Table 3-9 Clinton Keith Road Extension Project CDFW Jurisdictional Water Features Comparison for Segment 2

2006 CDFW Drainage	2014 CDFW Drainage	2006 CDFW Riparian Impacts (permanent/ temporary) *[acres]*	2006 CDFW Non-riparian Impacts (permanent/ temporary) *[acres]*	2014 CDFW Riparian Impacts (permanent/ temporary) *[acres]*	2014 CDFW Non-riparian Impacts (permanent/ temporary) *[acres]*
Not Present	Drainage 8	N/A	N/A	N/A	0.03/0.011
Not Present	Drainage 9	N/A	N/A	0.04/<0.001	0.002/0.001
Not Present	Drainage 10	N/A	N/A	N/A	0.004/0.01
Crossing A	Drainage 7	N/A	0.13/0.0	N/A	0.03/0.024
Crossing A'2	Drainage 3	0.0/0.0	0.0/0.0	0.005/0.002	0.0/0.0
Crossing B	Drainage 5	N/A	0.03/0.0	N/A	0.07/0.005
Crossing C (Warm Springs)	Drainage 2	0.30**/0.01	0.0/0.0	0.30**/0.002	N/A
Tributary 1	Drainage 3	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0
Tributary 2	Drainage 1	N/A	0.15/0.0	N/A	0.17/0.005
Tributary 3	Not Present	0.0/0.0	0.0/0.0	N/A	N/A
Not Present	Drainage 4	N/A	N/A	N/A	0.0/0.003
Not Present	Basin 1	N/A	N/A	N/A	0.02/0.002
Not Present	Drainage 14	N/A	N/A	N/A	0.02/0.006
		Total: 0.30/0.01	**Total: 0.31/0.0**	**Total: 0.35/0.18**	**Total: 0.346/0.067**

**Permanent, indirect impacts to riparian vegetation may occur as a result of bridge shading

Although there have been shifts in impacts to jurisdictional waters within Segment 2, these impacts would not change the conclusion presented in Section 3.5.4 of the SEIR, of less than significant, because mitigation measure B-2, Mitigation for Streambeds and Associated Wetlands, from the SEIR

would still be implemented. Additionally, minimization measures B-1b and B-4 (from SEIR), and B-5 and B-6 (new mitigation measures), as described below in Section 3.3.3, Mitigation Measures, would be implemented to minimize impacts to a less than significant level for sensitive plant and animal species that may be present in these jurisdictional water features.

Segment 4

Permanent impacts to WoUS within Segment 4 have increased from 0.25 acres, as stated in the SEIR, to 1.91 acres as stated in this SEIR Addendum. This amount of increase is largely due to a wetland area that has formed at the outlet of a recently constructed large culvert located at the intersection of Clinton Keith Road and Leon Road (Drainage 15 in Figure 3-3i, Impacts to Waters of the U.S.). This drainage area was included in the SEIR Study Area, however, it did not contain jurisdictional features at the time the SEIR was prepared. With the creation of wetlands within this drainage, this drainage has now been deemed jurisdictional. Additionally, the wetland limits have greatly expanded within Drainage 16 – French Valley Creek since the approval of the SEIR. Segment 4 would permanently impact 0.67 acre of non-wetland WoUS and 1.22 acre of wetland WoUS.

Temporary impacts to WoUS within Segment 4 increased from 0.24 acres as stated in the SEIR, to 0.93 acres, as stated in this SEIR Addendum, which is also largely due to the new/increased wetland areas within Drainages 15 and 16 . Segment 4 would temporarily impact 0.18 acre of non-wetland WoUS and 0.75 acre of wetland WoUS. Table 3-10 presents a comparison between previous impacts to WoUS within Segment 4 presented in the SEIR, and current impacts presented in this SEIR Addendum. Refer to Figures 3-3i through 3-3m, which depict current impacts to WoUS within Segment 4.

Table 3-10 Clinton Keith Road Extension Project Jurisdictional WoUS Comparison for Segment 4

2006 Jurisdictional Drainage	**2014 Jurisdictional Drainage**	**2006 Impacts WoUS/WoS (permanent/temporary) *[acres]***	**2014 Impacts WoUs/WoS (permanent/temporary) *[acres]***
Not Present	Drainage 11	N/A	0.024/0.005 non-wetlands; 0.0 wetlands
Not Present	Drainage 12*	N/A	0.006/0.003 non-wetlands; 0.0 wetlands
Not Present	Drainage 13	N/A	0.002/0.002 non-wetlands; 0.0 wetlands
Not Jurisdictional*	Drainage 15	N/A	0.021/0.009 non-wetlands

2006 Jurisdictional Drainage	2014 Jurisdictional Drainage	2006 Impacts WoUS/WoS (permanent/temporary) *[acres]*	2014 Impacts WoUs/WoS (permanent/temporary) *[acres]*
			0.58/0.24 wetlands
Crossing D: French Valley Creek	Drainage 16	0.25/0.24 wetlands only	0.64/0.163 non-wetlands; 0.64/0.51 wetlands
		Total: 0.0/0.0 non-wetlands; 0.25/0.24 wetlands	**Total: 0.69/0.18 non-wetlands; 1.22/0.75 wetlands**

*Drainage 15 was within the Study Area of the SEIR; however, it was deemed non-jurisdictional to the permitting agencies at that time.

Permanent impacts to CDFW jurisdictional water features within Segment 4 have increased from 0.25 acres, as stated in the SEIR, to 2.6 acres as stated in this SEIR Addendum, largely due to the new wetland area located within Drainage 15 [Figure 3-4i] and the shading effects associated with the increased riparian canopy at Drainage 16 – French Valley Creek (Figure 3-4j). Of the total 2.6 acres of permanent impact, impacts to CDFW non-riparian jurisdictional water features within Segment 4 would equal 1.26 acres, while permanent impacts to CDFW riparian jurisdictional water features would equal 1.34 acres. Temporary impacts increased from 0.0 acres, as stated in the SEIR, to 1.14 acres, as stated in this SEIR Addendum, which is also largely due to the increased wetland and riparian areas within Drainages 15 and 16. Temporary impacts to CDFW non-riparian jurisdictional water features would equal 0.46 acre, while temporary impacts to CDFW riparian jurisdictional water features would equal 0.68 acre. Table 3-11 presents a comparison between previous impacts to CDFW jurisdictional waters within Segment 4 presented in the SEIR, and current impacts presented in this SEIR Addendum. Refer to Figure 3-4i through l, Impacts to CDFW Jurisdictional Water Features, which depict current impacts to CDFW waters within Segment 4.

Table 3-11 Clinton Keith Road Extension Project CDFW Jurisdictional Drainages Comparison for Segment 4

2006 CDFW Jurisdictional Drainage	2014 CDFW Jurisdictional Drainage	2006 Impacts CDFW Jurisdictional Waters (permanent/temporary) *[acres]*	2014 Impacts CDFW Jurisdictional Waters (permanent/temporary) *[acres]*
Not Present	Drainage 11	N/A	0.0/0.0 riparian; 0.04/0.02 non-riparian
Not Present	Drainage 12*	N/A	0.0/0.0 riparian; 0.006/0.003 non-riparian
Not Present	Drainage 13	N/A	<0.001/0.0 riparian; 0.0/0.0

2006 CDFW Jurisdictional Drainage	2014 CDFW Jurisdictional Drainage	2006 Impacts CDFW Jurisdictional Waters (permanent/temporary) *[acres]*	2014 Impacts CDFW Jurisdictional Waters (permanent/temporary) *[acres]*
			non-riparian;
Not Jurisdictional****	Drainage 15	N/A	0.70**/0.13 riparian; 0.021/0.009 non-riparian
Crossing D: French Valley Creek	Drainage 16	0.25/0.24 wetlands only	0.64/0.55 riparian; 1.19***/ 0.43 non-riparian
		Total Impacts: 0.25/0.24 riparian; 0.0/0.0 non-riparian;	**Total Impacts: 1.34/0.68 riparian; 1.26/0.46 non-riparian;**

*Indicates features that include inferred areas. See Section 3.3.1.2, Wetlands and Other Waters, above, for a full description of inferred areas by feature. ** Permanent, indirect impacts to riparian vegetation due to shading would equal 0.12 acres of this total
*** Permanent, indirect impacts to CDFW riparian vegetation due to shading would equal 0.31 acres of this total. ****Drainage 15 was within the Study Area of the SEIR; however, it was deemed non-jurisdictional to the permitting agencies at that time.

The increase in impacts to WoUS within Segment 4 now requires an Individual Section 404 permit, since the impacts have exceeded the threshold of 0.5 acres to qualify for a Nationwide Section 404 permit. Segment 4 will be constructed at a later date, upon availability of funding. As such, mitigation for Segment 4 will be presented in an updated Habitat Mitigation and Monitoring Plan (HMMP) that will detail off site mitigation for Segment 4, consistent with mitigation measure B-2, Mitigation for Streambeds and Associated Wetlands. The mitigation for the increased impacts to wetlands within Segment 4 will provide for no net loss of WoUS. Additionally, minimization measures B-1b and B-4 (from SEIR), and B-5 and B-6 (new mitigation measures), as described below in Section 3.3.3, Mitigation Measures, would be implemented to minimize impacts to a less than significant level for sensitive plant and animal species that may be present in these jurisdictional water features. Therefore, the impacts to wetlands and other waters within Segment 4 remain less than significant, as stated in the SEIR.

Table 3-12 provides total impacts to WoUS and CDFW jurisdictional water features, including linear feet, within both Segments 2 and 4.

Table 3-12 Impacts to Jurisdictional Water Features

Feature	Non-Wetland WoUS/WoS (acres) Permanent/ Temporary	Wetland WoUS/WoS (acres) Permanent/ Temporary	WoUS/WoS Linear Feet Permanent/ Temporary	CDFW Unvegetated Streambed (acres) Permanent/ Temporary	CDFW Riparian (acres) Permanent/ Temporary	CDFW Linear Feet Permanent/ Temporary
Segment 2						
Drainage 1	0.065/0.002	0.0/0.0	1151.4/37.7	0.17/0.005	0.0/0.0	1151.4/37.7
Drainage 2 – Warm Springs Creek	0.0/0.137	0.0/0.028	0.0/202.2	0.0/0.0	0.30**/0.18	130.2/0.0
Drainage 3	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.005/0.002	39.8/35.9
Drainage 4*	0.0/0.001	0.0/0.0	0.0/22.4	0.0/0.003	0.0/0.0	0.0/22.4
Drainage 5*	0.023/0.003	0.0/0.0	346.2/41.5	0.07/0.005	0.0/0.0	313.9/41.4
Drainage 7	0.015/.014	0.0/0.0	122.4/111.9	0.03/0.024	0.0/0.0	1122.4/111.9
Drainage 8*	0.024/0.006	0.0/0.0	267.3/109.1	0.03/0.011	0.0/0.0	267.3/109.1
Drainage 9	0.009/0.001	0.0/0.0	119.7/174.7	0.002/0.001	0.04/<0.001	105.6/47.5
Drainage 10	0.003/0.003	0.0/0.0	79.0/88.4	0.004/0.01	0.0/0.0	79.0/88.4
Drainage 14*	0.010/0.004	0.0/0.0	217.8/85.8	0.02/0.006	0.0/0.0	113.0/40.1
Basin 1	0.004/0.001	0.0/0.0	82.6/16.8	0.02/0.002	0.0/0.0	82.6/16.8
Total	**0.153/0.17**	**0.0/0.028**	**2286/890.5**	**0.346/0.11**	**0.35/0.18**	**3405.2/551.2**
Segment 4						
Drainage 11	0.024/0.005	0.0/0.0	47.0/16.9	0.04/0.02	0.0/0.0	47.0/16.9
Drainage 12*	0.006/0.003	0.0/0.0	65.1/64.1	0.006/0.003	0.0/0.0	65.1/64.1
Drainage 13	0.002/0.002	0.0/0.0	34.0/33.0	<0.001/0.0	0.0/0.0	6.7/0.0
Drainage 15	0.021/0.009	0.58/0.24	447.7/49.4	0.021/0.009	0.70***/0.13	405.7/49.4
Drainage 16 – French Valley Creek*	0.64/0.163	0.64/0.51	37.5/47.3	1.19****/ 0.43	0.64/0.55	37.5/47.3
Total	**0.69/0.18**	**1.22/0.75**	**849.1/296.5**	**1.26/0.46**	**1.34/0.68**	**562.0/177.7**

*Indicates features that include inferred areas. See Section 3.3.1.2, Wetlands and Other Waters, above, for a full description of inferred areas by feature.
** Permanent, indirect impacts to CDFW riparian vegetation may occur due to bridge shading.
*** Permanent, indirect impacts to CDFW riparian vegetation due to shading would equal 0.12 acres of this total.
**** Permanent, indirect impacts to CDFW riparian vegetation due to shading would equal 0.31 acres of this total.

As stated in Section 3.5.2.2.1of the SEIR, impacts to jurisdictional water features represent a potentially significant adverse impact, requiring mitigation. Substantial effort and cost were incorporated into the Project design to ensure the most minimal impact would occur. In two of the major stream crossings (Drainage 2 -Warm Springs Creek and Drainage 16 - French Valley Creek),

impacts would be completely avoided or minimized by proposed bridges, which are described in Section 3.5.2.2.1 of the SEIR and summarized below in Section 3.3.3, Mitigation Measures.

To minimize impacts to wetlands within Drainage 15, a soft-bottom culvert has now been incorporated into the design of the Project to avoid impacts to the greatest extent possible, as described below in Section 3.3.3, Mitigation Measures.

Where impacts cannot be avoided or minimized, they would be mitigated by Mitigation Measure B-2, as stated in the SEIR, and described below in Section 3.3.3, Mitigation Measures, to below a level of significance. In addition, Mitigation Measure B-1 discusses standard construction and BMPs which would be implemented in compliance with MSHCP terms and conditions, and which would also provide additional protection to aquatic and riparian areas.

Additional indirect impacts in the wetland areas may include stormwater runoff and sediment discharge from construction activities. With implementation of the Storm Water Pollution Prevention Plan (SWPPP), required by Mitigation Measure H-1 in the SEIR and described below in Section 3.3.3, Mitigation Measures, these impacts are anticipated to be less than significant.

MSHCP Riparian/Riverine Resources

Fifteen of the 16 jurisdictional water features meet the criteria for an MSHCP Riparian or Riverine Resource (Figure 3-5, MSHCP Riparian/Riverine Resources). As stated above in Section 3.3.1, Basin 1 is an artificially created water body and, therefore, does not meet the definition of an MSHCP riparian/riverine resource. To comply with the DBESP for Riverine/Riparian Areas and Vernal Pools required by Section 6.1.2 of the MSHCP, an updated DBESP will be prepared and submitted to the wildlife agencies for review prior to construction. A total of 1.42 acres of MSHCP Riverine Habitat and 1.71 acres of MSHCP Riparian Habitat would be permanently impacted by the Project. A summary of impacts to MSHCP Riparian/Riverine resources is presented in Table 3-13.

