APPENDIX K

EXECUTIVE SUMMARY TABLE

TABLE 1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
SECTION 4.2. Geology and Soils	**SECTION 5.2. Geology and Soils Mitigation**							
Site Topography – The project alternatives could result in changes to site topography from grading activities	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Soils and Geology – Construction and grading activities could cause soil erosion and alterations of site topography	The following Best Management Practices (BMPs) shall be implemented for Alternatives A through F: **Mitigation Measure 5.2(A)**: The Tribe shall comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit from the United States Environmental Protection Agency (USEPA) for off-site infrastructure improvements, for construction site runoff during the construction phase in compliance with the Clean Water Act (CWA). A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared, implemented, and maintained throughout the construction phase of the development, consistent with Construction General Permit requirements. The SWPPP shall detail the BMPs to be implemented during construction and post-construction operation of the selected project alternative to reduce impacts related to soil erosion and water quality. The BMPs shall include, but are not limited to, the following: 1. Existing vegetation shall be retained where practicable. To the extent feasible, grading activities shall be limited to the immediate area required for construction and remediation. 2. Temporary erosion control measures (such as silt fences, fiber rolls, vegetated swales, a velocity dissipation structure, staked straw bales, temporary re-vegetation, rock bag dams, erosion control blankets, and sediment traps) shall be employed for disturbed areas. 3. To the maximum extent feasible, no disturbed surfaces shall be left without erosion control measures in place. 4. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods. Soil conservation practices shall be completed during the fall or late winter to reduce erosion during spring runoff.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI

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	5. Creating construction zones and grading only one area or part of a construction zone at a time shall minimize exposed areas. If practicable during the wet season, grading on a particular zone shall be delayed until protective cover is restored on the previously graded zone. 6. Disturbed areas shall be re-vegetated following construction activities. 7. Construction area entrances and exits shall be stabilized with large-diameter rock. 8. Sediment shall be retained on site by a system of sediment basins, traps, or other appropriate measures. 9. A spill prevention and countermeasure plan shall be developed which identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on site. 10. Petroleum products shall be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 United States Code [USC] §§1251 to 1387). 11. Construction materials, including topsoil and chemicals, shall be stored, covered, and isolated to prevent runoff losses and contamination of surface and groundwater. 12. Fuel and vehicle maintenance areas shall be established away from all drainage courses and designed to control runoff. 13. Sanitary facilities shall be provided for construction workers. 14. Disposal facilities shall be provided for soil wastes, including excess asphalt during construction and demolition. 15. Other potential BMPs include use of wheel wash or rumble strips and sweeping of paved surfaces to remove any and all tracked soil. **Mitigation Measure 5.2(B)**: Contractors involved in the project shall be trained on the potential environmental damage resulting from soil erosion prior to construction in a							

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	pre-construction meeting. Copies of the project's SWPPP shall be distributed at that time. Construction bid packages, contracts, plans, and specifications shall contain language that requires adherence to the SWPPP. **Mitigation Measure 5.2(C)**: In order to prevent damage to concrete and steel from corrosive soils, construction will utilize non-corrosive materials and protective coatings for buried facilities.							
Seismicity – Construction near an active fault zone could yield adverse effects associated with seismic activity	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Volcanic Hazard – Construction near an active volcano could endanger infrastructure	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Mineral Resources – Development and operation of the alternatives could disturb mineral resources	No mitigation required	LS	LS	LS	LS	LS	LS	NI
SECTION 4.3. Water Resources	**SECTION 5.3. Water Resources Mitigation**							
Surface Water – Impacts related to surface water could include:								
1) **Flooding** – Development within a floodplain could generate adverse effects related to inundation	Implement **Mitigation Measures 5.5(R)** through **5.5(U)**. The following measure shall be implemented for Alternative E: **Mitigation Measure 5.3(A)**: Prior to construction of Alternative E, the Tribe shall file a "Letter of Map Revision – Fill" with Federal Emergency Management Agency (FEMA) that describes the portions of the existing 100-year floodplain on the Anderson Site that will be filled as a result of site grading activities.	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	LS	NI
2) **Construction Impacts** – Construction activities could increase the discharge of sediment and pollutants to surface waters	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	LS/LS	NI

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3) **Stormwater Runoff** – Project alternatives could alter stormwater quantity, quality, and/or drainage patterns	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	LS	NI
4) **Sacramento River Streambank Stabilization** – Project operation could contribute to erosion and sedimentation of the Sacramento River	Implement **Mitigation Measures 5.5(R)** through **5.5(U)**.	LS/LS	LS/LS	LS/LS	LS/LS	NI	NI	NI
5) **Surface Water Supply** – Project operation could impact surface water supply	The use of BMPs would minimize impacts to surface water supply.	LS	LS	LS	LS	NI	LS	NI
Groundwater – The following characteristics of groundwater resources could be impacted by the project alternatives:								
1) **Groundwater Supply** – The project alternatives could result in the drawdown of groundwater aquifers	The use of BMPs would minimize impacts to groundwater supply.	LS	LS	LS	LS	LS	LS	NI
2) **Groundwater Recharge** – The project alternatives could impact groundwater recharge through the development of impervious surfaces	No mitigation required	LS	LS	LS	LS	LS	LS	NI
3) **Groundwater Quality** – Impacts to groundwater quality could occur as a result of:								
a) Polluted Stormwater Runoff	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
b) Irrigation with Tertiary Treated Water	No mitigation required	LS	LS	LS	LS	NI	NI	NI
c) Application of Treated Effluent to the Leach Field Complex	No mitigation required	LS	LS	LS	LS	NI	NI	NI

