>• Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors.<br>• Require all diesel-fueled off-road construction equipment be equipped with EPA Tier 4 Final compliance engines or better as a condition of contract.<br>• Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent emissions standard, such as model year (MY) 2024 to 2026, as a condition of contract.<br>• Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes (A 5-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and develop an enforceable mechanism to monitor idling time to ensure compliance with this measure.<br>• Prohibit off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.<br>• Use U.S. Environmental Protection Agency SmartWay certified trucks for deliveries and equipment transport.<br>• Require all construction equipment is maintained and properly tuned in accordance with manufacturer's specifications. Equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.<br>• Where grid power is available, prohibit portable diesel engines and provide electrical hook ups for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.<br>• Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites.<br>• Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options onsite or shuttles to nearby meal destinations for construction employees.<br>• Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.<br>• Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.<br>• Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15% more by weight than the diversion requirement in Title 24.<br>• Use locally sourced or recycled materials for construction materials (goal of at least 20% based on costs for building materials and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products used should be certified through a sustainable forestry program.<br>• Use low-carbon concrete, minimize the amount of concrete used and produce concrete on-site if it is more efficient and lower emitting than transporting ready-mix.<br>• Develop a plan to efficiently use water for adequate dust control because substantial amounts of energy can be consumed during the pumping of water.<br>• Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant on- or off-road construction equipment for use prior to any ground-disturbing and construction activities. | **Impact 3.8a –** Potential to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?<br><br>**Impact 3.8b –** Potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that mitigation measure is included in contract documents.<br><br>2. Confirm that measures are implemented during construction. | 1. Contracting<br><br>2. Construction | 1._____<br><br>2._____ |

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| **Hazards and Hazardous Materials** | | | | | | |
| **Mitigation Measure HAZ-1: Hazardous Materials Management Spill Prevention and Control Plan**<br>Before construction begins, the City's construction contractor shall prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a project-specific contingency plan for hazardous materials and water operations. The Plan will be applicable to construction activities and will establish policies and procedures according to applicable codes and regulations, including but not limited to the California Building Fire Codes, and federal and Occupational Safety and Health Administration regulations. As opposed to a single document, all necessary elements of a Hazards Plan may be developed into contract specifications. The Plan will include, but is not limited to the following:<br>• Hazardous materials that will be used on the project and management of these materials, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas.<br>• Training procedures for identification of contamination.<br>• Spill prevention, control, and countermeasures that will be implemented to prevent spills or respond to accidental spills.<br>• An overview of the notification and documentation procedures to be followed in the event of a spill. | **Impact 3.9b –** Potential to 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.<br><br>**Impact 3.9c –** Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.<br><br>**Impact 3.9d –** Potential be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.<br><br>**Impact 3.10e –** Potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include preparation of a Hazardous Materials Management Spill Prevention and Control Plan.<br><br>2. Confirm contractor has prepared HMMSPCP and is available on-site.<br><br>3. Verify implementation of plan.<br><br>4. Retain a copy of the HMMSPCP in the project file. | 1. Contracting<br><br>2. Construction<br><br>3. Construction<br><br>4. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4. _____ |
| **Mitigation Measure HAZ-2: Pre-Demolition Hazardous Material Survey and Abatement**<br>A survey will be conducted on collection system projects to identify yellow traffic striping that may contain lead chromate and asphalt that may contain asbestos. Following results of the hazardous materials survey, and incorporating information from current lead and asbestos inventories, demolition or renovation plans and contract specifications, including those for road-disturbing activities, shall incorporate abatement procedures for the removal of materials containing asbestos, lead, and universal waste items, as required by law. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency, Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and the Bay Area Air Quality Management District. | **Impact 3.9b –** Potential to 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.<br><br>**Impact 3.9c –** Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include preparation of a Pre-Demolition Hazardous Materials Survey.<br><br>2. Confirm contractor has conducted a survey of construction materials that may contain lead chromate or asbestos.<br><br>3. Confirm contractor has incorporated abatement procedures for construction materials that may contain lead chromate or asbestos.<br><br>4. Retain a copy of the survey and abatement procedures in the project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction<br><br>4. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____ |