Table 3-13 Impacts to MSHCP Riparian/Riverine Resources

Feature	MSHCP Riverine (Unvegetated Streambed) [permanent/temporary] {acres}	MSHCP Riparian (permanent/temporary) [acres]
Segment 2		
Drainage 1	0.17/0.005	0.0/0.0
Drainage 2-Warm Springs Creek	0.0/0.0	0.30**/0.18
Drainage 3	0.0/0.0	0.005/0.002
Drainage 4*	0.0/0.003	0.0/0.0

Feature	MSHCP Riverine (Unvegetated Streambed) [permanent/temporary] {acres}	MSHCP Riparian (permanent/temporary) [acres]
Drainage 5*	0.07/0.005	0.0/0.0
Drainage 7	0.03/0.024	0.0/0.0
Drainage 8*	0.03/0.011	0.0/0.0
Drainage 9	0.002/0.001	0.04/<0.001
Drainage 10	0.004/0.01	0.0/0.0
Drainage 14*	0.02/0.006	0.0/0.0
Total	0.346/0.109	0.35/0.18
Segment 4		
Drainage 11	0.04/0.02	0.0/0.0
Drainage 12*	0.006/0.003	0.0/0.0
Drainage 13	<0.001/0.0	0.0/0.0
Drainage 15	0.021/0.009	0.70***/0.13
Drainage 16-French Valley Creek*	1.19****/ 0.43	0.64/0.55
Total	1.26/0.46	1.34/0.68

* Indicates features that include inferred areas. See Section 3.3.1.2, Wetlands and Other Waters, above, for a full description of inferred areas by feature.
** Permanent, indirect impacts to riparian vegetation may occur due to bridge shading
*** Permanent, indirect impacts to riparian vegetation due to shading would equal 0.12 acres of this total
**** Permanent, indirect impacts to riparian vegetation due to shading would equal 0.31 acres of this total

Special-Status Species

MSHCP Special-Status Species

Impacts to MSHCP special-status species above and beyond those identified in Section 3.5.2.2.1 and 3.5.2.2.2 of the SEIR are not anticipated to occur within 13 of the 16 jurisdictional water features identified as MSHCP riparian/riverine features due to lack of suitable habitat for sensitive species. However, a low potential exists for MSHCP riparian/riverine species within three of the jurisdictional water features; Drainage 2 – Warm Springs Creek, Drainage 15, and Drainage 16 – French Valley Creek. These species include smooth tarplant, southwestern willow flycatcher, and least Bell's vireo. Other MSHCP special-status species with a low potential to occur include many-stemmed dudleya, San Diego ambrosia, burrowing owl, and LAPM (ICF 2013). Minimization measures B-1b, and B-4 through B-6, as described below in Section 3.3.3, Mitigation Measures, would be implemented to minimize impacts to less than significant. The Project would be in compliance with MSHCP Section 6.1.2 - Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, providing additional protection to riparian/riverine-associated species.

Non-MSHCP Special-Status Species

One non-MSHCP special-status plant species, the paniculate tarplant (CNPS List 4.2), was observed within the Study Area during the habitat assessment performed in 2013 (ICF 2013). The paniculate tarplant is a common species within loamy soils throughout southwestern Riverside County. The species is well adapted to considerable human disturbance and not currently imperiled. Potential indirect effects to adjacent populations during construction within the Study Area would be greatly avoided and minimized with implementation of measures B-1B through B-1E as described in Section 3.5.3, Mitigation Measures, of the SEIR and summarized below in Section 3.3.3, Mitigation Measures. As a result, impacts are expected to be less than significant.

Based on the results of the updated habitat assessment (ICF 2013), a low potential also exists for special-status bats, which is consistent with the findings presented in Section 3.5.2.2.1 of the SEIR. Mitigation measure B-3 would reduce impacts to less than significant.

Overall, potential impacts to special-status species, within the jurisdictional water features, above and beyond those already identified in the SEIR, are anticipated to be less than significant.

Potential Impacts on Wildlife Movement or Wildlife Corridors

Impacts on wildlife movement or wildlife corridors would remain less than significant as stated in Section 3.5.2.2.2 of the SEIR, which analyzed impacts on wildlife movement throughout the entire length of the Project. Current shifts and increases in wetland areas and jurisdictional water features since the approval of the SEIR did not create new wildlife movement corridors. Therefore, findings from the updated jurisdictional delineations would not change the impacts or conclusions regarding wildlife movement as presented in the SEIR.

To summarize, to compensate for potential wildlife movement or wildlife corridor impacts, a number of features have been incorporated into the Project to facilitate wildlife movement and comply with the MSHCP Section 7.5.2 – Guidelines for the Construction of Wildlife Crossings. These crossings include multiple undercrossings (bridge at Warm Springs Creek, bridge at French Valley Creek, and several culverts), as well as a wildlife overcrossing immediately east of the bridge over Warm Springs Creek. These are summarized in Section 3.3.3, Mitigation Measure B-1A, below.

Potential Impacts from Conflicts with Local Policies or Ordinances

Updated impacts associated with the jurisdictional water features located within Segment 2 and 4 would not introduce new conflicts with local policies or ordinances. As stated in Section 3.5.2.2.2 of the SEIR, there are no anticipated conflicts with local policies or ordinances from the Project. No new

updates to local policies or ordinances that would affect the conclusions presented in the SEIR have occurred; therefore, no impacts are anticipated.

Potential Impacts from Conflicts with Adopted Conservation Plans

There are two conservation plans located within the Project area: The Stephens' kangaroo rat Habitat Conservation Plan (SKR HCP), and the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). These were previously identified in Section 3.5.2.2.2 of the SEIR. Updated impacts associated with the jurisdictional water features located within Segment 2 and 4 would not introduce new conflicts with either of these adopted conservation plans based on the following.

Stephens' Kangaroo Rat HCP

As stated in Section 3.5.2.2.2 of the SEIR:

> *"Stephens' Kangaroo Rat Habitat Conservation Plan*
>
> *The Project would be consistent with and in compliance with the Stephens' kangaroo rat HCP. The Project is within the County fee area, but outside the limits of proposed HCP core reserve areas. Take of Stephens' kangaroo rat is permitted under the Stephens' kangaroo rat HCP. All public works projects are covered under the HCP and exempt from fee payment. Therefore, the Project would not conflict with this adopted conservation plan."*

Because the updated impacts to jurisdictional water features do not change the fact that the Project is still covered under the Stephens' kangaroo rat habitat conservation plan as a public works project, impacts to the SKR HCP remain less than significant.

Western Riverside County Multiple Species Habitat Conservation Plan

The Project is also a covered activity under the MSHCP and would be in compliance with all requirements of the MSHCP, since all previous measures listed in Table 3.5-11 of the SEIR, would still be implemented. The updated impacts to MSHCP Riparian/Riverine areas would require an updated DBESP to address changes in riparian/riverine impacts. The DBESP will mitigate for shifts/new impacts in MSHCP riparian/riverine areas to a less than significant level and will be submitted to the wildlife agencies for their review. Therefore, the Project would not conflict with this adopted conservation plan, and the impact remains less than significant.

3.3.3 Mitigation Measures

The mitigation measures B-1 through B-4 listed for the Project in Section 3.5.3, Mitigation Measures, of the SEIR, would still be implemented during construction of Phase 1, including Design Option 1 and 2, and Phase 2 of Segment 2 and construction of Segment 4, where applicable. In addition to these, measures B-5 through B-9 have been added to address biological resource impacts based on the updated jurisdictional delineation of the 16 jurisdictional water features. Measures B-5 through B-9 would address impacts within these water features that were not previously addressed in the SEIR.

3.3.3.1 Measures B-1 through B-4 from SEIR

Mitigation Measure B-1

Listed below are the MSHCP requirements applicable to the Project that will be implemented. These measures document full compliance with the SEIR and the MSHCP.

B-1A – Measures to Accommodate Wildlife Movement

The following measures will accommodate wildlife movement in order to minimize habitat fragmentation consistent with requirements of the MSHCP:

- Per MSHCP Table 7-4, "The crossing of Warm Springs Creek will span the floodway with sufficient vertical clearance and length including a span bridge." This is a three-span bridge with a total length of approximately 360 feet. The specific design of this bridge structure has been described in Section 2.0 Project Description and shown in Figure 2-5 of the SEIR. This structure will be constructed for the Project.

- Per MSHCP Table 7-4, and Section 7.5.2, "the crossing of Warm Springs Creek will include a cut and cover element or wildlife overcrossing to accommodate avian, mammalian, reptile, amphibian, and insect movement." The wildlife overcrossing structure will be constructed to resemble a double arch structure over Clinton Keith Road and has been designed and is described in Section 2.0 Project Description and shown in Figure 2-7 of the SEIR. This structure will be constructed for the Project if at the time of construction there are no MSHCP amendments or Criteria Refinements approved in Proposed Core 2 which would eliminate the need for the overcrossing.

- Per MSHCP Section 7.5.2, wildlife movement requirements will include a number of design elements. These facilities have been designed and are described in Section 2.0, Project Description of the SEIR. These elements are in addition to the two crossings described above and include the following:

- The crossing of French Valley Creek with a single-span bridge with a total length of approximately 180 feet. The wildlife undercrossing structure has been designed and is described in Section 2.0 Project Description and shown in Figure 2-6 of the SEIR. This structure will be constructed for the Project.
- Two wildlife undercrossings fitted with natural light portals, consisting of three glass skylights (one within each shoulder, and one within the median) or by other similar or improved method:
  - Culvert at station 296+40 under Clinton Keith Road (36-inch RCP)
  - Culvert at station 312+04 under Clinton Keith Road (36-inch RCP)
- Directive and exclusion fencing along the Project roadway and at wildlife under and over crossing locations, see Figure 3.5-5 of SEIR for fencing locations
- One-way animal exclusion boxes, see Figure 3.5-5 of SEIR for exclusion locations

B-1B – Construction Guidelines

Construction guidelines will be implemented consistent with terms and conditions of the MSHCP in Section 7.5.3. This will include the following items:

- A plan for water pollution and erosion control will be prepared and implemented (see Mitigation Measure H-1, Section 3.6.3).
- Timing of construction will avoid habitat clearing during species active breeding defined as March 1 to August 15.
- Short-term stream diversions, silt fencing, settling ponds and other measures will be implemented to avoid release of silt or debris in streams.
- Equipment storage and fueling will be sited on non-sensitive uplands.
- Exotic species will be properly handled to avoid resprout or regrowth.
- Appropriate fire-fighting equipment shall be on hand when working adjacent to flammable habitats.
- Active construction will be watered for dust control.
- Dispensing fuel, oil, or other toxic substances shall occur only in designated areas.

B-1C – Best Management Practices

BMPs required under the MSHCP, will be implemented and include the following:

- A qualified biologist shall conduct training sessions for construction personnel.
- Water pollution and erosion control plans shall be developed.
- Project footprints will be minimized and clearly marked.
- Projects shall be designed to avoid placement of equipment and personnel in stream channel habitat used by target species of concern. Where the Project cannot avoid placement of equipment or personnel in sensitive habitats, it should be timed to avoid the breeding season of riparian species.
- Erosion shall be minimized by diverting stream flows, use of settling ponds, and/or use of silt fences.
- Removal of native vegetation shall be avoided and minimized to the maximum extent practicable; temporary impacts shall be returned to a pre-existing contour and revegetated with appropriate native species.
- Exotic species that prey upon native species shall be permanently removed to the extent feasible, and the site shall be kept clean to avoid attracting predators.

B-1D – Fuel Management

Brush management will be implemented within the Riverside County Transportation Department and City of Murrieta right-of-way on the new Clinton Keith Road alignment, consistent with fuel management requirements in the MSHCP for areas adjacent to conservation areas. This will include brush management by mechanical removal, where feasible, to minimize risk of fire originating along the roadway.

B-1E – Urban Wildlands Interface

Proposed Project measures will be implemented to meet terms and conditions of the MSHCP pertaining to urban/wildlands interface, as described in MSHCP Section 6.1.4. This will include, among other measures, the following.

- Drainage facilities and design will ensure that quantity and quality of runoff discharged to the MSHCP is not altered in an adverse way compared to existing conditions. Section 3.6, Hydrology/Water Quality provides stormwater management system design measures.

- Only legal herbicides applied by applicators licensed with the State of California will be applied during roadway operations and maintenance, according to all state and federal regulations. Toxic runoff will be managed with stormwater management design measures.
- Roadway lighting shall be directional or shielded to avoid increasing ambient lighting conditions in the Conservation Area. Project lighting is described in Section 2.1.2, Project Description. The proposed solar street lights would include full cut-off fixtures to not allow direct lighting above the horizontal plane of the fixture. In addition, lighting fixtures adjacent to the MSHCP Conservation Area or other natural habitat areas will be fitted with external opaque reflectors to shield fixtures and reduce spillage into adjacent areas outside the ROW.
- To minimize the effects of noise on the MSHCP Conservation Area, all proposed conservation acquisitions by the Resource Conservation Area adjacent to the Project roadway will be reviewed by the Riverside County Transportation Department. To minimize the effects of noise to the proposed MSHCP Conservation Area adjacent to the Project, all slope areas adjacent to Clinton Keith Road have been acquired in fee title or permanent easement which will increase the distance between noise generating traffic and proposed Conservation Areas thereby reducing noise to acceptable levels on conservation lands.
- The Riverside County Transportation Department submitted final fencing, culvert crossing and revegetation plans to the Resource Conservation Agency and Wildlife Agencies for their review prior to construction.
- Landscape plans shall avoid the use of invasive plants as identified in the MSHCP.

Mitigation Measure B-2

Mitigation for Streambeds and Associated Wetlands. This mitigation measure addresses the potentially significant adverse impacts of the proposed Clinton Keith Road on streambeds and associated wetlands. In addition, the mitigation will be addressed under the requirements of the permitting agencies. The impacts are expected to be mitigated by revegetation and rectification at the impact location, and potentially enhancement of riparian habitat, preferably in the same watershed.

The impacts on streambeds and associated wetlands will be mitigated to below a level of significance as part of the mitigation required for a Section 404 permit (USACE) and Section 1601 Agreement (CDFW) for impacts on riparian habitats. The permit and agreement will require replacement in such a manner as to result in no net loss of riparian resources and will meet the MSHCP requirements for a Biologically Equivalent or Superior result (MSHCP Section 6.1.2). Therefore, some limited

restoration is anticipated for those resource values not avoided at the Warm Springs Creek Bridge. Any replacement ratios will be determined through consultation with the resource agencies.

A riparian revegetation plan will be prepared and coordinated with the USACE and CDFW as necessary. The requirements of the permit and agreement shall be incorporated into the riparian revegetation plan. The basis for the riparian revegetation plan will also be used to satisfy the "Biologically Equivalent or Superior Analysis" for the loss of Riparian/Riverine habitat required by the MSHCP.

Mitigation Measure B-3 – Special-Status Bats

Prior to ground-disturbing activities, surveys will be conducted for potential bat roosts. Where potential bat roosts are identified, ground disturbance and roost destruction will be avoided during the parturition period (generally March through August). Where this is not feasible, exit surveys and/or roost surveys of potential roost sites will occur; and active roosts will be identified. Construction activity within 300 feet of active roosts will be prohibited until the completion of parturition (end of August). Alternatively, if potential roosts are identified prior to onset of parturition, roosts may be excluded during the evening forage period (within 4 hours after dark) or fitted with one-way exit doors to effectively eliminate and exclude roost.

Mitigation Measure B-4 – Burrowing Owl

Within 30 days prior to ground-disturbing activities, surveys will be conducted for burrowing owls in suitable habitat. Take of active nests will be avoided. If burrowing owls are observed in the Project impact area, they will be passively or actively relocated following accepted protocols.

Updated Measures B-5 through B-9

The SEIR documented the revision of biological mitigation measures in the EIR that had been superceded by the implementation of the MSHCP requirements. Accordingly, the following measures are included to demonstrate full compliance with the MSHCP. Including the measures below is consistent with the SEIR and the MSHCP.