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SECTION 4.4. Air Quality	**SECTION 5.4. Air Quality Mitigation**							
Construction Emissions – Construction activities could adversely affect air quality through the emission of particulate matter less than 10 microns in diameter (PM_{10}), nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), reactive organic gases (ROG), greenhouse gases (GHGs), and hazardous air pollutants (HAPs; primarily in the form of diesel particulate matter [DPM])	The use of BMPs would minimize impacts to air quality caused by construction emissions.	LS	LS	LS	LS	LS	LS	NI
Operational Vehicle and Area Emissions – Project alternatives could adversely affect air quality through the emission of criteria pollutants from vehicles and project facilities	The use of BMPs would minimize impacts to air quality caused by operational vehicle and area emissions.	LS	LS	LS	LS	LS	LS	NI
SECTION 4.5. Biological Resources	**SECTION 5.5. Biological Resources Mitigation**							
Potential Effects to Habitats – Development of project alternatives could disturb federally-designated critical or sensitive habitats	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	LS/LS	LS/LS	LS/LS	LS/LS	LS	LS	NI
Potential Effects to Federally Listed or Protected Special-Status Species – The following special-status species could be impacted by the project alternatives:								
1) Valley Elderberry Longhorn Beetle (VELB)	The following mitigation measures, consistent with United States Fish and Wildlife Service (USFWS) Framework, shall be implemented for Alternatives A through D prior to commencement of construction activities occurring within 50 meters of Valley Elderberry Longhorn Beetle (VELB) the elderberry shrub: **Mitigation Measure 5.5(A)**: The elderberry shrub along the northwest corner of the Strawberry Fields Site along the	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI	NI

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	Sacramento River shall be fenced or flagged for avoidance. Construction activities potentially impacting the shrub (e.g. trenching) shall apply a buffer of at least 6 meters (approximately 20 feet) from the drip-line. To the degree feasible, activities occurring within 50 meters (165 feet) of an elderberry shrub shall be limited to the season when VELB are not active (August to February). **Mitigation Measure 5.5(B)**: Should mechanical weed removal occur within the drip-line of the elderberry shrub, it shall be limited to the season when adults are not active (August to February) and shall avoid damaging the elderberry. **Mitigation Measure 5.5(C)**: Construction staging areas shall be located a minimum of 30 feet away from the elderberry shrub. Temporary stockpiling of excavated or imported material shall occur in approved construction staging areas. Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. **Mitigation Measure 5.5(D)**: A qualified biologist shall provide training for construction personnel. Training shall include the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrub, and the possible penalties for noncompliance. **Mitigation Measure 5.5(E)**: Herbicides shall not be used within the drip-line of the shrub. Insecticides shall not be used within 30 meters (98 feet) of the elderberry shrub. Chemicals shall be applied using a backpack sprayer or similar direct application method. **Mitigation Measure 5.5(F)**: A qualified biologist shall monitor the work area at project-appropriate intervals to assure avoidance and conservation measures are being implemented. The amount and duration of monitoring depend on project specifics and shall be discussed with USFWS. **Mitigation Measure 5.5(G)**: Should removal of the elderberry shrub be necessary as part of future bank stabilization measures, the shrub will be relocated following USFWS protocols (USFWS, 1999) to suitable riparian habitat approximately 1,800 feet southwest of its original location, as							

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	approved by USFWS. Additionally, two credits will be purchased from a USFWS-approved conservation bank. After relocation, monitoring and annual reporting will occur for five years. Additional mitigation may be required pursuant to consultation with USFWS.							
2) California Red-legged Frog (CRLF)	The following mitigation measures shall be implemented for Alternatives A through E: **Mitigation Measure 5.5(K)**: A qualified biologist will conduct a preconstruction habitat assessment survey for California red legged frogs (CRLFs) following Appendix D of USFWS (2005) *Revised Guidance of Site Assessments and Field Surveys for the California Red-legged Frog*. The survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the CRLF. The survey will be conducted in all potential CRLF habitat on and within 200 feet of the Action Area. If CRLF is detected within or immediately adjacent to the Action Area, the USFWS shall be contacted immediately to determine the best course of action. **Mitigation Measure 5.5(L)**: Should CRLF be identified during surveys, additional silt fencing will be installed after surveys have been completed to further protect this species from construction impacts, should it be present. The fencing shall remain in place until construction activities cease. If identified on site, USFWS may be contacted for additional consultation. **Mitigation Measure 5.5(M)**: Prior to the start of construction, the applicant will retain a qualified biologist to conduct an informational meeting to educate all construction staff on the CRLF. This training will include a description of the CRLF and its habitat needs; an explanation of the status of the species and its protection under the FESA; and a list of the measures being taken to reduce effects to the species during project construction and implementation. The training will include a handout containing training information. The project manager will use this handout to train any additional construction	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI

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	personnel that were not in attendance at the first meeting, prior to starting work on the project.							
3) Bald Eagle	The following mitigation measures shall be implemented for Alternatives A through E: **Mitigation Measure 5.5(I)**: If construction activities (e.g., building, grading, ground disturbance, removal of vegetation) are scheduled to occur during the nesting season for bald eagles (nesting season in the Pacific Northwest is from January 1 through August 15), a qualified biologist shall conduct a preconstruction nest survey for bald eagles within one-mile of the Strawberry Fields Site prior to the start of construction. If an active nest is located within one mile of construction activities, the Tribe will comply with the recommendations identified in the USFWS (2007) *National Bald Eagle Management Guidelines and Conservation* to avoid disturbing nesting bald eagles and their young. If the active nest is visible from the Strawberry Fields Site, recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest, restricting all clearing, external construction, and landscaping activities within 660 feet of the nest until the nesting season is over and maintaining and establishing landscape buffers. If the active nest is not visible from the Strawberry Fields Site recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest and maintaining and establishing landscape buffers. Implementation of the mitigation discussed in **Section 5.5.2** will further reduce potential adverse effects to bald eagles. The following mitigation measures shall be implemented for Alternatives A through F: Implement **Mitigation Measures 5.5(O)** through **5.5(Q)**, described below.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
Potential Effects to Special-Status Fish Species – Special-status fish species could be impacted by the project alternatives	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI	NI