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| **Noise** | | | | | | |
| **Mitigation Measure NOI-1: Daytime Construction**<br>The City shall implement noise controls for daytime construction activities that include a minimum of the following measures:<br>• Two weeks prior to the commencement of construction, a notice to all residences within 300 feet of construction disclosing construction schedule, including the various types of activities that would be occurring throughout the duration of the construction period.<br>• Require construction equipment and trucks used for project construction to utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).<br>• Noise-generating construction activity (other than microtunneling) shall be limited to daytime hours between 7 a.m. to 6 p.m. on weekdays, and 9 a.m. to 5 p.m. on weekends and holidays.<br>• High noise activities for construction shall be scheduled between 8:00 a.m. and 5:00 p.m (except microtunneling).<br>• When construction takes place within 100 feet of sensitive receptors, use specific techniques such as, but not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.<br>• Locate stationary equipment, construction staging areas, and construction material areas as far from sensitive receptors as possible. | **Impact 3.13a –** Potential for the generation of 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. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that daytime noise reduction measures are included in the contract documents.<br>2. Confirm that written notification has occurred to all properties within 300 feet of the proposed project two weeks prior to the start of construction.<br>3. Confirm City of Petaluma has established a noise complaint process prior to start of construction.<br>4. Confirm that construction occurs during approved hours and that all noise reduction measures, such as acoustical barriers, are implemented during construction.<br>5. Retain construction monitoring documentation in project file. | 1. Contracting<br>2. Pre-construction<br>3. Pre-construction<br>4. Construction<br>5. Post-construction | 1._____<br>2._____<br>3._____<br>4._____<br>5._____ |
| **Mitigation Measure NOI-2: Nighttime Construction**<br>In addition to the measures described in Mitigation Measure NOI-1, the following measures shall be implemented during nighttime construction activities at the Microtunnel Installations across Adobe Creek and the storm drains west of the ECWRF:<br>• At least two weeks prior to the commencement of nighttime construction activities, a notice to all residences within 300 feet of construction shall be provided disclosing the construction schedule, duration, and providing directions on protocol to follow for noise complaints.<br>• The City shall install acoustical barriers shielding the drilling equipment from noise sensitive uses at the launch and/or receiving shafts. Barriers shall be located as close to equipment as practicable. The walls shall consist of 8-foot tall sound panels, installed with sound curtains on the noise source side of the wall (batt insulation sewn between vinyl laminates with a weight of 1 pound per square feet).<br>• Sheet pile installation for launch and receiving pits shall be conducted during daytime hours or adhere to the City conditions of approval and/ or mitigation measures for allowing exemptions (City of Petaluma Municipal Code Section 21.040 (a)(5)(e)).<br>• Rock crushing of tunneling debris within 500 feet of sensitive receptors shall only be conducted during daytime hours. | **Impact 3.13a –** Potential for the generation of 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. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that nighttime noise reduction measures are included in the contract documents.<br>2. Confirm that written notification has occurred to all properties within 300-feet of the proposed project two weeks prior to the start of construction.<br>3. Confirm City of Petaluma has established a noise complaint process prior to start of construction.<br>4. Confirm that construction occurs during approved hours and that all noise reduction measures, such as acoustical barriers, are implemented during construction.<br>5. Retain construction monitoring documentation in project file. | 1. Contracting<br>2. Pre-construction<br>3. Pre-construction<br>4. Construction<br>5. Post-construction | 1._____<br>2._____<br>3._____<br>4._____<br>5._____ |

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| **Traffic** | | | | | | |