The measures listed below address the potential for MSHCP species and the updated MSHCP Riparian/Riverine impacts.

Mitigation Measure B-5 – Updated Revegetation Plan

Mitigation measures for temporary impacts to riparian and/or wetland areas at Drainages 2, 3, 9, 15, and 16 will include revegetation of the impacted areas at a 1:1 ratio. This may include the following:

- Banking of the top 8 inches of topsoil prior to site disturbance; topsoil will be banked away from active construction areas and covered with tarpaulins to avoid erosion or seed establishment.
- Areas impacted will be regraded to original contours or as close to original contours as feasible once construction is complete, and topsoil redistributed across impact area.
- A hydroseed mix appropriate to wetland and riparian scrub areas in western Riverside County consisting entirely of seeds of native species will be applied according to industry standard methods and rates.
- Hydroseed will contain cellulose-fiber mulch with a tackifier, applied at appropriate rates for erosion control.

Final re-vegetation plans will be coordinated with the permitting agencies during the permitting process.

Mitigation Measure B-6 – Installation of Soft-Bottom Culverts at Drainage 15

Within Drainage 15, a double 24 by 9-foot soft-bottom culvert will be installed, as shown in Figure 3-3i and 3-4i to avoid impacts to WoUS/WoS.

Mitigation Measure B-7 – ESA Fencing – Updated Limits

Environmentally Sensitive Area (ESA) fencing would be installed to minimize additional impacts to jurisdictional water features at Drainage 2 – Warm Springs Creek, Drainage 3, Drainage 15, and Drainage 16 – French Valley Creek as shown in Figures 3-3f, i, j and 3-4f, i, j.

Mitigation Measure B-8 – Updated Compensatory Mitigation

The County will provide appropriate compensatory mitigation through either in-lieu fees or creation or preservation of wetlands/WoUS/WoS within the Santa Margarita Watershed to offset unavoidable impacts. This will be determined through the permitting process. The mitigation ratio identified in the 2006 JD Report is 1:1.5 (acres impacted to acres mitigated) for permanent impacts and 1:1 for shading impacts to CDFW Jurisdictional Areas. This mitigation ratio may be modified through coordination with the permitting agencies.

Mitigation Measure B-9 – Updated Determination of Biologically Equivalent or Superior Preservation

The County will update the DBESP using current formats developed by the wildlife agencies to include an assessment of impacts within the 15 MSHCP riparian/riverine resource areas. Any compensation will be determined through consultation with the resource agencies.

3.3.4 Level of Significance after Mitigation

As stated in Section 3.5.4 of the SEIR, the Project would not result in a significant impact on biological resources after mitigation. With the incorporation of mitigation measures B-1 through B-9, this conclusion remains for Segments 2 and 4.

3.4 Cultural Resources

This assessment is based on information provided in the Phase I Cultural Resources Assessment (*Æ* 2014a), First Supplemental Phase I Cultural Resources Assessment (*Æ* 2014b), Phase II Testing Report (*Æ*, 2014c), the 2006 SEIR, and the PS&E for the proposed Project.

3.4.1 Updated Environmental Setting

The environmental setting for cultural and paleontological resources reported in the SEIR (2006) was based on a Phase I cultural and paleontological resource assessment (CH2M HILL 2004). During the time that cultural studies were being conducted for the SEIR, efforts to survey the Project area were hindered by land access restrictions that limited intensive-level pedestrian survey to the public/existing ROW and private land for which permission to enter had been obtained. The southeast corner of Section 36, Township 6S/R3W, known as part of the Anheuser Busch property, was not among the parcels surveyed because requests to enter the property were denied by the landowner. No cultural resources were identified within the 2004 survey limits, although areas of high sensitivity for archaeological resources were identified, including terrace deposits adjacent to Warm Springs Creek within the Anheuser Bush property. Certification of the SEIR included a Late Discovery Archaeological Treatment and Monitoring Plan to mitigate significant impacts to sites that might be identified during Project construction.

Since that time, access to previously restricted portions of the Project was obtained by the County. Therefore, in 2013, the County initiated the first step in documenting consistency with the SEIR requirement to prepare a Late Discovery Archaeological Treatment and Monitoring Plan by contracting *Æ* to complete a cultural resources assessment of the Project area, to verify previous findings, and identify any previously undiscovered cultural and/or paleontological resources. Additional record searches, literature reviews, and field investigations were conducted to update the environmental setting for cultural and paleontological resources within the Project area. Supplemental investigations did not identify any additional portions of the Project area where paleontological sensitive sediments are present. Additional cultural resource investigations did result in the identification of historic properties/historical resources eligible for listing in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). The update to the

environmental setting for cultural and paleontological resources is documented in a series of technical reports on file with the Riverside County Transportation Department (Æ 2014a, 2014b, 2014c, 2014d).

3.4.1.1 Historical Resources

Additional research and field investigations conducted in 2013-2014 were the next step in preparation of the Late Discovery Archaeological Treatment and Monitoring Plan required by the SEIR. This investigation identified nine archaeological resources that are historic properties/historical resources eligible for listing in the NRHP and CRHR within the Project area. These archaeological resources include a complex lithic scatter (33-016689), seven bedrock milling sites (BRMs) (CA-RIV-11571/H, -11572, -11573, -11574/H, -11575, -11739, -11740), and an undefined archaeological district or prehistoric vernacular landscape associated with the Adobe Springs village site (CA-RIV-716). The complex lithic scatter and bedrock milling sites also contribute to the significance of the undefined district or landscape, should the district or landscape ever be formally evaluated and found eligible for listing in the NRHP and/or CRHR.

1. Complex Lithic Scatter (33-016689). This prehistoric complex lithic scatter was recorded previously in a disked field. An intensive survey failed to identify any evidence of the site on the surface of the Project area. The site may still exist on the surface of the disked field outside the Project area and it is not known if the site contains a subsurface component. The site can be protected in place during Project construction through the establishment of an ESA and, for the purposes of the Project, is presumed eligible for listing in the NRHP and CRHR under Criterion D/4.

2. BRM (CA-RIV-11571/H). The prehistoric component consists of a minimal to moderate use BRM with five feature outcrops (OCs 2–6) exhibiting nine slicks and a flaked stone scatter with lithic tools. A subsurface archaeological deposit was identified within and surrounding the flaked stone artifact scatter during Phase II testing (Æ 2014c). The site also retains a prehistoric viewshed to neighboring sites and notable landmarks on the cultural landscape. CA-RIV-11571/H was formally evaluated and found eligible for listing in the NRHP and CRHR under Criterion A/1 for its potential association with a Luiseño family garden and under Criterion D/4 for its data potential.

3. BRM (CA-RIV-11572). This prehistoric site consists of a minimal to moderate use BRM containing five feature outcrops (OCs 1–5), exhibiting five slicks, one basin metate, and a potential footprint left by $úukat (Deer) or one of the little people (*Kíikatum 'atáaxum*) on OC 4.

Feature outcrops are found in couplets represented by OCs 1, 4, and 5 in the western portion and OCs 2 and 3 in the eastern portion. The feature couplets are separated by approximately 45 m. The site also contains twenty crystalline quartz flakes, one possible quartz core, a stone tool, and a basin metate fragment. A subsurface archaeological deposit was identified within the western portion of the site surrounding OCs 1, 4, and 5. The site also retains prehistoric viewshed to neighboring sites and notable landmarks on the cultural landscape, including a direct line of site from OC 1 to the place of Luiseño creation. CA-RIV-11572 was formally evaluated and found eligible for listing in the NRHP and CRHR under Criterion A/1 for its potential association with a Luiseño family garden and under Criterion D/4 for its data potential. In addition, CA-RIV-11572 was found eligible for listing under Criterion B for its potential association with *$úukat* (Deer) or *Kíikatum 'atáaxum* (Little People), culturally significant persons in Luiseño history.

4. BRM (CA-RIV-11573). This prehistoric site consists of a minimal to moderate use BRM with two feature outcrops (OC 1 and 2) each exhibiting one slick. No subsurface deposit was identified at the site during Phase II testing. However, the site retains a prehistoric viewshed to neighboring site CA-RIV-11571/H and was likely associated with a Luiseño family garden. CA-RIV-11573 was formally evaluated and found eligible for listing in the NRHP and CRHR under Criterion A/1 for its potential association with a Luiseño family garden and under Criterion D/4 for its data potential.

5. BRM/Historic Refuse Deposit (CA-RIV-11574/H). The prehistoric component consists of a minimal to moderate use BRM with two feature outcrops (OCs 1 and 2) containing a total of nine slicks. Eight of the nine slicks are on OC 1 and all slicks exhibit moderate polish indicative of minimal to moderate use. The historical archaeological component consists of a discrete mid-twentieth-century historical refuse dump (Feature 1). No clear historical association could be determined from surface recordation of the refuse. The site can be protected in place during Project construction through the establishment of an ESA and, for the purposes of the Project, is presumed eligible for listing in the NRHP and CRHR under Criterion D/4.

6. BRM (CA-RIV-11575). This prehistoric site consists of an intensive use BRM containing 19 feature outcrops (OCs 1–19) exhibiting 37 feature elements (25 milling slicks, five basin metates, and seven mortars). The site also contains a sparse complex lithic scatter that extends throughout the site with a small concentration noted in the southeast portion. The number of tightly clustered outcrop features and feature elements and the variety of elements exhibiting moderate to high polish are indicative of intensive site use. CA-RIV-11575 was likely utilized as a small group base and centralized resource processing site for the efficient exploitation of an

ecotone. A sparse subsurface archaeological deposit was identified during Phase II testing of the southeast portion of the site. CA-RIV-11575 was formally evaluated and found eligible for listing in the NRHP and CRHR under Criterion A/1 for its potential association with a Luiseño family garden and under Criterion D/4 for its data potential.

7. BRM (CA-RIV-11739). This prehistoric site consists of an incompletely defined complex lithic scatter and potential BRM. Access to the parcel containing the site was restricted at the time of the survey. Bulldozing and/or grading activities associated with the construction of a dirt road have removed approximately 1 foot of sediment from the edge of the site, with no trace of intact archaeological deposits remaining within the road bed. During the survey, 27 crystalline quartz flaked stone debitage (2 primary, 3 secondary, 12 tertiary, 10 shatter), one edge-modified quartz secondary flake, and one ground stone metate fragment were found along the edge of the existing roadway near the toe of slope to an adjacent private parcel within a narrow strip measuring 29 x 1 m in length. Artifacts observed on the surface extend approximately 1 m onto private land. The artifacts were apparently transported downslope from the site into the Project APE, likely as a result of rain wash. The site can be protected in place during Project construction through the establishment of an ESA and, for the purposes of the Project, is presumed eligible for listing in the NRHP and CRHR under Criterion D/4.

8. BRM (CA-RIV-11740). This prehistoric site consists of a minimal to moderate use BRM containing three feature outcrops (OC 1–OC 3) each with ephemeral or lightly utilized slicks. The site can be protected in place during Project construction through the establishment of an ESA and, for the purposes of the Project, is presumed eligible for listing in the NRHP and CRHR under Criterion D/4.

9. Undefined district or vernacular landscape associated with Adobe Springs village (CA-RIV-716). The Adobe Springs village site (CA-RIV-716) contains at least seven loci spread over 35 acres of land. The densest concentration of features and artifacts are recorded at Loci 5, 6, and 7. Combined, these loci contain more than 20 slicks, 45 mortars, and two rock-shelters, one of which contains rock art, surrounded by dense concentrations of artifacts that include ceramics, chipped stone lithic debitage and tools, and ground stone fragments. Warm Springs Creek, which lies approximately 1.0 mile to the south of the Adobe Springs Village, links Adobe Springs village to the Project APE. The creek provided a natural travel corridor, as it does today for large and small game that allowed inhabitants of the village to access resource gathering areas to the north and south. French Valley Creek provided access to additional resources to the northeast along the terraces and an open valley was all that separated French Valley Creek from Tucalota

Creek to the south. Luiseño concepts of land classification were not bounded by the limits of a village site's archaeological footprint. Rather, the concept of village extended out to the broader landscape and included resource gathering and processing locations, trails, ceremonial locations, sacred spots, quarries, water sources, and other elements that made up the village territory or Tch'o'num tcho'mi. Elements of the Adobe Springs village territory may still exist within and surrounding the Project area and may constitute an archaeological district or prehistoric vernacular landscape. Additional work is needed to document, inventory, describe, and formally evaluate the potential archaeological district or vernacular landscape associated with Adobe Springs (CA-RIV-716); however, information generated during this study is enough to presume eligibility, for the purposes of the Project, of the district or vernacular landscape for listing in the NRHP and CRHR under Criteria A/1 and D/4.

3.4.1.2 Paleontological Resources

A supplemental records search conducted by *Æ* in April 2013 showed no previously recorded paleontological vertebrate fossil localities directly within the Project boundaries; however, museum collection records indicate that at least three fossil localities have been recovered nearby from within the same Pleistocene age alluvial deposits that are mapped along the easternmost extent of the Project area. SBCM 5.6.628, 53.6.857, and 5.6.859 were documented within one-half to one mile of the Project area and yielded fossil remains of fish, reptiles, rabbits, and rodents as well as unspecified invertebrates (Scott 2013).

During an updated field survey conducted by *Æ* in June 2013, there were no previously documented paleontological resources within the Project boundaries. However, there is a high potential for encountering buried paleontological resources within Pleistocene age geologic units underlying portions of the Project area. These nonrenewable scientific resources may be at risk of being adversely impacted by earth disturbing activities during the construction of the Project. However, by implementing the management recommendations presented in the Paleontological Resources Monitoring and Mitigation Plan (PRMMP) prepared for the Project, adverse impacts to paleontological resources can be reduced to a less than significant level pursuant to the requirements of CEQA. This is consistent with Section 3.6.2 of the SEIR.

3.4.2 Impact Assessment

3.4.2.1 Thresholds of Significance

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

3.4.2.2 Methodology

Efforts to identify historical resources included a records search at the Eastern Information Center, coordination with the Native American Heritage Commission (NAHC) and local Native American groups, a pedestrian survey of the 2013 Project Survey Area and 2014 Supplemental Survey Area (Æ 2014a and 2014b), historical/archival research, and Phase II testing and evaluation. A search of the Sacred Land files by the NAHC did not indicate the presence of known cultural resources or sacred sites in the Survey Area. However, results of the records search indicated that 59 prehistoric archaeological resources (47 sites and 12 isolated artifacts), 14 historical archaeological resources (12 sites and two isolated artifact), and six built-environment resources were recorded previously within a 1-mile radius.

An intensive cultural resources pedestrian survey of the 2013 Project survey area was performed on June 13 and 14, 2013. Archaeological site recordation occurred between June 27 and July 3, 2013. The 2014 Supplemental Survey Area was intensively surveyed for cultural resources on February 4, 2014. These surveys resulted in the identification of 13 cultural resources, of which nine (33-016689, CA-RIV-11571/H, CA-RIV-11572, CA-RIV-11573, CA-RIV-11574/H, CA-RIV-11575, CA-RIV-11739, CA-RIV-11740, and the undefined archaeological district or vernacular landscape associated with the Adobe Springs village site [CA-RIV-716]) are considered eligible for listing on the NRHP or CRHR through formal evaluation or presumption of eligibility for the purposes of the Project. The four remaining resources were evaluated against NRHP and CRHR criteria and were found not eligible for listing. These included two roads (Winchester Road [33-013871] and Los Alamos Road [33-023953]) and two isolated artifacts (33-023477 and 33-021031).