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Potential Effects to State Listed Special-Status Species – The following special-status species could be impacted by the project alternatives:								
1) Western Red Bat	The following mitigation measures shall be implemented for Alternative E: **Mitigation Measure 5.5(N)**: A qualified biologist shall conduct a habitat assessment of the oak woodland habitat within the Anderson Site no more than three days prior to the start of construction occurring within 100 feet of the oak woodland. If the habitat assessment reveals suitable tree cavities large enough to accommodate roosting bats, the qualified biologist shall conduct a sunset fly-out survey on trees with identified cavities. Should bats be detected, the identified trees shall be flagged and buffered by 100 feet. Should the avoidance of identified bat-roosting trees not be feasible, replacement of suitable bat roosting habitat shall occur at a 1:1 ratio elsewhere on the Anderson Site outside of clearing limits. Replacement habitat may consist of bat boxes or similar structures. A qualified biologist shall determine bat box placement and a 100-foot avoidance buffer will be placed around each box. Trees identified to contain roosting bats that are proposed for removal shall be removed as late in the day as possible to reduce the likelihood of potential bat mortality. On the first day, remaining limbs may be removed as late in the day as possible. This amount of disturbance should cause roosting bats to seek other roosting habitat. The rest of the tree can then be harvested on the afternoon of the second day. A qualified biologist shall be present for the removal of these trees in the event that bats are found to have been roosting.	NI	NI	NI	NI	PS/LS	NI	NI
2) Western Spadefoot Toad	The following mitigation measures shall be implemented for Alternatives A through E: **Mitigation Measure 5.5(J)**: A qualified biologist will conduct a preconstruction survey of the potential upland grassland habitat for western spadefoot toad. Mitigation discussed in **Section 5.5.3** will be implemented to protect potential	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI

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	breeding habitat. Additional silt fencing will be installed after surveys have been completed to further protect this species from construction impacts, should it be present. The fencing shall remain in place until all construction activities on the site have been completed. The following measures shall be implemented for Alternatives A through D: Implement **Mitigation Measures 5.5(R)** through **5.5(U)**, described below.							
3) Red Bluff Dwarf Rush	The following mitigation measures shall be implemented for Alternatives A through E: **Mitigation Measure 5.5(H)**: A qualified botanist will conduct a preconstruction survey for Red Bluff dwarf rush within the identifiable bloom season (March through June) directly prior to construction. If the species is not identified within the area of impact, no further mitigation is required. Should the species be identified within the area of impact, a 25-foot "no construction" buffer will be established and maintained using fencing. If avoidance is not possible, impacts to identified populations of Red Bluff dwarf rush shall be offset by preserving remaining populations to the extent feasible and/or replanting at a 1:1 ratio. Transplants shall be planted in suitable areas ecologically similar to the original sites as determined by the qualified biologist. A 25-foot buffer shall be established around preserved populations and replanting sites. The qualified biologist shall place orange construction fencing around avoided and replanted populations prior to construction activities to ensure populations are protected. Final replanting density shall be consistent with what is impacted.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
4) Tricolored Blackbird	Implement **Mitigation Measures 5.5(O)** through **5.2(Q)**, described below.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
5) Bank Swallow	Implement **Mitigation Measures 5.5(O)** through **5.2(Q)**, described below.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI

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Potential Effects to Migratory Birds and Other Birds of Prey – The following elements of the project alternatives could impact migratory birds:								
1) **Construction Activities**: Active nests could be disturbed if construction occurred during the nesting season	The following measures shall be implemented for Alternatives A through F to avoid and/or reduce impacts to any potentially nesting migratory, raptor, and/or special-status bird species: **Mitigation Measure 5.5(O)**: If construction activities (e.g., building, grading, ground disturbance, removal of vegetation) are scheduled to occur during the nesting season (February 15-September 15), a preconstruction nesting bird survey shall be conducted by a qualified wildlife biologist throughout the areas of suitable habitat within 500 feet of proposed construction activity. The surveys shall occur no more than 14 days prior to the scheduled onset of construction. If construction is delayed or halted for more than 14 days, another preconstruction survey for nesting bird species shall be conducted. If no nesting birds are detected during the preconstruction survey, no additional surveys or mitigation measures are required. **Mitigation Measure 5.5(P)**: If nesting bird species are observed within 500 feet of construction areas during the surveys, appropriate "no construction" buffers shall be established. The size and scale of nesting bird buffers shall be determined by a qualified biologist and shall be dependent upon the species observed and the location of the nest. Buffers shall be established around active nest locations. The nesting bird buffers shall be completely avoided during construction activities. The qualified biologist shall also determine an appropriate monitoring plan and decide whether construction monitoring is necessary during construction activities. Monitoring requirements are dependent upon the species observed, the location of the nests, and the number of nests observed. The buffers may be removed when the qualified wildlife biologist confirms that the nest(s) is no longer occupied and all birds have fledged.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI

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	Mitigation Measure 5.5(Q): If impacts (i.e., take) to migratory nesting bird species are unavoidable, consultation with USFWS shall be initiated. Through consultation, an appropriate and acceptable course of action shall be established.							
2) **Lighting**: Lighting could increase collisions of birds with structures or cause avian disorientation	The incorporation of design features would minimize impacts to birds caused by lighting	LS	LS	LS	LS	LS	LS	NI
Potential Effects to Wetlands and Waters of the U.S. – Construction could impact wetlands within project site and improvement area boundaries	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**. The following measures shall be implemented for Alternatives A through D to minimize or avoid potential impacts to wetlands and Waters of the U.S.: **Mitigation Measure 5.5(R)**: Prior to the start of construction, wetlands and jurisdictional features shall be fenced, and excluded from activity. Fencing shall be located as far as feasible from the edge of wetlands and riparian habitats and installed prior to the dry season, after special-status species surveys have been conducted and prior to construction. The fencing shall remain in place until all construction activities on the site have been completed. 1. Construction activities within 50 feet of any United States Army Corps of Engineers (USACE) jurisdictional features identified in the formal delineation process shall be conducted during the dry season to minimize erosion. 2. Staging areas shall be located away from the areas of wetland habitat that are fenced off. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. Stockpiles that are to remain on the site through the wet season shall be protected to prevent erosion (e.g. with tarps, silt fences, or straw bales). 3. Standard precautions shall be employed by the construction contractor to prevent the accidental release	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI

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	of fuel, oil, lubricant, or other hazardous materials associated with construction activities into jurisdictional features. A contaminant program shall be developed and implemented in the event of release of hazardous materials. 4. If impacts to Waters of the U.S. and wetland habitat are unavoidable, a 404 permit and 401 Certification under CWA shall be obtained from the USACE and USEPA. Mitigation measures may include creation or restoration of wetland habitats either on site or at an appropriate off-site location, or the purchase of approved credits in a wetland mitigation bank approved by the USACE. Compensatory mitigation shall occur at a minimum of 1:1 ratio or as required by the USACE and USEPA. **Mitigation Measure 5.5(S)**: Prior to the construction of streambank stabilization measures along the Sacramento River, the Tribe shall consult with the USEPA and USACE regarding the need to obtain a CWA 404 permit and 401 Water Quality Certification. Additionally, the Tribe shall consult with FEMA regarding the need for FEMA review of potential floodplain impacts. The Tribe shall adhere to all conditions of the permits to ensure the protection of the floodplain and water quality during construction activities. The following measures shall be implemented for Alternatives A through E to minimize or avoid potential impacts to wetlands and Waters of the U.S.: **Mitigation Measure 5.5(T)**: Compliance with the NPDES General Construction Permit, as required in **Mitigation Measure 5.2(A)**, will provide additional protection to wetlands, Waters of the U.S., and the fish and wildlife species that depend on them. The following measures shall be implemented for Alternative E to minimize or avoid potential impacts to wetlands and Waters of the U.S.:							

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	Mitigation Measure 5.5(U): Prior to the start of construction on any site, a formal Jurisdictional Delineation shall be conducted and the results of that survey shall be verified by the USACE. A 404 permit and 401 Certification under CWA shall be obtained from the USACE and USEPA. Mitigation measures may include creation or restoration of wetland habitats either on site or at an appropriate off-site location, or the purchase of approved credits in a wetland mitigation bank approved by the USACE. Compensatory mitigation shall occur at a minimum of 1:1 ratio or as required by the USACE and USEPA.							
SECTION 4.6. Cultural and Paleontological Resources	**SECTION 5.6. Cultural and Paleontological Resources Mitigation**							
Cultural Resources – Ground-disturbing activities could uncover and/or damage archaeological sites	The following mitigation measures shall be implemented for Alternatives A through F: **Mitigation Measure 5.6(A)**: In the event of inadvertent discovery of prehistoric or historic archaeological resources during construction-related earth-moving activities within the site, traffic mitigation locations, or Off-site Access Improvement Areas, all such finds shall be subject to Section 106 of the National Historic Preservation Act (NHPA) as amended (36 CFR 800), and the Bureau of Indian Affairs (BIA) shall be notified. Specifically, procedures for post-review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. All work within 50 feet of the find shall be halted until a professional archaeologist meeting the Secretary of the Interior's qualifications (36 CFR 61) can assess the significance of the find. If the find can be associated with archaeological site CA-SHA-4413 and appears to represent a new feature, activity, time period, or is anything other than emblematic of the site as it is currently understood, then the National Register eligibility of CA-SHA-4413 shall be reassessed in light of the new finds. Any find not related to CA-SHA-4413 shall be evaluated by the archaeologist in consultation with the Tribe and BIA; if the site appears to be eligible to the National Register of Historic Places (NRHP), the archaeologist in consultation with the	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI

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	Tribe and BIA shall determine the appropriate course of action, including the development and implementation of a Treatment Plan or Monitoring Plan if necessary. All significant cultural materials recovered shall be subject to scientific analysis, professional curation or repatriation, and a report prepared by the professional archaeologist according to current professional standards. **Mitigation Measure 5.6(B)**: In the event of inadvertent discovery of paleontological resources during construction-related earth-moving activities, all such finds shall be subject to Section 101 (b)(4) of NEPA (40 CFR §§1500-1508), and the BIA shall be notified. All work within 50 feet of the find shall be halted until a professional paleontologist can assess the significance of the find. If the find is determined to be significant by the paleontologist, then representatives of the BIA shall meet with the paleontologist to determine the appropriate course of action, including the development of an Evaluation Report and/or Mitigation Plan, if necessary. All significant paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional paleontologist according to current professional standards. **Mitigation Measure 5.6(C)**: If human remains are discovered during ground-disturbing activities on tribal lands, the Tribe, BIA, and County Coroner shall be contacted immediately. No further disturbances shall occur until the County Coroner has determined that the remains are not connected to criminal activity. If the remains are determined to be of Native American origin, the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) shall apply. Construction shall not resume in the vicinity until final disposition of the remains has been determined. Prior to undertaking construction of off-site infrastructure, a qualified archaeologist shall conduct a survey for any areas to be disturbed during construction. If significant resources or significant archaeological sites are present, they shall be avoided, as feasible. If avoidance of such resources is not feasible, recordation of the sites shall be required, along with							

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TABLE 1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
	treatment as is recommended by the archaeologist after consultation with the State Historic Preservation Officer (SHPO) and, if the find is prehistoric, the Native American Heritage Commission (NAHC). If unknown resources are encountered during construction, recommendations, including the management recommendations listed in **Mitigation Measures 5.6(A)** and **5.6(B)**, shall be implemented to ensure that the resources are avoided, protected, and/or recorded. The following mitigation measure shall be implemented for Alternatives A through D: **Mitigation Measure 5.6(D):** Prior to construction of the northern access improvements along Bechelli Lane, the BIA shall consult with the SHPO to develop an appropriate mitigation plan to address the potential for adverse effects to CA-SHA-266, an NRHP-eligible site that would be impacted by construction. Section 106 of the NHPA requires that these effects be resolved in a Memorandum of Agreement, Programmatic Agreement, or by incorporation of a description of its binding commitment to measures to avoid, minimize, or mitigate adverse effects to historic properties in the Record of Decision. It is anticipated that such measures would include development and implementation of archaeological and burial treatment plans. The archaeological and burial treatment plans shall include details regarding the method and timing of the investigation of the North Access Improvement Area Area of Potential Effects (APE), data collection and analysis methodology, burial recordation and analysis methodology, decision points, artifact and burial storage, and repatriation schedules. It is strongly recommended that the North Access Improvement Area APE be graded to subsoil or to anticipated construction impacts (whichever comes first) prior to Proposed Project construction wherever possible. This would help avoid unnecessary and potentially expensive construction delays by uncovering any features of CA-SHA-266 or other resources in advance, allowing time appropriately implement measures in accordance with the stipulations of the treatment plans.							