| **Mitigation Measure TRA-1: Traffic Control Plan**<br>Before the start of project construction activities, a traffic control plan shall be submitted to the City of Petaluma Traffic Engineering Division for review and approval. The plan shall include measures such as, but not limited to, appropriate signage, traffic cones, temporary trench covers, coordination with local police and emergency service providers, and flaggers to allow for emergency vehicle and property access during project construction. Additionally, the plan will include measures to account for construction hazards such as the presence of equipment and materials in public roadways. The traffic control plan shall also include a public outreach component and shall be developed and implemented in coordination with the Petaluma Communications Team. | **Impact 3.9f –** Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.<br><br>**Impact 3.17c –** Potential to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).<br><br>**Impact 3.17d –** Potential to result in inadequate emergency access. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm that a Traffic Control Plan was developed in accordance with the mitigation measure, and approved by City of Petaluma Traffic Engineering Division.<br><br>3. Confirm coordination of construction schedules has occurred with emergency services, as needed.<br><br>4. Confirm traffic control measures identified in the Traffic Control Plan are implemented during construction.<br><br>5. Retain copy of Traffic Control and Detour Plan in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Pre-construction<br><br>4. Construction<br><br>5. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5._____ |
| **Tribal Cultural Resources** | | | | | | |
| **Mitigation Measure TCR-1: Tribal Monitoring**<br>Prior to issuance of a grading permit, the City shall retain the services of a Tribal Monitor by entering into a Tribal Monitoring Agreement with the Federated Indians of Graton Rancheria, to monitor initial ground disturbing activities for the inadvertent discovery of archaeological resources (prehistoric and historic-era). Prior to ground disturbing activities the FIGR Tribal Monitor shall review the construction schedule and advise the contractor of the activities that require monitoring presence. The contractor shall notify the FIGR Tribal Monitor within 24 hours of the construction work requiring monitoring. The FIGR Tribal Monitor shall be present on site during initial ground disturbance to observe and investigate any potential resources. The FIGR Tribal Monitor shall have the authority to request that construction work halt as needed to investigate potential resources. If a potentially significant archaeological resource is encountered the archaeologist shall be provided sufficient time to evaluate the resource and make treatment recommendations in accordance with CEQA Guidelines §15064.5 and in consultation with FIGR. | **Impact 3.18a –** Potential to cause 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, | City of Petaluma, Qualified Archaeologist, Tribal Monitor(s), Consulting Tribe(s) | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Confirm that construction schedule has been provided to FIGR<br><br>3. Confirm that tribal monitors have been contracted to coordinate monitoring work within 24 hours of work requiring monitoring.<br><br>4. Confirm a Consulting Tribe(s) monitor is present during initial ground disturbing activities.<br><br>5. Retain copies of all agreements in project file. | 1. Contracting<br><br>2. Pre-construction<br><br>3. Construction<br><br>4. Construction<br><br>5. Post-construction | 1._____<br><br>2._____<br><br>3._____<br><br>4._____<br><br>5. _____ |

| Mitigation Measure | Impact Statement | Party Responsible for Implementation and Reporting | Review and Approval by: | Monitoring and Reporting Actions | Implementation Schedule | Verification: Status/ Date Completed/ Initials |
|---|---|---|---|---|---|---|
| **Wildfire** | | | | | | |
| **Mitigation Measure FIR-1: Fire Prevention and Protection Practices**<br>The City shall be responsible for ensuring its construction contractor maintains adequate firefighting equipment on site, and complies with applicable federal, local, and state fire prevention regulations. Adequate fire prevention and protection practices include, but may not be limited to:<br>• Earthmoving and portable equipment with internal combustion engines shall be equipped with a properly-maintained spark arrestor to reduce the potential for igniting a wildfire.<br>• For all work occurring between April 1 and December 1, or any other periods during which a high fire danger has been identified, restrictions are placed on equipment use. During periods of high fire danger, equipment that could produce a spark, fire, or flame shall not be used within 10 feet of any flammable materials, and portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials.<br>• 100 feet of defensible space shall be established around the construction site, including mowing brush and grasses to a height of 4 inches or less, removing dead trees, tree trimming, establishing clearance between structures and trees and all combustible matter.<br>• All combustible materials must be stacked away from structures within the construction site and have all combustible growth cleared for 15 feet around the stack.<br>• During construction, the contractor must maintain an unobstructed horizontal clearance at access drives in accordance with fire code. | **Impact 3.9g –** Potential to expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.<br><br>**Impact 3.20b –** Potential to due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. | City of Petaluma, Construction Contractor | City of Petaluma | 1. Confirm that contract documents include mitigation measure.<br><br>2. Perform site inspections to verify that the Construction Contractor maintains adequate firefighting equipment on site and complies with applicable federal, local, and state fire prevention regulations.<br><br>3. Retain copies of all agreements in project file. | 1. Contracting<br><br>2. Construction<br><br>3. Post-construction | 1._____<br><br>2._____<br><br>3._____ |