For paleontological resources, a supplemental literature review and records search was performed by the San Bernardino County Museum Division of Geological Sciences (Scott 2013). A supplemental paleontological resources field survey was conducted by Æ Senior Paleontologist Jess DeBusk on June 28, 2013. The purpose of the field survey was to verify previous findings and recommendations,

and identify any new areas containing sediments that were conducive to the preservation of paleontological resources.

3.4.2.3 Updated Environmental Impacts

Cultural Resources

Previous findings documented in the SEIR identified three potential impacts to cultural resources: (1) Los Alamos Road; (2) the site of a recorded structure west of Warm Springs Creek; and (3) an area of archaeological sensitivity where the proposed Project crosses Warm Springs Creek for an area of 400 feet from the east and west banks of that creek. Potential impacts to Los Alamos Road were minimized by Mitigation Measure T-1, a Traffic Management Plan, in the SEIR. Although the resource was formally evaluated and found not eligible for listing on the NRHP or CRHR, the County will continue to enforce implementation of Mitigation Measure T-1. Potential impacts to the site of a recorded structure were previously minimized by Mitigation Measure CR-3 in the 2006 SEIR, which required archaeological monitoring within 200 feet of the intersection of Clinton Keith Road and Menifee Road. Finally, the Projects potential impact to the area of archaeological sensitivity near the banks of Warm Springs Creek was previously minimized by Mitigation Measure CR-2 in the 2006 SEIR, which required archaeological monitoring within 400 feet of the creek. Based on the results of recent cultural resource studies, these mitigation measures were revised as detailed in Section 2.4.3 below (Mitigation Measures).

Cultural resource studies conducted by *Æ* also resulted in the identification of nine historic properties/historical resources within the Project area. The Project will cause a substantial adverse change to the significance of five historical resources within the Project area (CA-RIV-11571/H, -11572, -11573, -11575, and the potential Adobe Springs archaeological district or prehistoric vernacular landscape) resulting from their partial or complete destruction (Refer to Table 3-14). Proposed measures are included below in Section 2.4.3, Mitigation Measures, to reduce impacts on these five historical resources to a level of less than significant.

Table 3-14 Assessing the Project's Potential to Cause a Substantial Adverse Change to a Historical Resource

Historical Resource	Direct Impacts	Indirect Impacts	Impact Assessment
33-016689	-	-	No significant impact*
CA-RIV-11571/H	Partial destruction	Loss of association with Luiseño family garden and potential Adobe Springs archaeological district/ landscape; obstruction of viewshed	Substantial Adverse Change- Less than Significant with Mitigation Measures CR-7, CR-8, CR-9, CR-10, CR-11, and CR-12
CA-RIV-11572	Partial destruction	Obstruction of viewshed	Substantial Adverse Change - Less than Significant with Mitigation Measures CR-2, CR-3, CR-4, CR-5, CR-8, CR-9, and CR-12
CA-RIV-11573	Complete destruction	Loss of association with Luiseño family garden and potential Adobe Springs archaeological district/ landscape; obstruction of viewshed	Substantial Adverse Change- Less than Significant with Mitigation Measure CR-10
CA-RIV-11574/H	-	-	No significant impact*
CA-RIV-11575	Partial destruction	-	Substantial Adverse Change - Less than Significant with Mitigation Measures CR-7, CR-8, CR-9, , CR-11, and CR-12
CA-RIV-11739	-	-	No significant impact*
CA-RIV-11740	-	-	No significant impact*
Potential Adobe Springs Archaeological District/ Landscape	Partial destruction	-	Substantial Adverse Change- Less than Significant with Mitigation Measure CR-12

* Implementation of Measure CR-1 will result in no significant impact to these four historical resources

Paleontological Resources

As stated above in Section 3.4.1, Updated Environmental Setting, no previously documented paleontological resources within the Project boundaries and no fossil resources were discovered during updated studies. Consistent with Section 3.6.2 of the 2006 SEIR, there is potential for an unknown number of fossils buried within those geologic units underlying portions of the Project area determined to have a high paleontological resource potential (Pleistocene age deposits). These nonrenewable scientific resources may be at risk of being adversely impacted by earth disturbing activities during the construction of the Project. However, by implementing the management recommendations presented in the PRMMP prepared for the Project, as previously stated in

Mitigation Measure CR-1 in the 2006 SEIR, adverse impacts to paleontological resources can be reduced to a less than significant level pursuant to the requirements of CEQA.

3.4.3 Mitigation Measures

The 2006 SEIR included Mitigation Measure CR-1 to address impacts on paleontological resources and mitigation measures CR-2 and CR-3 to address impacts on cultural resources. Measure CR-1, as stated in the 2006 SEIR, has already been implemented and is now CR-6. CR-2 and CR-3 of the SEIR have been replaced with CR-8 andCR-9.. Other mitigation measures have been added as CR-1 through CR-5, CR-7, and CR-10 through CR-12, consistent with the SEIR.

- **CR-1:** Establish ESA and conduct archaeological monitoring to protect 33-016689, CA-RIV-11574/H, CA-RIV-11739, and CA-RIV-11740 in place during construction. Prepare an ESA Action Plan detailing measures that will be taken to protect the property in place.
- **CR-2:** Collect flaked stone artifact from surface of CA-RIV-11572 identified in southwestern portion of property and curate along with other archaeological materials collected from the site.
- **CR-3:** Establish ESA around character-defining elements of CA-RIV-11572 and conduct archaeological monitoring during construction. Prepare an ESA Action Plan detailing measures that will be taken to protect the property in place.
- **CR-4:** Construct retaining wall to protect character-defining elements of CA-RIV-11572 in place.
- **CR-5:** Evaluate the inclusion of signs, fencing, or any other above-ground structures or objects associated with the Project in order to reduce or eliminate obstruction of the direct line of site viewshed from the work area at OC 2 at CA-RIV-11572 to the place of Luiseño creation, *Pu'Eska* Mountain.
- **CR-6 (formerly CR-1 in SEIR [already implemented])**: A PRMMP has been developed that prescribes onsite monitoring for paleontological resources during all ground-disturbing construction activities in paleontologically sensitive areas (CH2M HILL 2004). Monitoring will consist of visually inspecting fresh exposures of sediment and backdirt generated by the site preparation, grading, and other excavations. The monitoring will concentrate on areas and rock units containing fossil sites recorded during the preconstruction survey. A qualified paleontological monitor shall observe all ground-disturbing activities in the following four paleontologically sensitive areas within the proposed Project impact area:

1) Area between the intersection of proposed Clinton Keith Road and Meadowlark Road and 1,300 feet east of this intersection (between Stations 236 and 252)
2) North of the proposed Project centerline along Menifee Road
3) Locations where the proposed Project alignment and temporary construction access areas cross the older terrace of Warm Springs Creek, represented by its current floodplain
4) From Station 330 to the east end of the proposed alignment (Station 380)

The PRMMP calls for construction worker education on paleontological resources identification and avoidance, and the roles of the paleontological monitor and project paleontologist. It includes a Paleontological Resources Discovery Plan (PRDP) for construction supervisors. The PRMMP and the PRDP describe procedures for notification and avoidance by construction should paleontological resources be discovered, and the assessment and recovery of discovered fossil resources. The PRMMP also stipulates procedures for sediment sampling and processing, requirements for the preparation and curation of recovered resources, and the preparation of reports on monitoring conducted, and on discovered paleontological resources if any.

- **CR-7:** Establish ESA and conduct archaeological monitoring to protect all remaining portions of CA-RIV-11571/H and CA-RIV-11575 in place during construction. Prepare an ESA Action Plan detailing measures that will be taken to protect the property in place.
- **CR-8:** An archaeological monitoring and treatment plan will be developed prior to Project construction that requires monitoring of all ground-disturbing activities by a Qualified Archaeologist due to the sensitivity of the Project APE for buried cultural deposits. If buried archaeological resources are uncovered during construction, all work should be halted in the vicinity of the archaeological discovery until a Qualified Archaeologist can visit the site of discovery and evaluate the significance of the archaeological resource. Both the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians are also requesting Native American monitors to be present during ground-disturbing activities associated with Project construction and implementation.
- **CR-9:** Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below. In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered.

The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the NAHC by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

- **CR-10:** Bury or relocate feature outcrops that will be impacted by grading operations or other earth-moving activities at CA-RIV-11571/H and CA-RIV-11573 under the direct supervision of an archaeological monitor and Native American monitor.
- **CR-11:** Establish ESA during Project construction to protect feature outcrop OC 2 at CA-RIV-11575.
- **CR-12:** The County will develop and implement a Data Recovery and Treatment Plan for CA-RIV-11571/H, CA-RIV-11572, CA-RIV-11575, and the potential Adobe Springs archaeological district or prehistoric vernacular landscape in coordination with Native American Tribes that ascribe cultural and/or religious significance to cultural resources.

3.4.4 Level of Significance after Mitigation

Consistent with Section 3.6.5 of the SEIR, which required further investigation of cultural resources, the proposed Project would not result in a significant impact on cultural or paleontological resources after implementation of mitigation measures CR-1 through CR-12.

3.5 Greenhouse Gas Emissions

This assessment is based on information provided in the PS&E for the Project.

3.5.1 Updated Environmental Setting

This section is being prepared to address the 2012 updated CEQA checklist questions related to greenhouse gas emissions (GHG). When the SEIR was approved in 2006, the CEQA checklist did not contain questions regarding GHG.

Climate change and potential impacts related to GHG emissions from Phase 1 and Phase 2 of Segment 2, as well as, construction of Segment 4, are discussed in this section. Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes

to increasing global atmospheric concentrations of GHG emissions, particularly those generated from human activities that include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles) make up the largest source of GHG emitting sources (CARB 2013). The dominant GHG emitted is CO_2, primarily from fossil fuel combustion.

3.5.1.1 Regulatory Setting

Federal

Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - Federal Leadership in Environmental, Energy, and Economic Performance.

On December 7, 2009, USEPA Administrator signed the two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act: the Endangerment Finding and the Cause or Contribute Finding. Although these findings did not impose any requirements on industry or other entities on GHG, this action was a prerequisite to finalizing USEPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles (2009). On May 7, 2010, the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards were published in the Federal Register.

USEPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean on-road vehicles and engines with reduced GHG emissions and improved fuel efficiency. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010. The final combined USEPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. These standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On November 16, 2011, USEPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

State

At the state level, Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006 provides the legal framework for regulating GHG emissions in California. This law requires CARB to design and implement emission limits, regulations, and other measures to reduce statewide GHG emissions to 1990 levels by 2020 in a technologically feasible and cost-effective manner.

As required by AB 32, CARB developed and approved AB 32 Scoping Plan in 2008. The AB32 Scoping Plan contains the main strategies California will use to reduce the GHG emissions that cause climate change. It has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program. The AB32 Scoping Plan needs to be updated every five years to ensure that California is on track to achieve the 2020 GHG reduction goal. The 2013 AB 32 Scoping Plan update is currently being prepared to define ARB's climate change priorities for the next five years and lay the groundwork to reach post-2020 goals.

California State Senate Bill 97 was signed into law in August 2007. The Senate Bill required the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resource Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. As directed by Senate Bill 97, the OPR developed recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. The amendments to CEQA Guidelines provide guidance regarding the analysis and mitigation of greenhouse gas emissions and the effects of greenhouse gas emissions in draft CEQA documents. The recommended amendments were approved by the Natural Resource Agency and became effective on March 18, 2010.

3.5.2 Impact Assessment

Currently, there is no explicit Federal, state, or local guidance or methodology on how to conduct project-level greenhouse gas analysis for transportation projects. Project-related impacts on climate change and GHG for the Project have been evaluated using the following criteria from the CEQA Guidelines:

3.5.2.1 Thresholds of Significance

Would the Project:

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

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

GHG emissions from the Project can be divided into those produced during construction and those produced during operations. GHG emissions from construction include those produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. GHG emissions during construction would be temporary and can be reduced by implementing control measures such as minimizing construction equipment idling time, utilizing electricity-powered equipment instead of diesel- or gasoline-powered equipment, and optimizing traffic controls. Operational emissions would primarily be caused by increases in the number of VMT in the area. A portion of the operational emissions increases due to the VMT increase may be offset by GHG emissions reductions resulting from improved traffic flow in the region.

Global climate change is a cumulative impact; therefore, no individual project is likely to generate enough GHG emissions to significantly influence global climate change. The project-related emissions are expected to be negligible in comparison to statewide or global emissions levels. In 2010, the California statewide GHG emissions were 451.6 million metric tons CO_2-equivalent (CO_2e) (CARB 2013). The overall length of the roadways to be constructed for the Project is 3.4 miles, which is a small project relative to statewide construction activities. VMT on the affected roadways of the Project would be negligible compared to the overall regional or state-wide VMT. Because of the small scale of the Project and the limited duration of the project construction, contribution of GHG emissions from Phase 1 or Phase 2 of Segment 2, or Segment 4, to the state or regional GHG emission inventory would be negligible. Based on the small potential GHG impacts of Phase 1 and Phase 2, the GHG emissions from the Project are not expected to result in "reasonably foreseeable significant adverse impacts on the human environment" (40 CFR 1502.22(b)).

Although the Project would result in GHG emissions during construction and operation, as discussed above, the GHG emissions contribution from the 3.4 mile roadway project to the state-wide GHG inventory would be negligible. The Project GHG emissions would not interfere with the AB 32 Scoping Plan, and the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Therefore, the Project would not conflict with plans, policies, or regulations intended to reduce GHGs. The Project would result in a less-than-significant impact on global climate and GHG emissions.

3.5.3 Mitigation Measures

There are no mitigation measures proposed for GHG emissions because, as stated above, the GHG emissions contribution from the 3.4 mile roadway project to the state-wide GHG inventory would be negligible. The Project GHG emissions would not interfere with the AB 32 Scoping Plan, and the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020.

3.5.4 Level of Significance after Mitigation

Since impacts associated with GHG emissions would be negligible, impacts are less than significant.

3.6 Hydrology/Water Quality

This assessment is based on information provided in the 2006 SEIR, the Hydraulic and Scour Analyses for Warm Springs Creek and French Valley Creek Bridges (CH2M HILL 2006a), Plans, Specifications, and Estimates (PS&E) for the Project, the Final Geotechnical Design Report (CH2M HILL 2014), the Final Drainage Report (CH2M HILL 2013a), and the updated Water Quality Management Plan (WQMP) [RBF 2014].

3.6.1 Updated Environmental Setting

Since the approval of the SEIR, the existing hydrological environment within the Project area has been altered. Specifically, as described above in Section 3.3, Biological Environment, eight additional drainages were mapped within the Study Areas of Segments 2 and 4 during updated wetland delineation studies. Therefore, a total of 16 drainage areas are now present within the Project Impact Area (PIA). The following paragraphs describe changes associated with the newly mapped drainages and phasing of construction into two phases for Segment 2. All other information presented in Section 3.3, Hydrology/Water Quality, of the SEIR would remain the same.

3.6.1.1 Regulatory Setting

Pursuant to Section 402 (p) of the CWA, USEPA has established regulations under the National Pollutant Discharge Elimination System (NPDES) program to control municipal and industrial (including construction) stormwater discharges. The CWA requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4) as well as other designated stormwater discharges that are considered significant contributors of pollutants to WoUS. NPDES permits typically are required for construction dewatering that is discharged to surface waters. Waste Discharge Requirements (WDRs) are typically required for discharges to land. Section 401 of the CWA requires a 401 Water Quality Certification for projects that impact the water quality of waters of the U.S., as defined in Section 404 of the Clean Water Act.