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		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
	All construction within the North Access Improvement Area APE below sterile subsoil shall be monitored by a team comprised of qualified professional archaeologists and Native American monitors.							
Paleontological Resources – Paleontological resources could be uncovered and/or damaged by ground-disturbing activities	Implement **Mitigation Measures 5.6(A)** and **5.6(B)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
SECTION 4.7. Socioeconomic Conditions	**SECTION 5.7. Socioeconomic Conditions Mitigation**							
Economic Effects								
1) **Economic Output**								
a) **Construction** – Construction of the project alternatives could impact spending and labor demand in the region	No mitigation required	BI	BI	BI	BI	BI	BI	NI
b) **Operation** – Operation of the project alternatives could impact spending and labor demand in the region	No mitigation required	BI	BI	BI	BI	BI	BI	NI
2) **Substitution Effects**								
a) **Existing Tribal Casino Gaming Market Substitution Effects** – Operation of the project alternatives could reduce revenues at existing tribal casinos	No mitigation required	LS	LS	LS	NI	LS	LS	NI
b) **Non-Gaming Substitution Effects** – Operation of the project alternatives could reduce revenues at existing hotels, restaurants, and retail facilities	No mitigation required	LS	LS	LS	LS	LS	NI	NI

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3) **Fiscal Effects** – The project alternatives could adversely impact County and/or City tax revenues and operating budgets	Implement **Mitigation Measures 5.10(E)** through **5.10(H)**.	BI	BI	BI	BI	BI	BI	NI
4) **Property Values** – Development of the project alternatives could cause a reduction in regional property values	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Employment								
1) **Construction** – Construction of the project alternatives could impact wages, job availability, and/or employment rates	No mitigation required	BI	BI	BI	BI	BI	BI	NI
2) **Operation** – Operation of the project alternatives could impact wages, job availability, and/or employment rates	No mitigation required	BI	BI	BI	BI	BI	BI	NI
Housing – Employment-driven in-migration could cause or exacerbate housing supply issues	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Social Effects – The following social impacts could result from operation of the project alternatives:								
1) **Problem and Pathological Gambling** – Operation of the project alternatives could increase the prevalence of problem or pathological gaming	The following mitigation measure shall be implemented for Alternatives A, B, C, and E: **Mitigation Measure 5.7(A)**: The Tribe shall implement problem gambling policies similar to those in effect at the existing Win-River Casino, which include self-help brochures available on site, and self-banning procedures to help those who may be affected by problem gaming.	LS/LS	LS/LS	LS/LS	NI	LS/LS	LS	NI
2) **Crime** – Operation of the project alternatives could increase the incidence of crime in the region	The use of BMPs and implementation of **Mitigation Measures 5.10(G)** and **5.10(H**) would minimize impacts related to increased crime.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Community Effects – Impacts to the following areas could result from development of the project alternatives:								
1) **Schools** – Employment-driven in-migration could introduce a number of new students in excess of the regional enrollment capacity	No mitigation required	LS	LS	LS	LS	LS	LS	NI
2) **Libraries and Parks** – Employment-driven in-migration could overburden existing recreational facilities	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Effects to the Redding Rancheria	No mitigation required	BI	BI	BI	BI	BI	BI	NI
Environmental Justice: Minority and Low-Income Communities – There are some identified minority and low-income populations in the vicinity of the alternative sites that could be affected	No mitigation required	LS	LS	LS	LS	LS	LS	NI
SECTION 4.8. Transportation/ Circulation	**SECTION 5.8. Transportation/Circulation Mitigation**							
Construction Traffic – Vehicle trips associated with project construction could negatively impact roadways and significantly increase traffic volumes	The following mitigation measures shall be implemented under Alternatives A through F to minimize transportation impacts associated with construction: **Mitigation Measure 5.8(A)**: A traffic management plan shall be prepared in accordance with standards set forth in the California Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways (FHWA, 2009). The traffic management plan shall be submitted to each affected local jurisdiction and/or agency. Also, prior to construction, the contractor shall coordinate with emergency service providers to avoid obstructing emergency response service. Police, fire, ambulance, and other emergency response providers shall be notified in advance of the details of the construction schedule, location of construction activities, duration of the construction period, and any access	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	NI

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	restrictions that could impact emergency response services. Traffic management plans shall include details regarding emergency service coordination. Copies of the traffic management plans shall be provided to all affected emergency service providers.							
Project Traffic – Vehicle trips associated with the operation of the project alternatives could significantly increase traffic volume and exceed the designed capacity of regional roadways	Implement (as applicable) **Mitigation Measures 5.8(B)** through **5.8(R)** in **Section 5.8**.	S/LS	S/LS	S/LS	S/LS	S/LS	LS	NI
Transit, Bicycle, and Pedestrian Facilities – Traffic generated by the project alternatives could adversely impact other transportation facilities	No mitigation required	LS	LS	LS	LS	LS	LS	NI
SECTION 4.9. Land Use	**SECTION 5.9. Land Use Mitigation**							
Land Use Plans – The project alternatives could conflict with City and/or County land use plans and ordinances	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Land Use Compatibility – The project alternatives could conflict with neighboring land uses	The use of BMPs and implementation of **Mitigation Measures 5.8(A)** through **5.8(R)** would minimize impacts related to land use compatibility	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	NI
Agriculture – The project alternatives could conflict with state and federal farmland designations	No mitigation required	LS	LS	LS	LS	LS	LS	NI
SECTION 4.10. Public Services	**SECTION 5.10. Public Services Mitigation**							
Water Supply – The project alternatives could exceed the capacity of the municipal water supply or require significant improvements to the existing municipal water distribution infrastructure	Implementation of the mitigation measures below shall minimize potential impacts related to water and wastewater services. The following mitigation measure shall be implemented for Alternatives A through D: **Mitigation Measure 5.10(A)**: For off-site water and/or wastewater provision options, the Tribe shall enter into a service agreement with the City of Redding prior to project operation. The service agreement shall include provisions for	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	LS/LS	NI