USEPA delegated its authority for regulating water quality in California under Section 401 to the SWRCB. The SWRCB is divided into nine regions. The Project site is in SWRCB Region 9, which is in the jurisdictional area of the SD RWQCB. Region 9 includes San Diego and the southern portion of Riverside County. The SD RWQCB administers the NPDES, WDR, and 401 Water Quality Certification permitting programs for projects in Region 9.

The Porter-Cologne Act empowers the regional boards to formulate and adopt a Water Quality Control Plan (Basin Plan) that designates beneficial uses and establishes water quality objectives that will ensure reasonable protection of beneficial uses. The Water Quality Control Plan for the San Diego Basin, also known as the "Basin Plan," applies to the Project area.

The SD RWQCB adopted the Basin Plan that identifies surface and groundwater resources in the basin and designates beneficial uses for these waters. Beneficial uses form the cornerstone of water quality protection under the Basin Plan. The SD RWQCB Basin Plan also includes water quality objectives for the beneficial uses, to ensure the protection of these uses (SD RWQCB 1994).

3.6.1.2 Affected Environment

Surface Water

Drainages

Section 3.3.1 of the SEIR identified five drainages within the Study Area; however, recent studies identified 16 drainages within the Study Area (Figure 3-2), as described above in Section 3.3.1, Biological Resources, Updated Environmental Setting. The drainages located between Whitewood Road and Trois Valley Street (Drainages 1, 3-5, and 7-10) flow south to north into a small tributary running west to east (Drainage 3) that joins Warm Springs Creek north of the Project. Drainage 14 runs north to south and is located at the outlet of Basin 1 near Trois Valley Street. The drainages located between Leon Road and SR 79 (Drainages 11-13, and 15) flow into French Valley Creek (Drainage 16). Within the Study Area, French Valley Creek crosses under Briggs Road via two 5-foot culverts and under Porth Road further downstream in a 2-foot culvert. The SEIR described sheet flows occurring approximately 1,200 feet north of Thompson Road and east of Briggs Road; however, since that time, a residential tract has been constructed (Tract 29484), and Leon Road and Briggs Road were realigned. As part of that construction, two large double box culverts were installed under Leon Road, which has resulted in the creation of wetlands at the outlet (Figure 3-3i and Figure 3-4i).

Groundwater

As stated in Section 3.3.1 of the SEIR, the Project site is underlain by the Murrieta Hydrologic Area (HA), as described in the Regional Water Quality Control Board Basin Plan for the Santa Margarita Hydrologic Unit. The following beneficial uses apply to the Murrieta HA groundwater: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), and Industrial Process Supply (PROC).

As described in the Final Geotechnical Report, based on borings collected during sampling, the depth to groundwater below finished grade along the Project alignment is in excess of 20 feet.

Floodplain

As stated in Section 3.3.1 of the SEIR, some areas of the Project occur within the 100-year or 500-year flood zone; but none are within the designated floodplains, as shown in the County of Riverside General Plan Southwest Area Plan Flood Hazards Map and federal 100-year flood hazard maps. The eastern portion of the Project impact area (between Trois Valley Street and SR 79) is within the "High Dam Hazard Zone" for Skinner Reservoir (Riverside County 2003).

3.6.2 Impact Assessment

3.6.2.1 Thresholds of Significance

Would the Project:

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

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow

3.6.2.2 Updated Environmental Impacts

As part of Final Design, hydrologic and hydraulic analyses of both on-site and off-site drainage areas were performed based on the design criteria outlined in the Riverside County Flood Control and Water Conservation District (Riverside County, 1978) Hydrology Manual and the Riverside County Transportation Department Ordinance 460, and the Urban Drainage Design Manual (HEC 22) by the FHWA. Additionally, geotechnical borings were obtained along the Project alignment and presented in the Final Geotechnical Design Report (CH2M HILL 2014). This section discusses updated impacts based on the results of these analyses.

Construction

Groundwater

As stated in Section 3.3.2 of the SEIR, "Construction activities would not affect groundwater recharge or deplete groundwater supplies. Shallow groundwater may be encountered during construction of the Project. Construction activities, including but not limited to excavation, dewatering, and accidental spills could contaminate shallow groundwater encountered during construction. Therefore, the Project may result in a potentially significant impact on shallow groundwater quality." This is consistent with the findings outlined in the Final Geotechnical Design Report, which states that some isolated seepages could be encountered due to perched groundwater. Therefore, mitigation measures H-1, H-2, and H-3 from the SEIR, and described again below in Section 3.6.3, would still be implemented to ensure that adverse impacts to water quality and groundwater are minimized. Measure H-2 has been modified to be more specific to the Project as the Drainage Report has been updated since the SEIR. With the implementation of these mitigation measures, alterations to the hydrological environment and phasing of Segment 2 would not result in a

significant impact to groundwater during construction and the less than significant determination as stated in the SEIR would remain.

Waste Discharges, Erosion, and Runoff

Construction impacts associated with waste discharges, erosion, and runoff would remain the same as described in Section 3.3.2 of the SEIR which state the Project would result in a potentially significant erosion and water quality impact on surface water during construction. Mitigation measures H-1, H-2, and H-3 require Riverside County Transportation Department to obtain the required water quality permits and implement BMPs to minimize pollution. With the implementation of these mitigation measures, alterations to the hydrological environment and phasing of Segment 2 would not result in significant waste discharge, erosion, and runoff water quality impacts, as stated in the SEIR.

Flooding and Storm Drain Capacity

Construction impacts associated with flooding and storm drain capacity would remain the same as described in Section 3.3.2 of the SEIR. Phasing of construction and changes in the existing hydrological environment would not change the conclusions in the SEIR regarding flooding and storm drain capacity. The conclusions in the SEIR state the potential of dam failure at Skinner Reservoir and the flooding would result in a significant unavoidable impact on the Project during construction.

Section 3.3.2 of the SEIR also states the construction of the Project will not impact storm drain capacity within the PIA because a storm drain system is not known to occur within the PIA. Phasing of Segment 2 and alterations in the hydrological environment does not change this determination. Therefore, no impact will occur to an existing storm drain system during construction of the Project.

Seiche, Tsunami or Mudflow

Phasing of Segment 2 would not change construction impacts associated with seiches, tsunamis or mudflows as described in Section 3.3.2 of the SEIR, which states that Freeboard has been provided to contain seiche waves (Metropolitan, 2004). Phasing of Segment 2 would not change the environmental footprint, therefore, phasing of Segment 2 would not result in a significant seiche impact, as stated in the SEIR.

The proposed Project site is approximately 36 miles from the Pacific Ocean. Therefore, tsunamis are not anticipated to impact the proposed Project site. The topography of the proposed Project site consists of undulating, low-elevation hills; and mudflows are not anticipated to inundate the proposed Project site. Phasing of Segment 2 would not change this. The conclusions of no significant impact as stated in the SEIR, would remain the same.

Operation

Groundwater

Updated geotechnical studies indicate the depth to groundwater is in excess of 20 feet along the Project alignment, therefore the roadway is not anticipated to be affected by groundwater (CH2M HILL 2013a). The conclusions presented in Section 3.3.2 of the SEIR would therefore remain, which state the Project would not result in a significant impact to groundwater recharge or the depletion of groundwater supplies. Phasing of Segment 2 would not change this determination because the environmental footprint remains the same as described in the SEIR.

Waste Discharges, Erosion, and Runoff

Section 3.3.2 of the SEIR states: "During operation of the Project, the stormwater flowing from the road to the drainages would contain pollutants such as particulates, nitrogen, phosphorus, lead, zinc, iron, copper, cadmium, chromium, nickel, manganese, cyanide, sodium, calcium, chloride, sulfate and petroleum (SD RWQCB 1994)." In addition to these pollutants, information presented in the WQMP (RBF 2014) identified metals and bacteria/viruses as another type of pollutant of concern.
The conclusions in Section 3.3.2 of the SEIR would therefore remain the same, such that the Project may result in a significant water quality impact as a result of waste discharges. Mitigation measures H-2 and H-3, from the SEIR, and stated below in Section 3.6.3.1, contain stormwater pollution prevention requirements that would minimize erosion and siltation and long-term operational water quality impacts to below a level of significance.

The impacts associated with runoff and erosion may differ slightly with the phased construction from those presented in Section 3.3.2 of the SEIR. Phase 1 of Segment 2, including both Design Option 1 and 2, would include grading to the ultimate width and paving a portion of the roadbed, leaving exposed, unpaved areas until Phase 2 is constructed. However, upon completion of the Phase 1, all new and modified slopes will be sprayed with an erosion-control, Project-specific bonded fiber matrix and native seed mix. The Project is not anticipating any new slopes to be steeper than 2:1. Most runoff produced from cut slopes draining towards the road will be conveyed through v-ditches and/or graded channels and discharged into their existing drainage courses in order to keep natural off-site runoff from comingling with on-site roadway runoff. All side slopes within the Project will be protected with Erosion Control BMPs which will alleviate erosion and sedimentation in the portions of the Project which allow comingling of side slopes and roadway runoff. Rock slope protection (RSP) may be included to protect the fill slopes near existing tributary creek beds. Where cross-culverts convey on- and off-site runoff under the highway, flared end sections will be specified at the

inlet/outlet of the culverts, and RSP will be provided at the culvert outlets to minimize scour and erosion at cross-culvert transitions (RBF 2014).

Although the potential for erosion may increase with the phasing of construction, mitigation measure H-4 would incorporate the design features described in the above paragraph to keep the impact below a level of significance, which is consistent with the findings in the SEIR. The WQMP has been updated and mitigation measure H-4 has been modified to be more specific to the Project, as presented below in Section 3.6.3, Mitigation Measures.

Flooding and Storm Drain Capacity

As stated in Section 3.3.2 of the SEIR, "Operation of the Project would not occur within a designated FEMA 100-year or 500-year flood zone. Operation of the eastern portion of the Project impact area would occur within the High Dam Hazard Zone of Skinner Reservoir. This area would be inundated from the failure of the dam at the Skinner Reservoir with or without the Project. Based on the potential for this dam failure and related flooding to occur, people or structures would potentially be exposed to significant risk of loss, injury, or death. Therefore, potential flooding from dam failure would result in a significant unavoidable impact on the Project during operation."

Hydraulic and scour analyses of Warm Springs Creek Bridge and French Valley Creek Bridge were updated subsequent to the approval of the SEIR to ensure the bridges would withstand a 100-year peak flow (CH2M HILL 2006a). As a result, mitigation measure H-5 is being removed from the measures listed in Section 3.6.3 below. According to the analyses, the hydraulic results show that the proposed bridge structures over Warm Springs Creek and French Valley Creek would continue to have capacity to fully convey the 100-year floodwater. Therefore, the impact associated with flooding is less than significant.

No storm drain facilities are present within the PIA, so no impacts would occur.

As stated in Section 3.3.2 of the SEIR, "The Project does not include any proposed housing development. Therefore, the Project would not place housing or cause existing housing to be placed within a 100-year flood hazard area."

Seiche, Tsunami, or Mudflow

Impacts associated with seiches, tsunamis, or mudflows associated with operation of the roadway would remain the same as presented in Section 3.3.2 of the SEIR. The Project is not anticipated to result in an adverse impact related to inundation by tsunami or mudflow during operation.

3.6.3 Mitigation Measures

Mitigation measures H-1 through H-4, listed in Section 3.3.3, Mitigation Measures, of the SEIR, would be implemented during construction of Phase 1 (both Design Option 1 and 2) and Phase 2 of Segment 2, and construction of Segment 4, where applicable. However, measures H-2 and H-4 have been modified to be more Project-specific since the Drainage Report was finalized subsequent to the SEIR approval. Measure H-5, which required the County to determine the potential 100-year flood inundation peak discharge rate at Warm Springs Creek and French Valley Creek prior to final design, has been deleted, since updated hydraulic analyses for Warm Springs Creek and French Valley Creek have already taken place.

3.6.3.1 Measures H-1 through H-4 from SEIR

Mitigation Measure H-1

Prior to initiation of construction activity, the County will obtain the required SD RWQCB and USACE permits for the Project.

It is anticipated that SD RWQCB will require the County to obtain and implement the following permits/approvals/conditions: an NPDES General Construction Activity Storm Water Permit (General Permit), SWPPP, and BMPs; and a 401 Water Quality Certification.

It is anticipated that USACE will require the County to obtain and implement the following permits/approvals/conditions: a Section 404 Permit.

For the County to acquire these permits, measures H-2 and H-3 will be completed for the Project prior to construction.

Mitigation Measure H-2 (Modified)

Measures H-2 has been modified to be more Project-specific since the Drainage Report was finalized subsequent to the SEIR approval. The following BMPs will be installed to maintain water quality:

- Preserve existing vegetation
- Install three detention basins at the following locations:
  - East of Warm Springs Creek on the south side of the roadway near Station 306+00
  - Adjacent to the west side of the proposed roadway at Station 353+00, near Leon Road
  - In the corner bounded by Clinton Keith Road, realigned Briggs Road, and Porth Road
- Utilize native drought-tolerant seed mix for all slopes and detention basin surfaces

Mitigation Measure H-3

After final design and prior to the Project construction, the construction contractor will develop the SWPPP, select appropriate BMPs, and will obtain RWQCB approval of the SWPPP prior to start of construction. The SWPPP will identify the sources of sediment and other pollutants that may affect the quality of the stormwater discharges during construction. The SWPPP also will describe the implementation of BMPs that would effectively prevent or minimize the introduction of pollutants into the stormwater runoff from the Project site for construction, and will include BMPs to ensure that temporary construction dewatering at drainage crossings will not cause excessive erosion or turbidity. These BMPs may include, but are not limited to, structural (e.g., erosion-control fences) and nonstructural BMPs (e.g., education and general awareness of permit conditions). Erosion and sediment control BMP methods may include straw bales, silt fences, sedimentation basins, filter strips, and other techniques.

Mitigation Measure H-4 (Modified)

Measure H-4 has been modified to be more Project-specific since the Drainage Report was finalized subsequent to the SEIR approval.

The County will install culverts and energy dissipaters at various locations throughout the Project limits to maintain post-construction runoff volumes and flow rates. The following culverts will be installed:

- Culvert at Station 19+10 under Menifee Road (a 24-inch reinforced concrete pipe [RCP])
- Culvert at Station 252+70 under Clinton Keith Road (42-inch RCP)
- Culvert at Station 269+00 under Clinton Keith Road (2-60-inch RCP)
- Culvert at Station 277+18 under Clinton Keith Road (2-36-inch RCP)
- Culvert at Station 349+98 under Clinton Keith Road (two 24 feet by 9 feet reinforced concrete box [RCB])

Mitigation Measure H-5 (Deleted)

This measure, which required the County to determine the potential 100-year flood inundation peak discharge rate at Warm Springs Creek and French Valley Creek prior to final design in the SEIR, has been deleted, since updated hydraulic analyses for Warm Springs Creek and French Valley Creek have already taken place.

Prior to final design of Clinton Keith Road bridge structures, the County will determine the potential 100-year flood inundation peak discharge rate where Warm Springs Creek and French Valley Creek cross the Project site. The existing HEC-RAS computer model of the proposed bridge crossings will be refined to ensure that the bridge structures over Warm Springs Creek and French Valley Creek will withstand a 100-year peak flow without affecting adjacent property owners and/or obstructing the flow of stormwater due to the Project.

3.6.4 Level of Significance after Mitigation

Phasing of Segment 2 and alterations to the hydrological environment would not change impacts associated with groundwater, waste discharge, erosion and run-off as described above throughout Section 3.6.2.2. The impact would remain less than significant, as stated in the SEIR, with the implementation of mitigation measures H-1 through H-4. Also, consistent with Section 3.34 of the SEIR, "The Project would result in a significant unavoidable impact to flooding from dam failure from Skinner Reservoir after mitigation."

3.7 Noise

This assessment is based on information provided in the Plans, Specifications, and Estimates (PS&E) for the Project and the 2006 SEIR.

3.7.1 Updated Environmental Setting

As stated in Section 3.1.3. Aesthetics, Mitigation Measures of this SEIR Addendum, the properties previously identified as requiring a noise barrier, in the SEIR, have either been or will be acquired by the County or relocated as described below (Figure 3-1):

- Property A in Segment 2 has been acquired by the County and is no longer occupied.
- The property B in Segment 2 used to contain a mobile home residence that has since been relocated.
- The property C in Segment 4 will be acquired by the County prior to construction.
- The trailer located on property D in Segment 2 has been relocated.

With acquisition and removal of these existing residences, the need for sound walls has been eliminated from the Project since there are no longer sensitive noise receptors within Segments 2 and 4.

3.7.2 Impact Assessment

3.7.2.1 Thresholds of Significance

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

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

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

All impacts identified in Section 3.9.2, Impact Assessment, Noise, of the SEIR still apply, except for the impacts associated with the four properties discussed above in Section 3.7.1 of this SEIR Addendum. Impacts to these four properties would no longer occur since the County purchased, will purchase, or relocated these private residences.

None of the conclusions presented in Section 3.9.2, Impact Assessment, of the SEIR, would change as a result of phasing the Project since the sensitive noise receptors have been or will be removed from the impact area prior to construction. Each of the determinations to the above CEQA questions would remain less than significant.

3.7.3 Mitigation Measures

Mitigation measures N-1 through N-4 identified in Section 3.9.3 of the SEIR still apply to the proposed Project, and are listed below. Additionally, since the County owns or relocated the properties identified previously for noise barriers, mitigation measure N-5, which included the need for noise barriers, has been revised.

Mitigation Measure N-1

During site preparation, grading, excavation, and construction of the Project, the County will require construction contractors to limit all grading and construction activities within unincorporated Riverside County to the hours of 6:00 a.m. to 6:00 p.m. from June to September, and from 7:00 a.m. to 6:00 p.m. from October to May. As required by the City of Murrieta Development Code, construction within the City of Murrieta will take place only between the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. No Project work will be conducted on Sundays or federal holidays in the City of Murrieta.

Mitigation Measure N-2

During site preparation, grading, excavation, and construction of the Project, Riverside County Transportation Department will require the construction contractors to ensure that all construction equipment, fixed or mobile, is equipped with properly operating and maintained mufflers.

Mitigation Measure N-3

During site preparation, grading, excavation, and construction of the Project, Riverside County Transportation Department will require the construction contractors to ensure that, whenever feasible, stationary construction and generating equipment is placed such that emitted noise is directed away from adjacent land uses to minimize the effects of construction related to noise on adjacent land uses.

Mitigation Measure N-4

Impact pile driving should be avoided in noise-sensitive areas, where possible. Drilled piles or the use of a sonic or vibratory pile driver are quieter alternatives than impact pile driving. Geological conditions can limit their use. Sonic pile driving typically generates noise levels that are approximately 5 decibels lower than those from impact pile drivers. At Warm Springs Creek, within Segment 2, drilled piles will be used for bridge construction to minimize noise impacts. Within Segment 4, feasibility of alternative pile driving methods for French Valley Creek Bridge will be determined during final design, as identified in the SEIR.

Mitigation Measure N-5 (Revised)

With the acquisition and removal of the sensitive viewers in the areas identified previously for noise barriers, mitigation measure N-5 has been revised. Noise barriers are no longer required.

Previously, measure N-5 required the County to install noise barrier walls at the locations shown in Figure 3.9-2 (of the SEIR) and Figure 3-1 of this SEIR Addendum, prior to operation of the Project. Revised mitigation for noise impacts to these four properties includes the following:

- Property A in Segment 2 has been acquired by the County and is no longer occupied.

- Property B in Segment 2 used to contain a mobile home residence that has since been relocated.
- Property C in Segment 4 will be acquired by the County prior to construction.
- The trailer located on property D in Segment 2 has been relocated.

3.7.4 Level of Significance after Mitigation

With the implementation of mitigation measures N-1 through N-4, as identified in the SEIR, noise impacts would be less than significant after mitigation. Additionally, with the acquisition and removal of the sensitive viewers in the areas previously identified for noise barriers, noise walls are no longer required, resulting in no impact to residences within the Project impact area.

3.8 Traffic and Transportation

This assessment is based on information provided in the PS&E for the Project, the Traffic Operations Analysis (TOA), the 2015 Traffic Update for Clinton Keith Road Extension Project (LSA Associates, Inc.) [Appendix E], and the 2006 SEIR.

3.8.1 Updated Environmental Setting

The purpose of this SEIR Addendum is to determine the impacts, if any, to the surrounding roadway network due to phasing of Segments 2 and 4. Construction of Segment 2, Clinton Keith Road from Whitewood Road to Trois Valley Street, will require the interim routing to and from State Route 79 via Leon Road and Max Gilliss Boulevard. Leon Road and Max Gilliss Boulevard are both fully built to the ultimate cross-section.

Two Design options for Segment 2, Phase 1 are proposed:

- A 2-lane roadway consisting of building the south half of the ultimate 6-lane cross-section and striping it for one travel lane in each direction, a six-foot wide painted median, and full grading for the remaining half width.
- A 4-lane roadway consisting of constructing the two outside lanes in each direction and full grading for the two remaining inside lanes and median area.

Segment 2, Phase 2 includes completing construction of the full 6-lane facility between Whitewood Road and Trois Valley Street. Timing for construction of the remaining Segment 4 from Leon Road to SR 79 will be dependent on additional funds becoming available and/or development constructing their frontage improvements.

3.8.2 Impact Assessment

3.8.2.1 Thresholds of Significance

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

3.8.2.2 Methodology

Traffic Volume Development

Existing Traffic Volumes: Existing traffic volumes at the intersections of SR 79/Benton Road and Briggs Road/Leon Road are based on peak hour intersection turn movement counts collected by Counts Unlimited in October 2014. Existing traffic volumes at the remaining intersections are from count data provided by the County of Riverside. These data reflected traffic volumes under year 2013 conditions. LSA Associates applied an annual growth rate to reflect existing (2014) volumes for these study intersections. The annual growth rate has been calculated from the Riverside County Traffic Analysis Model (RivTAM) and has been described in the Opening Year (2018) Traffic Volumes without Project section. Detailed volume development worksheets and figures are included in the Traffic Operations Analysis (TOA), 2015 Traffic Update for Clinton Keith Road Extension Project (LSA Associates, Inc.) [Appendix E].

Opening Year (2018) Traffic Volumes Without Project: Opening Year (2018) without project peak hour intersection and roadway segment volumes were developed by applying an annual growth rate to existing (2014) traffic volumes. The annual growth rate has been derived from RivTAM by calculating the per year growth between the base year (2007) without project model run and the future year (2060) without project model run. Detailed volume development worksheets and figures are included in the Traffic Operations Analysis (TOA), 2015 Traffic Update for Clinton Keith Road Extension Project (LSA Associates, Inc.) [Appendix E].

Opening Year (2018) Traffic Volumes With Phase 1 (2-Lane Design Option): RivTAM base year and future year model networks were modified to reflect the proposed roadway network under opening year (2018) Phase 1with 2-lane design option. Raw traffic model data from RivTAM base and future year model runs were post-processed using National Cooperative Highway Research Program (NCHRP) 255 methodologies to develop peak-hour turning movement volumes at each study area intersection and roadway segments. Detailed volume development worksheets and figures are included in the Traffic Operations Analysis (TOA), 2015 Traffic Update for Clinton Keith Road Extension Project (LSA Associates, Inc.) [Appendix E].

Opening Year (2018) Traffic Volumes With Phase 1 (4-Lane Design Option): RivTAM base year and future year model networks were modified to reflect the proposed roadway network under opening year (2018) Phase 1with 4-lane design option. Raw traffic model data from RivTAM base and future year model runs were post-processed using National Cooperative Highway Research Program (NCHRP) 255 methodologies to develop peak-hour turning movement volumes at each study area intersection and roadway segments. Detailed volume development worksheets and figures are included in the Traffic Operations Analysis (TOA), 2015 Traffic Update for Clinton Keith Road Extension Project (LSA Associates, Inc.) [Appendix E].

Year 2035 Traffic Volumes Segments 2 and 4 (Project Completion): RivTAM base year and future year model networks currently reflect the proposed roadway network under year 2035 conditions with Clinton Keith Road proposed as a 6-lane roadway. The model was refined to include a greater level of detail to reflect existing and future land uses and network connections. Raw traffic model data from RivTAM base and future year model runs were post-processed using National Cooperative Highway Research Program (NCHRP) 255 methodologies to develop peak-hour turning movement volumes at each study area intersection and roadway segments. Detailed volume

development worksheets and figures are included in the Traffic Operations Analysis (TOA), 2015 Traffic Update for Clinton Keith Road Extension Project (LSA Associates, Inc.) [Appendix E].

Level of Service Definitions and Procedures

Roadway operations and the relationship between capacity and traffic volumes are generally expressed in terms of levels of service (which are defined using the letter grades A through F). These levels recognize that, while an absolute limit exists as to the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorate as traffic approaches the absolute capacity. Under such conditions, congestion is experienced. General instability in the traffic flow means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays. This near-capacity situation is labeled Level of Service (LOS) E. Beyond LOS E, capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. An upstream queue will then form and continue to expand in length until the demand volume again declines.

For all study area intersections, the 2000 *Highway Capacity Manual* (HCM 2000) analysis methodologies were used to determine intersection levels of service. Levels of service at all intersections were calculated using the Synchro software, which uses the HCM 2000 methodologies. HCM 2000 is being used for this study to maintain consistency with previous analyses.

A complete description of the meaning of level of service can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual* (Manual). The Manual establishes levels of service A through F. Table 3-15 provides brief descriptions of the six levels of service, as abstracted from the Manual for intersections.

Table 3-15: Level of Service Definitions, Intersections

LOS	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

Table 3-15: Level of Service Definitions, Intersections

LOS	Description
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Table 3-16 shows the level of service criteria for unsignalized and signalized intersections.

Table 3-16: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: Highway Capacity Manual, 2000

For all roadway segments, the roadway capacity is based on County of Riverside General Plan Circulation Element, *Figure C-3 Link/Volume Capacity Level of Service for Riverside County Roadways*. The roadway segment LOS is based on the City of Murrieta General Plan *Table 5.4-4 Roadway Segment LOS Criteria.* Appendix C of the TOA [Appendix E] shows the roadway capacity and roadway segments LOS tables. Table 3-17 provides brief descriptions of the six levels of service, as abstracted from the Manual for roadway segments.

Table 3-17: Level of Service Definitions, Roadway Segments

LOS	Description
A	Describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control Delay at the boundary intersection is minimal. The travel speed exceeds 85% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
B	Describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary is not significant. The travel speed is between 67% and 85% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
C	Describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersection may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
D	Indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersection. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
E	Characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersection. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
F	Characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersection, as indicated by high delay and extensive queuing. The travel speed is between 30% or less of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

3.8.2.3 Construction Impacts

As stated in Section 3.8.2 of the SEIR, impacts to traffic during construction of the ultimate facility (Phase 2) would be less than significant. Phasing construction will not change this conclusion based on the fact that the number of truck trips and workers assumed in the SEIR is for the ultimate build-out configuration as proposed for Phase 2. The number of truck trips and workers for Phase 1 (including both design options for Segment 2) would be the same or less as for Phase 2.

3.8.2.4 Operation Impacts

Plans, Ordinances and Policies

The ultimate six-lane Clinton Keith Road is in accordance with the County of Riverside and City of Murrieta build-out plans. The proposed improvements take into account all modes of travel as planned for by both agencies. Phasing of construction would not create significant impacts to existing plans, ordinances or policies. The impact remains less than significant.

Level of Service Standards

The Clinton Keith Extension project is within the unincorporated County of Riverside and City of Murrieta jurisdictions. The County considers LOS D as an acceptable level of service for intersections and roadway segments. The City considers LOS C as an acceptable level of service for roadway segments and LOS D for intersections. SR 79 is a designated Riverside County Congestion Management Program (CMP) facility. Based on the CMP, the minimum LOS standard for intersections and segments along the CMP system of Highways and Roadways shall be "E" unless the intersection or segment had a lower LOS (LOS F) in 1991. Therefore, this analysis considers LOS E as the LOS standard for all study intersections on SR 79.

Study Area

With the phasing of the Clinton Keith Road improvements, potential impacts to surrounding roadways have been analyzed in addition to analyzing the interim Clinton Keith Road as a 2 or 4 lane Road. Traffic traveling on the newly constructed interim section will be utilizing Leon Road and Max Gilliss Boulevard at the Project's east end. Max Gilliss Road and Leon Road are both designated as 4 lane Major roadways on the County's General Plan.

In addition, the existing temporary connection of Briggs Road at Leon Road will be converted to a right-in/right-out only movement until Clinton Keith Road is connected directly to SR 79 via Segment 4 of the Project. The temporary connection will be removed, and access to and from the Los Alamos area will be provided from Briggs Road to Clinton Keith Road via Porth Road. The Porth Road connection is part of the overall approved Clinton Keith Road Extension Project.

This analysis also includes an assessment of traffic conditions on Los Alamos Road with and without the Project. Traffic from recent development in the area is currently utilizing Los Alamos Road as an alternate east-west connector. The recent increase in volume along this two-lane, narrow roadway is not desirable. Los Alamos Road is not a General Plan Road and is not designed to carry a significant volume of traffic. The construction of Clinton Keith Road is anticipated to reduce traffic in the rural residential area and provide a higher level, more direct route between I-215 and SR 79. For analysis purposes, a functional classification of "collector" has been used to calculate the level of service for Los Alamos Road.

The study area includes the following intersections:

1. Whitewood Road/Clinton Keith Road;
2. Menifee Road/Clinton Keith Road;

3. Trois Valley Street/Clinton Keith Road;
4. Clinton Keith Road/Leon Road;
5. Porth Road/Clinton Keith Road;
6. SR 79/Clinton Keith Road-Benton Road;
7. Briggs Road/Leon Road;
8. Max Gilliss Boulevard/Leon Road; and
9. SR 79/Max Gilliss Boulevard

The analysis also includes the following roadway segments:

- Clinton Keith Road:
  - Between Whitewood Road and Menifee Road;
  - Between Menifee Road and Trois Valley Street;
  - Between Trois Valley Street and Leon Road;
  - Between Leon Road and Porth Road; and
  - Between Porth Road and SR 79
- Leon Road:
  - Between Clinton Keith Road and Briggs Road; and
  - Between Briggs Road and Max Gilliss Boulevard
- Max Gilliss Boulevard:
  - Between Leon Road and SR 79
- Los Alamos Road:
  - West of Menifee Road;
  - Between Menifee Road and Liberty Lane; and
  - Between Liberty Lane and Briggs Road

The results of the 2015 Traffic Update for the Clinton Keith Road Extension Project are summarized and presented below. The study methodology is more fully described in the Traffic Operations Analysis (TOA), Appendix E, to this Addendum.