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	monthly services charges consistent with rates paid by other commercial users within the city. **Mitigation Measure 5.10(B)**: Should the project be operational prior to the completion of improvements to the West Side Interceptor, the Tribe shall construct an equalization storage tank with a capacity of at least 362,000 gallons for storage of wastewater generated during 10-year, 24-hour storm events when the City's conveyance system is over capacity until the peak event has resided and flows are below the capacity of the pipeline conveyance system. The following mitigation measure shall be implemented for Alternative E: **Mitigation Measure 5.10(C)**: For the off-site water and/or wastewater provision option, the Tribe shall enter into a service agreement with the City of Anderson prior to project operation. The service agreement shall include provisions for monthly services charges consistent with rates paid by other commercial users within the city. The following mitigation measure shall be implemented for Alternative F: **Mitigation Measure 5.10(D)**: The existing 2012 Master Service Agreement between the City of Redding and the Tribe shall be renegotiated to account for the increase in water and wastewater demand as a result of Alternative F. The Tribe would continue to pay for water and wastewater services on per-use basis.							
Wastewater Service – Operation of the project alternatives could exceed the capacity of the existing municipal wastewater treatment and disposal infrastructure	Implement **Mitigation Measures 5.10(A)** through **5.10(C)**.	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	Option 1: LS/LS Option 2: NI	LS/LS	LS/LS	NI
Solid Waste Service								
1) **Construction** – Construction of the project alternatives could	The use of BMPs would minimize impacts to solid waste services from project construction.	LS	LS	LS	LS	LS	LS	NI

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Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
generate quantities or types of waste that cannot be accommodated by regional waste disposal facilities								
2) **Operation** – Operation of the project alternatives could generate quantities or types of waste that cannot be accommodated by regional waste disposal facilities	The use of BMPs would minimize impacts to solid waste services from project operation.	LS	LS	LS	LS	LS	LS	NI
Law Enforcement – Service calls to local law enforcement agencies could increase due to the project alternatives.	The following mitigation measure shall be implemented for Alternatives A through D. **Mitigation Measure 5.10(E)**: Prior to operation the Tribe shall enter into agreements to reimburse the Redding Police Department (RPD) and/or the Shasta County Sheriff's Office (SCSO) for quantifiable direct and indirect costs incurred in conjunction with providing law enforcement services. The following mitigation measure shall be implemented for Alternative E: **Mitigation Measure 5.10(F)**: Prior to operation the Tribe shall enter into agreements to reimburse the Anderson Police Department (APD) for quantifiable direct and indirect costs incurred in conjunction with providing law enforcement services.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
Fire Protection and Emergency Medical Services								
1) **Construction** – Construction activities could increase the risk of fire	The use of BMPs would minimize impacts to fire protection and emergency services from project construction.	LS	LS	LS	LS	LS	LS	NI
2) **Operation** – The project alternatives could increase the number of service calls to local fire protection/emergency medical service providers	The following mitigation measure shall be implemented for Alternatives A through D and F: **Mitigation Measure 5.10(G)**: Prior to operation the Tribe shall enter into a service agreement to reimburse the Shasta County Fire Department (SCFD) for additional demands	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI

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	caused by the operation of the facilities on trust property. The agreement shall address any required conditions and standards for emergency access and fire protection systems. The following mitigation measure shall be implemented for Alternative E: **Mitigation Measure 5.10(H)**: Prior to operation the Tribe shall enter into a service agreement to reimburse the Anderson Fire Department (AFD) for additional demands caused by the operation of the facilities on trust property. The agreement shall address any required conditions and standards for emergency access and fire protection systems.							
Electricity and Natural Gas								
1) **Construction** – Construction activities could damage underground utilities	The use of BMPs would minimize impacts to electricity and natural gas from project construction.	LS	LS	LS	LS	LS	LS	NI
2) **Operation** – Operation of the project alternatives could necessitate improvements to electrical and natural gas infrastructure that generate adverse environmental effects	No mitigation required.	LS	LS	LS	LS	LS	LS	NI
SECTION 4.11. Noise	**SECTION 5.11. Noise Mitigation**							
Construction Noise – Noise associated with construction activities could adversely affect human health and/or the physical environment	The use of BMPs would minimize impacts caused by construction noise.	LS	LS	LS	LS	LS	LS	NI
1) Construction Traffic Noise	The use of BMPs would minimize impacts caused by construction traffic noise.	LS	LS	LS	LS	LS	LS	NI
Construction Vibration – Vibration associated with construction activities could adversely affect human health and/or the physical environment	The use of BMPs would minimize impacts caused by construction vibration.	LS	LS	LS	LS	LS	LS	NI

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Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Operational Noise – Noise from the following sources associated with the project alternatives could adversely affect the physical environment:								
1) **Traffic** – Operation of the project alternatives could increase traffic-related noise in the vicinity of roads surrounding the project sites, with the exception of the roads analyzed separately below:	No mitigation required.	LS	LS	LS	LS	LS	LS	NI
a) Bechelli Lane south of South Bonnyview Road		LS	LS	LS	LS	NI	NI	NI
b) Churn Creek Road between Smith Road and Knighton Road	No mitigation required	LS	LS	LS	LS	NI	NI	NI
c) Smith Road between Churn Creek Road and Adra Way	No mitigation required	LS	LS	LS	LS	NI	NI	NI
d) Adra Way north of Smith Road	No mitigation required	LS	LS	LS	LS	NI	NI	NI
2) **Other Noise Sources** – Roof-mounted air handling units, idling vehicles, patron conversations, and doors opening and closing in parking lots could increase ambient noise levels	The use of BMPs would minimize impacts caused by other noise sources. Additionally, the following measure shall be implemented for Alternatives A, B, and C: **Mitigation Measure 5.11(A)**: Sound levels shall be monitored at initial performances or "practice sessions" at the outdoor amphitheater to determine the sound levels at the nearest receptors based upon a reference sound level at 100 feet from the stage. To quantify this relationship, sound levels shall be monitored simultaneously at a point 100 feet from the stage and at one or more points near the northern boundary of the Strawberry Fields Site close to the nearest residential receptors. Once this relationship is established for the specifics of the venue, sound levels at the point 100 feet from	PS/LS	PS/LS	PS/LS	LS/LS	LS/LS	LS/LS	NI

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	the stage shall be monitored during events and, if necessary, the volume shall be reduced to ensure that the ambient sound level in the vicinity of residential receptors remains below 67 A-weighted decibels (dBA) equivalent noise level (Leq). Performers shall be required by contract to turn down the volume at the request of the Tribe if event conditions indicate this is necessary.							
Operational Vibration – Vibration associated with operation could adversely affect human health and/or the physical environment	No mitigation required	LS	LS	LS	LS	LS	LS	NI
SECTION 4.12. Hazardous Materials	**SECTION 5.12. Hazardous Materials Mitigation**							
Construction – Construction of the project alternatives could disturb existing hazardous materials or introduce new hazardous materials into the environment	The use of BMPs would minimize impacts from hazardous materials during construction.	LS	LS	LS	LS	LS	LS	NI
Operation – Operation of the project alternatives could introduce hazardous materials into the physical environment	The use of BMPs would minimize impacts from hazardous materials during operation.	LS	LS	LS	LS	LS	LS	NI
SECTION 4.13. Aesthetics	**SECTION 5.13. Aesthetics Mitigation**							
Construction Impacts – Construction activities could obstruct views of scenic resources	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Operational Impacts – Development of the project alternatives could generate significant adverse aesthetic impacts, including those impacts addressed separately below	The incorporation of design features would minimize impacts to aesthetics during operation.	LS	LS	LS/LS	LS	LS	LS	NI
1) Effects on Viewsheds Surrounding the Project	The incorporation of design features would minimize impacts to viewsheds during operation.	LS	LS	LS	LS	LS	LS	NI
2) Shadow, Light, and Glare	The incorporation of design features would minimize impacts caused by shadow, light, and glare during operation.	LS	LS	LS	LS	LS	LS	NI

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SECTION 4.14. Indirect and Growth-Inducing Effects								
SECTION 4.14.1. Indirect Effects from Off-Site Traffic Mitigation Improvements								
Geology and Soils – Construction of roadway improvements could increase the potential for soil erosion and geological hazards	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Water Resources – Construction of roadway improvements could increase stormwater runoff and erosion and adversely impact water quality	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Air Quality – Construction of roadway improvements could adversely impact air quality through the emission of air pollutants	The use of BMPs will minimize air quality impacts caused by construction of roadway improvements.	LS	LS	LS	LS	LS	NI	NI
Biological Resources – Habitat could be lost and special-status species could be disturbed due to the construction of roadway improvements	Implement **Mitigation Measures 5.2(A)** through **5.2(C)** and **Mitigation Measure 5.5(R)** through **5.5(U)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Cultural Resources – Construction of roadway improvements has the potential to disturb archaeological resources	Implement **Mitigation Measures 5.6(A)** through **5.6(D)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Socioeconomic Conditions – Roadway improvements could cause disturbances in traffic flow and/or the loss of access to businesses and communities	No mitigation required	LS	LS	LS	LS	LS	NI	NI
Transportation/Circulation – Roadway improvements could disrupt traffic flow and/or access to surrounding land uses	No mitigation required	LS	LS	LS	LS	LS	NI	NI

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Land Use – Roadway improvements could conflict with City or County planning ordinances or adversely impact adjacent property owners	No mitigation required	LS	LS	LS	LS	LS	NI	NI
Public Services – Roadway improvements could significantly disrupt the provision of public services	Implement **Mitigation Measures 5.8(A)** and **5.10(G)** and **5.10(H)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Noise – Construction of the roadway improvements could result in significant increases in ambient noise levels	The use of BMPs will minimize impacts from construction noise from roadway improvements.	LS	LS	LS	LS	LS	NI	NI
Hazardous Materials – Hazardous materials could be released inadvertently and dry vegetation could be ignited during grading and construction activities	The use of BMPs will minimize impacts from inadvertent hazard material releases.	LS	LS	LS	LS	LS	NI	NI
Aesthetics – Roadway improvements could significantly alter viewsheds	No mitigation required	LS	LS	LS	LS	LS	NI	NI
SECTION 4.14.2. Indirect Effects from Off-Site Utility/Infrastructure Improvements								
Geology and Soils – Construction of utility improvements could increase the potential for soil erosion and geological hazards	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Water Resources – Construction of utility improvements could increase stormwater runoff and erosion and adversely impact water quality	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Air Quality – Construction of utility improvements could adversely impact air quality through the emission of air pollutants	The use of BMPs will minimize impacts to air quality from construction.	LS	LS	LS	LS	LS	NI	NI
Biological Resources – Habitat could be lost and special-status species could	Implement **Mitigation Measure 5.5(R)** through **5.5(U)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI

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be disturbed due to the construction of utility improvements								
Cultural Resources – Construction of utility improvements has the potential to disturb archaeological resources	Implement **Mitigation Measures 5.6(A)** through **5.6(D)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Socioeconomic Conditions – Utility improvements could cause disturbances in traffic flow and/or the loss of access to businesses and communities	No mitigation required	LS	LS	LS	LS	LS	NI	NI
Transportation/Circulation – Utility improvements could disrupt traffic flow and/or access to surrounding land uses	Implement **Mitigation Measures 5.8(A)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Land Use – Utility improvements could conflict with City or County planning ordinances or adversely impact adjacent property owners	No mitigation required	LS	LS	LS	LS	LS	NI	NI
Public Services – Utility improvements could significantly disrupt the provision of public services	Implement **Mitigation Measures 5.8(A)**, **5.10(G),** and **5.10(H)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI	NI
Noise – Construction of the utility improvements could result in significant increases in ambient noise levels	The use of BMPs will minimize impacts from noise caused by construction of utility improvements.	LS	LS	LS	LS	LS	NI	NI
Hazardous Materials – Hazardous materials could be released inadvertently and dry vegetation could be ignited during grading and construction activities	The use of BMPs will minimize impacts from inadvertent hazardous material releases.	LS	LS	LS	LS	LS	NI	NI
Aesthetics – Utility improvements could significantly alter viewsheds	No mitigation required	LS	LS	LS	LS	LS	NI	NI
SECTION 4.14.3. Growth-Inducing Effects – Development of the project alternatives could promote population growth and/or the construction of additional housing, which could	No mitigation required	LS	LS	LS	LS	LS	LS	NI