The analysis for the phased construction of Clinton Keith Road includes Existing Conditions, Project Opening year (2018) without Phase 1 improvements, Project Opening Year with Phase 1 2-lane design option, Project Opening (2018) with Phase 1 4-lane design option, and Year 2035 Phase 2 conditions.

Existing Conditions: Table 3-18 summarizes the existing a.m. and p.m. peak hour levels of service at the study area intersections. Table 3-18 indicates that all study area intersections are currently operating at satisfactory levels of service.

Table 3-19 shows the existing daily roadway segment volumes and levels of service, and demonstrates that all study area roadway segments are currently operating at satisfactory levels of service in the existing condition.

Table 3-18 Summary of Intersection Analysis – Existing Conditions

Intersection		Control	A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
1.	Whitewood Road/Clinton Keith Road	Signal	26.5	C	30.9	C
2.	Menifee Road/Clinton Keith Road	TWSC	8.9	A	8.9	A
3.	Trois Valley Street/Clinton Keith Road	-	*No Conflicting Movement*		*No Conflicting Movement*	
4.	Clinton Keith Road/Leon Road	-	*No Conflicting Movement*		*No Conflicting Movement*	
5.	Porth Road/Clinton Keith Road	-	*Future Intersection*		*Future Intersection*	
6.	SR 79/Clinton Keith Road-Benton Road	Signal	16.6	B	21.9	C
7.	Briggs Road/Leon Road	TWSC	13.7	B	18.5	C
8.	Max Gilliss Boulevard/Leon Road	Signal	26.9	C	24.7	C
9.	SR 79 /Max Gilliss Boulevard	Signal	52.0	D	35.6	D

Notes:
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service

Table 3-19 Summary of Roadway Segment Analysis – Existing Conditions

Roadway (General Plan designation)	Segment	Functional Classification[1]	Maximum Two-Way Capacity[2]	Existing		
				Volume	V/C	LOS[3]
Clinton Keith Road (6-Lane Urban Arterial)	Between Whitewood Road and Menifee Road	2 Lane Collector	13,000	374	0.029	A
	Between Menifee Road and Trois Valley Street	*Future Roadway Segment*	-	-	-	-
	Between Trois Valley Street and Leon Road	4 Lane Arterial	35,900	1,181	0.033	A
	Between Leon Road and Porth Road	*Future Roadway Segment*	-	-	-	-
	Between Porth Road and SR 79	*Future Roadway Segment*	-	-	-	-
Leon Road (4-Lane Major Raodway)	Between Clinton Keith Road and Briggs Road	4 Lane Major	34,100	1,181	0.035	A
	Between Briggs Road and Max Gilliss Boulevard	4 Lane Major	34,100	8,517	0.250	A
Max Gilliss Boulevard (4-Lane Major Roadway)	Between Leon Road and SR 79	4 Lane Major	34,100	14,938	0.438	A
Los Alamos Road (Non-General Plan Roadway)	West of Menifee Road	2 Lane Collector	13,000	8,571	0.659	B
	Between Menifee Road and Liberty Lane	2 Lane Collector	13,000	8,425	0.648	B
	Between Liberty Lane and Briggs Road	2 Lane Collector	13,000	8,406	0.647	B

Notes:

[1] Functional classifications are used to determine capacity based on existing characteristics and function

[2] Link/Volume Capacity/Level of Service for Riverside County Roadways based on Riverside County Traffic Impact Guidelines, Figure C-3, Riverside County General Plan

[3] LOS based on V/C from City of Murrieta General Plan

V/C - Volume to Capacity

Opening Year (2018) Without Project Conditions: A level of service analysis was conducted to assess opening year (2018) without project traffic conditions. Table 3-20 summarizes opening year

(2018) without project a.m. and p.m. peak hour levels of service at the study area intersections. As shown in Table 3-20, all intersections are forecast to operate at satisfactory levels of service.

Table 3-21 shows the opening year (2018) without project daily roadway segment volumes and levels of service. As shown in Table 3-21, all study area roadway segments are forecast to operate at satisfactory levels of service in the opening year without project condition.

Table 3-20 Summary of Intersection Analysis – Opening Year (2018) Without Project Conditions

Intersection		Control	A.M. Peak Hour		P.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS
1.	Whitewood Road/Clinton Keith Road	Signal	27.2	C	30.1	C
2.	Menifee Road/Clinton Keith Road	TWSC	9.0	A	8.9	A
3.	Trois Valley Street/Clinton Keith Road	-	*No Conflicting Movement*		*No Conflicting Movement*	
4.	Clinton Keith Road/Leon Road	-	*No Conflicting Movement*		*No Conflicting Movement*	
5.	Porth Road/Clinton Keith Road	-	*Future Intersection*		*Future Intersection*	
6.	SR 79/Clinton Keith Road-Benton Road	Signal	17.7	B	26.0	C
7.	Briggs Road/Leon Road	TWSC	14.4	B	21.0	C
8.	Max Gilliss Boulevard/Leon Road	Signal	27.5	C	25.4	C
9.	SR 79 /Max Gilliss Boulevard	Signal	41.2	D	25.9	C

Notes:
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service

Table 3-21 Summary of Roadway Segment Analysis – Opening Year (2018) Without Project Conditions

Roadway (General Plan Designation)	Segment	Functional Classification[(1)]	Maximum Two-Way Capacity[(2)]	Opening Year (2018)		
				Volume	V/C	LOS[(3)]
Clinton Keith Road	Between Whitewood Road and Menifee Road	2 Lane Collector	13,000	443	0.034	A

Roadway (General Plan Designation)	Segment	Functional Classification[(1)]	Maximum Two-Way Capacity[(2)]	Opening Year (2018)		
				Volume	V/C	LOS[(3)]
(6-Lane Urban Arterial)	Between Menifee Road and Trois Valley Street	*Future Roadway Segment*	-	-	-	-
	Between Trois Valley Street and Leon Road	4 Lane Arterial	35,900	1,181	0.033	A
	Between Leon Road and Porth Road	*Future Roadway Segment*	-	-	-	-
	Between Porth Road and SR 79	*Future Roadway Segment*	-	-	-	-
Leon Road (4-Lane Major Roadway)	Between Clinton Keith Road and Briggs Road	4 Lane Major	34,100	1,181	0.035	A
	Between Briggs Road and Max Gilliss Boulevard	4 Lane Major	34,100	9,064	0.266	A
Max Gilliss Boulevard (4-Lane Major Roadway)	Between Leon Road and SR 79	4 Lane Major	34,100	17,702	0.519	A
Los Alamos Road (Non-General Plan Roadway)	West of Menifee Road	2 Lane Collector	13,000	10,163	0.782	C
	Between Menifee Road and Liberty Lane	2 Lane Collector	13,000	9,990	0.768	C
	Between Liberty Lane and Briggs Road	2 Lane Collector	13,000	9,968	0.767	C

Notes:

(1) Functional classifications are used to determine capacity based on existing characteristics and function

(2) Link/Volume Capacity/Level of Service for Riverside County Roadways based on Riverside County Traffic Impact Guidelines, Figure C-3, Riverside County General Plan

(3) LOS based on V/C from City of Murrieta General Plan

V/C - Volume to Capacity

Opening Year (2018) With Segment 2 Phase 1 (2-Lane Design Option) Project Conditions: A level of service analysis was conducted to assess opening year (2018) with Phase 1 (2-Lane Design Option) traffic conditions. Table 3-22 summarizes opening year (2018) with Phase 1 (2-Lane Design Option) a.m. and p.m. peak hour levels of service for the study area intersections. As shown in Table

3-22, all study area intersections are forecast to operate at satisfactory levels of service with the exception of Menifee Road/Clinton Keith Road. The minor street approach on Menifee Road will experience longer delays while the Clinton Keith Road approach will operate acceptably. While a signal is planned at the intersection, timing of the installation will be dependent on development activity and signal warrants being met. The intersection will be monitored by the local agencies, as described in Section 3.8.3, Mitigation Measures. When the traffic signal is installed at this intersection, the intersection will operate at a satisfactory LOS.

Table 3-23 shows the opening year (2018) with Phase 1 (2-Lane Design Option) daily roadway segment volumes and levels of service. As shown in Table 3-23, all study area roadway segments are forecast to operate at satisfactory levels of service with the exception of the segment on Clinton Keith Road between Whitewood Road and Menifee Road, which operates at LOS D.

Table 3-22 Summary of Intersection Analysis – Opening Year (2018) With Segment 2 Phase 1 (2-Lane Design Option) Conditions

Intersection		Control	A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	LOS		Delay (sec.)	LOS	
1.	Whitewood Road/Clinton Keith Road	Signal	28.5	C		32.1	C	
2.	Menifee Road/Clinton Keith Road	TWSC	965.5	F	*	751.9	F	*
		Signal**	26.1	C		24.2	C	
3.	Trois Valley Street/Clinton Keith Road	Signal	7.0	A		8.2	A	
4.	Clinton Keith Road/Leon Road	-	*No Conflicting Movement*			*No Conflicting Movement*		
5.	Porth Road/Clinton Keith Road	-	*Future Intersection*			*Future Intersection*		
6.	SR 79/Clinton Keith Road-Benton Road	Signal	18.1	B		26.1	C	
7.	Briggs Road/Leon Road	TWSC	13.1	B		16.2	C	
8.	Max Gilliss Boulevard/Leon Road	Signal	31.8	C		24.5	C	
9.	SR 79 /Max Gilliss Boulevard	Signal	46.7	D		35.5	D	

Notes:

TWSC = Two-Way Stop Control

Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).

LOS = Level of Service

*Exceeds LOS Standard

**LOS F is for minor street approaches on Menifee Road, primarily the northbound approach. Approaches on Clinton Keith Road operate at LOS A. Signal will be installed as part of Clinton Keith Road Extension Project at a later phase when warranted.

Table 3-23 Summary of Roadway Segment Analysis – Opening Year (2018) With Segment 2 Phase 1 (2-Lane Design Option) Conditions

Roadway (General Plan Designation)	Segment	Functional Classification[1]	Maximum Two-Way Capacity[2]	Opening Year (2018)		
				Volume	V/C	LOS[3]
Clinton Keith Road (6-Lane Urban Arterial)	Between Whitewood Road and Menifee Road	2 Lane Arterial	18,000	15,494	0.861	D
	Between Menifee Road and Trois Valley Street	2 Lane Arterial	18,000	13,831	0.768	C
	Between Trois Valley Street and Leon Road	2 Lane Arterial	18,000	13,736	0.763	C
	Between Leon Road and Porth Road	*Future Roadway Segment*	-	-	-	-
	Between Porth Road and SR 79	*Future Roadway Segment*	-	-	-	-
Leon Road (4-Lane Major Roadway)	Between Clinton Keith Road and Briggs Road	4 Lane Major	34,100	13,831	0.406	A
	Between Briggs Road and Max Gilliss Boulevard	4 Lane Major	34,100	16,279	0.477	A
Max Gilliss Boulevard (4-Lane Major Roadway)	Between Leon Road and SR 79	4 Lane Major	34,100	21,254	0.623	B
Los Alamos Road (Non-General Plan Roadway)	West of Menifee Road	2 Lane Collector	13,000	4,788	0.368	A
	Between Menifee Road and Liberty Lane	2 Lane Collector	13,000	6,350	0.488	A
	Between Liberty Lane and Briggs Road	2 Lane Collector	13,000	5,274	0.406	A

Notes:

(1) Functional classifications are used to determine capacity based on existing characteristics and function for all roadways or based on proposed improvements for Clinton Keith Road.

(2) Link/Volume Capacity/Level of Service for Riverside County Roadways based on Riverside County Traffic Impact Guidelines, Figure C-3, Riverside County General Plan

(3) LOS based on V/C from City of Murrieta General Plan

V/C - Volume to Capacity

Bold = Unsatisfactory Level Of Service. It needs to be noted that the County considers LOS D acceptable.

Opening Year (2018) With Segment 2 Phase 1 (4-Lane Design Option) Project Conditions: A level of service analysis was conducted to assess opening year (2018) with Phase 1 (4-Lane Design Option) traffic conditions. Table 3-24 summarizes opening year (2018) with Phase 1 (4-Lane Design Option) a.m. and p.m. peak hour levels of service for the study area intersections. As shown in Table 3-24, all study area intersections are forecast to operate at satisfactory levels of service. It was determined that, due to higher volumes and the additional width of Clinton Keith Road, a signal at Clinton Keith Road/Menifee Road is necessary at Project opening if the 4-lane design option is built.

Table 3-25 shows the opening year (2018) with Phase 1 (4-Lane Design Option) daily roadway segment volumes and levels of service. As shown in Table 3-25, all study area roadway segments are forecast to operate at satisfactory levels of service.

Table 3-24 Summary of Intersection Analysis – Opening Year (2018) With Segment 2 Phase 1 (4-Lane Design Option) Conditions

Intersection		Control	A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	LOS		Delay (sec.)	LOS	
1.	Whitewood Road/Clinton Keith Road	Signal	35.4	D		32.4	C	
2.	Menifee Road/Clinton Keith Road	TWSC	21.2	C		16.8	B	
3.	Trois Valley Street/Clinton Keith Road	Signal	6.8	A		8.1	A	
4.	Clinton Keith Road/Leon Road	-	*No Conflicting Movement*			*No Conflicting Movement*		
5.	Porth Road/Clinton Keith Road	-	*Future Intersection*			*Future Intersection*		
6.	SR 79/Clinton Keith Road-Benton Road	Signal	18.1	B		35.7	D	
7.	Briggs Road/Leon Road	TWSC	15.7	C		18.2	C	

8.	Max Gilliss Boulevard/Leon Road	Signal	33.9	C		24.6	C	
9.	SR 79 /Max Gilliss Boulevard	Signal	48.1	D		36.3	D	

Notes:
TWSC = Two-Way Stop Control
Delay = Average control delay in seconds (For TWSC intersections, reported delay is for worst-case movement).
LOS = Level of Service

Table 3-25 Summary of Roadway Segment Analysis – Opening Year (2018) With Segment 2 Phase 1 (4-Lane Design Option) Conditions

Roadway (General Plan Designation)	**Segment**	**Functional Classification[1]**	**Maximum Two-Way Capacity[2]**	**Opening Year (2018)**		
				Volume	V/C	LOS[3]
Clinton Keith Road (6-Lane Urban Arterial)	Between Whitewood Road and Menifee Road	4 Lane Arterial	35,900	20,203	0.563	A
	Between Menifee Road and Trois Valley Street	4 Lane Arterial	35,900	19,926	0.555	A
	Between Trois Valley Street and Leon Road	4 Lane Arterial	35,900	19,811	0.552	A
	Between Leon Road and Porth Road	*Future Roadway Segment*	-	-	-	-
	Between Porth Road and SR 79	*Future Roadway Segment*	-	-	-	-
Leon Road (4-Lane Major Roadway)	Between Clinton Keith Road and Briggs Road	4 Lane Major	34,100	19,926	0.584	A
	Between Briggs Road and Max Gilliss Boulevard	4 Lane Major	34,100	18,806	0.551	A
Max Gilliss Boulevard (4-Lane Major Roadway)	Between Leon Road and SR 79	4 Lane Major	34,100	22,907	0.672	B
Los Alamos Road (Non-General Plan Roadway)	West of Menifee Road	2 Lane Collector	13,000	4,180	0.322	A
	Between Menifee Road and Liberty Lane	2 Lane Collector	13,000	5,228	0.402	A
	Between Liberty Lane and Briggs Road	2 Lane Collector	13,000	4,017	0.309	A

Notes:

(1) Functional classifications are used to determine capacity based on existing characteristics and function for all roadways or based on proposed improvements for Clinton Keith Road.