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adversely impact the physical and human environments								
SECTION 4.15. Cumulative Effects								
Geology and Soils – Development of the project alternatives could, when taken together with other foreseeable developments, result in significant topographic changes and/or soil loss	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
Water Resources								
1) **Surface Water and Flooding** – Development of the project alternatives in conjunction with other proposed developments could significantly increase sedimentation, pollution, and stormwater runoff	The use of BMPs would minimize cumulative impacts to surface water and flooding.	LS	LS	LS	LS	LS	LS	NI
2) **Water Quality** – The project alternatives, taken together with other foreseeable developments, could result in an increase in pollution and sedimentation	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
3) **Groundwater Supply** – The project alternatives, in conjunction with the buildout of County and/or City General Plans, could significantly impact groundwater supply if the total water demand exceeds the rate of groundwater recharge	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**, and **5.3(A)**.	PS/LS	PS/LS	PS/LS	PS/LS	LS/LS	LS	NI
4) **Groundwater Quality** – Development of the project alternatives, taken together with other foreseeable regional developments, could result in the contamination of groundwater	Implement **Mitigation Measures 5.2(A)** through **5.2(C)**.	LS	LS	LS	LS	LS	PS/LS	NI

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TABLE 1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Air Quality								
1) **Operational Emissions** – Development of the project alternatives, in conjunction with other regional projects, could contribute to the nonattainment of National Ambient Air Quality Standards (NAAQS)	The use of BMPs would minimize cumulative impacts to air quality resulting from operational emissions.	LS	LS	LS	LS	LS	LS	NI
2) **Carbon Monoxide Hot Spot Analysis** – Development of the project alternatives, taken together with the buildout of the City and/or County general plans, could cause an increase in delay at some intersections in the cumulative year 2040 sufficient to warrant a Hot Spot Analysis	No mitigation required	LS	LS	LS	LS	LS	LS	NI
3) **Climate Change** – Development of the project alternatives in conjunction with other foreseeable projects could significantly contribute to climate change through the emission of GHGs	The use of BMPs would minimize cumulative impacts related to climate change.	LS	LS	LS	LS	LS	LS	NI
Biological Resources								
1) **Wildlife and Habitats** – The project alternatives, in conjunction with other foreseeable developments, could adversely impact critical or sensitive habitat	No mitigation required	LS	LS	LS	LS	LS	LS	NI
2) **Special-Status Species** – Development of the project alternatives, taken together with the buildout of the City and	See **Mitigation Measure 5.5(A)** through **5.5(Q)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	LS	NI

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Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
		Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
County general plans, could adversely impact special-status species								
3) **Migratory Birds** – The project alternatives, taken together with the development of other foreseeable projects, could disturb migratory birds	See **Mitigation Measures 5.5(O)** through **5.5(Q)**	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
4) **Wetlands and/or Waters of the U.S.** – The project alternatives and other foreseeable developments could adversely impact wetlands and/or water of the U.S. by increasing erosion or through the discharge of runoff or wastewater	See **Mitigation Measures 5.2(A)** through **5.2(C)**, and **Mitigation Measure 5.5(R)** through **5.5(U)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	LS	NI
Cultural Resources – Construction activities, in conjunction with the development of other foreseeable projects, could disturb archaeological or paleontological resources	See **Mitigation Measure 5.6(A)** through **5.6(D)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	NI
Socioeconomic Conditions – The project alternatives, taken together with the buildout of the City and County general plans, could yield adverse impacts to the local labor market, housing availability, and local governments	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Transportation								
1) **2040 Cumulative Traffic Conditions** – Development of the project alternatives, taken together with the buildout of the City and County General Plans, could regional intersections to	See **Mitigation Measures 5.8(S)** through **5.8(JJ)** in **Section 5.8**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	LS	NI

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operate at an unacceptable level of service (LOS)								
2) **Transit, Bicycle, and Pedestrian Facilities** – Development of the project alternatives and other foreseeable alternatives could disrupt existing or planned transit, bicycle, and pedestrian facilities	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Land Use – Development of the project alternatives in conjunction with other development projects could disrupt or impede access to neighboring land uses	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Public Services								
1) **Water Supply** – Development of the project alternatives, taken together with other foreseeable developments, could adversely impact the provision of water	Implement **Mitigation Measures 5.10(A)** through **5.10(D)**.	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	PS/LS	NI
2) **Wastewater** – Development of the project alternatives in conjunction with the buildout of the City and County general plans could adversely impact the treatment and disposal of wastewater	Implement **Mitigation Measures 5.10(A)** through **5.10(D)**.	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	Option 1: PS/LS Option 2: NI	PS/LS	PS/LS	NI
3) **Solid Waste** – The project alternatives, taken together with other foreseeable developments, could adversely impact the disposal of solid waste	No mitigation required	LS	LS	LS	LS	LS	LS	NI
4) **Law Enforcement** – Development of the project	See **Mitigation Measures 5.10(E)** and **5.10(F)**.	PS/LS	PS/LS	PS/LS	PS/LS	PS/LS	LS	NI

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	alternatives and other foreseeable projects could adversely impact the provision of law enforcement services								
5)	**Fire Protection and Emergency Medical Services** – Operation of the project alternatives, taken together with other foreseeable development projects, could impede the provision of fire protection and emergency medical services	See **Mitigation Measures 5.10(G)** and **5.10(H)**.	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	LS/LS	NI
6)	**Energy and Natural Gas** – Development of the project alternatives, in conjunction with the buildout of the City and County General Plans, could adversely impact the provision of electrical and natural gas services and the physical environment	No mitigation required	LS	LS	LS	LS	LS	LS	NI
Noise									
1)	**Traffic Noise** – Development of the project alternatives could contribute to a cumulatively significant increase in traffic noise levels	No mitigation required.	LS	LS	LS	LS	LS	LS	NI
2)	**Vibration and Other Noise Sources** – Vibration and other noise sources associated with the project alternatives, in conjunction with noise from other foreseeable projects, could contribute to a significant increase in noise levels	The use of BMPs and implementation of **Mitigation Measure 5.11(A)** would minimize cumulative impacts related to vibration and other noise sources.	PS/LS	LS/LS	LS/LS	LS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures / Best Management Practices	Original Impact / Residual Impact with Mitigation						
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Hazardous Materials – Development of the project alternatives, in combination with other foreseeable projects, could disturb existing hazardous materials or introduce new hazardous materials to the physical environment	The use of BMPs would minimize cumulative impacts related to hazardous materials.	LS	LS	LS	LS	LS	LS	NI
Aesthetics – The project alternatives, in combination with other foreseeable alternatives, could be visually incompatible with existing land uses or otherwise adversely impact aesthetic resources	The incorporation of design features would minimize cumulative impacts to aesthetics.	LS	LS	LS	LS	LS	LS	NI

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