(2) Link/Volume Capacity/Level of Service for Riverside County Roadways based on Riverside County Traffic Impact Guidelines, Figure C-3, Riverside County General Plan

(3) LOS based on V/C from City of Murrieta General Plan

V/C - Volume to Capacity

Year 2035 Project Conditions: A level of service analysis was conducted to assess year 2035 (6 lanes) traffic conditions including the completion of Segments 2 and 4. Table 3-26 summarizes year 2035 with six lanes a.m. and p.m. peak hour levels of service for the study area intersections. As shown in Table 3-26, all study area intersections are projected to operate at satisfactory levels of service.

Table 3-27 shows the year 2035 with six lanes daily roadway segment volumes and levels of service. As shown in Table 3-27, all study area roadway segments are forecast to operate at satisfactory levels of service.

Table 3-26 Summary of Intersection Analysis –Year 2035 Project Completion Conditions

Intersection		Control	A.M. Peak Hour			P.M. Peak Hour		
			Delay (sec.)	LOS		Delay (sec.)	LOS	
1.	Whitewood Road/Clinton Keith Road	Signal	34.5	C		32.4	C	
2.	Menifee Road/Clinton Keith Road	Signal	23.8	C		19.1	B	
3.	Trois Valley Street/Clinton Keith Road	Signal	9.0	A		10.1	B	
4.	Clinton Keith Road/Leon Road	Signal	30.1	C		19.0	B	
5.	Porth Road/Clinton Keith Road	Signal	11.4	B		15.3	B	
6.	SR 79/Clinton Keith Road-Benton Road	Signal	47.2	D		50.6	D	
7.	Briggs Road/Leon Road	-	*Not a Part*			*Not a Part*		
8.	Max Gilliss Boulevard/Leon Road	Signal	40.7	D		27.2	C	
9.	SR 79 /Max Gilliss Boulevard	Signal	44.4	D		47.1	D	

Notes:

Delay = Average control delay in seconds.

LOS = Level of Service

Table 3-27 Summary of Roadway Segment Analysis – Year 2035 Project Completion Conditions

Roadway (General Plan Designation)	**Segment**	**Functional Classification[1]**	**Maximum Two-Way Capacity[2]**	**Opening Year (2018)**		
				Volume	V/C	LOS[3]
Clinton Keith Road (6-Lane Urban Arterial)	Between Whitewood Road and Menifee Road	6 Lane Arterial	53,900	35,667	0.662	B
	Between Menifee Road and Trois Valley Street	6 Lane Arterial	53,900	35,064	0.651	B
	Between Trois Valley Street and Leon Road	6 Lane Arterial	53,900	34,939	0.648	B
	Between Leon Road and Porth Road	6 Lane Arterial	53,900	26,211	0.486	A
	Between Porth Road and SR 79	6 Lane Arterial	53,900	29,162	0.541	A
Leon Road (4-Lane Major Roadway)	Between Clinton Keith Road and Max Gilliss Boulevard	4 Lane Major	34,100	27,306	0.801	D
Max Gilliss Boulevard (4-Lane Major Roadway)	Between Leon Road and SR 79	4 Lane Major	34,100	27,526	0.807	D
Los Alamos Road (Non-General Plan Roadway)	West of Menifee Road	2 Lane Collector	13,000	4,622	0.356	A
	Between Menifee Road and Liberty Lane	2 Lane Collector	13,000	3,377	0.260	A
	Between Liberty Lane and Briggs Road	2 Lane Collector	13,000	2,627	0.202	A

Notes:

[1] Functional classifications are used to determine capacity based on existing characteristics and function for all roadways or based on proposed improvements for Clinton Keith Road.

[2] Link/Volume Capacity/Level of Service for Riverside County Roadways based on Riverside County Traffic Impact Guidelines, Figure C-3, Riverside County General Plan

[3] LOS based on V/C from City of Murrieta General Plan

V/C - Volume to Capacity

Following is a summary of the level of service analysis for each study intersection:

- ***Clinton Keith Road @ Whitewood Road:*** This intersection operates satisfactorily under all analysis scenarios.

- ***Clinton Keith Road @ Menifee Road:*** This intersection operates satisfactorily under existing and opening year (2018) without project conditions. Under opening year (2018) Phase 1 (2-Lane Design Option) conditions, this intersection is forecast to operate unsatisfactorily. The minor street approach (Menifee Road) will experience longer delays in the northbound and southbound directions; however, the Clinton Keith Road approaches will operate acceptably. Timing of the installation of the traffic signal will be dependent on development activity and signal warrants being met. Due to the existing rural nature of Menifee Road and its surrounding, very low density residential development, the intersection will be monitored by the local agencies for determination of the appropriate timing for signalization, as described below in Section 3.8.3, Mitigation Measures. The design of the Clinton Keith Extension project has been prepared with consideration for the signal installation including electrical service, pedestrian accessibility, utility locations, etc. When the traffic signal is installed at this intersection, the intersection will operate at a satisfactory LOS. Under opening year (2018) Phase 1 (4-Lane Design Option) conditions, it was determined that, due to higher volumes and the additional width of Clinton Keith Road, a signal at Clinton Keith Road/Menifee Road is necessary at project opening if the 4-lane design option is built. This intersection operates satisfactorily under all other analysis scenarios.

- ***Clinton Keith Road @ Trois Valley Street:*** This intersection currently doesn't have any conflicting movements. Segment 2 improvements (Phase 1 with either design option) include completing the intersection and installing a traffic signal. The intersection will operate satisfactorily under all 2018 and 2035 analysis scenarios.

- ***Clinton Keith Road @ Leon Road:*** This intersection currently has no conflicting movements and will continue to operate within the same configuration with the construction of Phase 1. A traffic signal will be installed at this intersection when Clinton Keith Road, Segment 4, is constructed. The intersection is forecast to operate satisfactorily through year 2035 conditions with completion of Segments 2 and 4.

- ***Clinton Keith Road @ Porth Road:*** This intersection does not exist. With the construction of Segment 4, Clinton Keith Road from Leon Road to SR79, Porth Road will be realigned to

intersect with Clinton Keith and a traffic signal will be installed at this intersection. The intersection is forecast to operate satisfactorily with completion of Segments 2 and 4.

- ***Clinton Keith Road –Benton Road @ SR-79:*** The west leg of this intersection is currently a dirt road and will be constructed with Segment 4 improvements from Leon Road to SR79. The intersection is forecast to operate satisfactorily under year 2035 conditions.
- ***Leon Road @ Briggs Road:*** This intersection will be restricted to a right-in/right-out access under opening year (2018) Phase 1 conditions with either Design option. The intersection is a temporary connection that will be removed completely when Segment 4 is constructed, connecting Clinton Keith Road to SR 79. Under existing, and opening year (2018) conditions, the intersection is forecast to operate satisfactorily.
- ***Leon Road @ Max Gilliss Boulevard:*** This intersection operates satisfactorily under all analysis scenarios.
- ***Max Gilliss Boulevard @ SR 79:*** This intersection operates satisfactorily under all analysis scenarios.

All intersections and roadway segments, except for Menifee Road/Clinton Keith would operate at LOS "E" or better. The minimum LOS standard for intersections and segments along the CMP system of Highways and Roadways shall be "E," as stated in Section 2.8.2.4. Additionally, the intersection of Menifee Road/Clinton Keith Road would be monitored by the County under the 2-lane design option, since the Menifee Road approaches to the Clinton Keith Road intersection operates at LOS F under this scenario. The monitoring efforts would determine the timing of installation for a signal. Based on the level of service analysis and monitoring of the Menifee Road/Clinton Keith intersection, impacts associated with levels of service would be less than significant.

3.8.2.5 Air Traffic Patterns

Phasing of Segment 2 would not affect air traffic patterns, as the environmental footprint remains the same as described in the SEIR. This impact would remain less than significant, as stated in Section 3.8.2 of the SEIR.

3.8.2.6 Hazards

Phasing the Project would not change the conclusions presented in Section 3.8.2 of the SEIR regarding hazards. The Project would be designed to current roadway standards, with approved design exceptions where needed. The safety of the new facility would be adequate. Impacts related to hazards would remain less than significant.

3.8.2.7 Emergency Access

Phasing the Project would not change the conclusions presented in Section 3.8.2 of the SEIR regarding emergency access. New access provided by Clinton Keith Road would improve emergency access. Impacts would remain less than significant.

3.8.2.8 Public Transit, Bicycle, or Pedestrian Facilities

Construction of the ultimate facility, as proposed under Phase 2, will include sidewalks and intersections that would allow pedestrian access across Clinton Keith Road. Additionally, mitigation measure PS-2, presented below in Section 3.8.3, provides a framework for the County to coordinate with Riverside Transit Authority (RTA) and to determine the number and location of bus turnouts along the Project alignment. Phasing of Segment 2 would not change these elements of the Project. Therefore, impacts remain less than significant.

3.8.2.9 Public and Recreational Safety of Local Road Networks

The intersection at Leon Road and Briggs Road is a configuration which was created by local development and will allow for limited access to Los Alamos Road until Segment 4 is built (Appendix E, Figure 2). Such local development was built separately from the Project and was analyzed by its own environmental documents. Los Alamos Road is a narrow, 2-lane rural road without sidewalks, which is used by bicyclists, pedestrians and commuter traffic. Access to Los Alamos Road from Clinton Keith Road will be restricted, by limiting the Leon/Briggs intersection to right-in right-out only turns. In accordance with the SEIR, access to Briggs Road north of Los Alamos Road will be closed when Clinton Keith Road between Leon Road and SR 79 is constructed. The 4-lane design option for Phase 1 of Segment 2 will provide the greatest reduction of traffic on Los Alamos Road. As all Project scenarios substantially decrease traffic impacts and reduce the potential for conflicts relative to existing conditions, and the County will continue to monitor traffic volume and institute additional traffic controls as needed, impacts remain less than significant.

In addition, the 2015 Traffic Update, Study Area section, has been updated to include a discussion consistent with the above Addendum section.

3.8.3 Mitigation Measures

One new mitigation measure is proposed as a result of phasing the Project, listed below as Mitigation Measure T-2. Two other mitigation measures identified in Section 3.8.3 of the SEIR as T-1 and PS-2 would remain; however, measure T-1 has been modified. The requirement to coordinate with the City of Murrieta for construction of the I-215/Clinton Keith Interchange has been removed since that interchange has already been improved. The mitigation measures for traffic impacts are as follows:

Mitigation Measure T-1 (Modified)

This mitigation measure has been modified to exclude the requirement for the County to coordinate with the City of Murrieta on the construction of the I-215/Clinton Keith Interchange since that interchange was improved after the SEIR.

To mitigate potential traffic impacts associated with reduced access, including emergency access, a transportation management plan (TMP) will be prepared during final design, to be approved by Riverside County and Caltrans for the intersection at SR 79, that addresses, at a minimum, the following:

- General access restrictions associated with the Project, including proper notification of affected residences, businesses, and other facilities prior to construction. Advance public notification will include posting of notices and appropriate signage of construction activity. The TMP must ensure adequate access to residences and facilities via existing roadway intersections and private driveways at all times or include alternate access, detours, or temporary mitigation to address access restrictions adequately.

- Emergency access restrictions associated with the Project, including proper notification of emergency providers and provision of alternate routes, if necessary. All construction activities will be coordinated with local law enforcement, fire protection, and other emergency service providers. These entities will be notified of the timing, location, and duration of construction activities.

- Where construction will result in temporary lane closures of sidewalks and other pedestrian facilities, the Contractor will provide temporary pedestrian access, through detours or safe areas alongside the construction zone. Any affected pedestrian facilities and alternative facilities or detours will be identified.

Mitigation Measure T-2 (New)

This measure has been added since there are two design options for Segment 2. This measure applies to Design Option 1 of Segment 2. If Design Option 1 (2-lane) is implemented for Segment 2, the County and the City will monitor the intersection of Menifee Road/Clinton Keith Road to determine the timing for the installation of a signal as identified in the SEIR.

Mitigation Measure PS-2

This measure has not changed from the SEIR. During final design of each phase of Segments 2 and 4, the County will coordinate with the RTA on the potential need for Americans with Disabilities Act

(ADA)-accessible bus stops, turnouts, shelters, and other possible bus and transit patron amenities that may be appropriately incorporated in the design of the Project.

3.8.4 Level of Significance after Mitigation

With construction of project design features under opening year (2018) Phase 1 conditions, all intersections and roadway segments are forecast to operate satisfactorily. With construction of project design features under year 2035 with Phase 2 conditions, all intersections and roadway segments are forecast to operate satisfactorily and impacts are less than significant. Additionally, Section 3.8.4 of the SEIR states, "The proposed Project would result in a significant unavoidable short-term (1 to 3 years) traffic congestion and LOS impact on the Clinton Keith Road/I-215 interchange if the proposed Project is constructed before the interchange improvement project." Since the I-215/Clinton Keith Road Interchange has already been improved prior to the completion of the Project, the conclusion presented in Section 3.8.4 of the SEIR has been updated from significant to less than significant.

4.0 Cumulative Impacts

This section addresses potential cumulative impacts to the environment that could occur as a result of implementing the Project in concert with one or more other past, present, and reasonably foreseeable future projects. The CEQA Guidelines (Section 15130) require identification of other projects (public and private) in the area that, together with the Project, could result in cumulative impacts. Specifically, the CEQA Guidelines, state:

> *a) An EIR shall discuss cumulative impacts of a project when the incremental effect of a project is cumulatively considerable.*
>
> *b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness. The following elements are necessary to an adequate discussion of significant cumulative impacts:*
>
> *(1) Either:*
>
> *(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.*
>
> *(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.*
>
> *(2) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*
>
> *(3) A summary of the expected environmental effects to be produced by those projects with specific reference stating where that additional information is available.*

(4) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the contribution of a project to any significant cumulative effects.

4.1 List of Cumulative Projects in 2006 SEIR

For purposes of the Project cumulative impact assessment, the cumulative Project area is defined as the area within approximately 1 mile of the Project site because impacts of the Project are not likely to extend beyond this area. The projects listed in the 2006 SEIR that are within roughly 1 mile of the proposed alignment include:

Table 4-1 Projects Occurring Adjacent to the Project Impact Area

Project Name	Status	Project Proponent
I-215 Interchange Improvements	Constructed	City of Murrieta
Vista Murrieta High School	Constructed	City of Murrieta
Realignment of Antelope Road	Not Constructed	City of Murrieta
VTTM 30482	Constructed	Private Developer
Tract 29484	Constructed	Private Developer
Leon Road	Constructed	County of Riverside
Future Briggs Road	Constructed	County of Riverside
Signalization of SR 79 at Benton Road	Constructed	County of Riverside

4.2 Updated Cumulative Projects

The majority of the existing and proposed development in the vicinity of the Project is residential and commercial as shown in Figure 4-1. This figure also shows projects within the cumulative study area applied for after January 1, 2007. Table 4-1 shows which adjacent projects have been constructed since the 2006 SEIR. .

4.3 Cumulative Impacts of Phasing Segment 2 and Construction of the Ultimate 6-Lane Facility of Segment 4

The cumulative impacts to the environment that could result from phasing Segment 2 and constructing Segment 4, in concert with one or more of the other projects identified in this section, would not change from the cumulative impacts identified in Section 4.3 of the SEIR, as described in the following sections. The cumulative impacts from Section 4.3 of the SEIR are presented below for

each resource presented in this SEIR Addendum, to depict how the cumulative impacts would remain the same with the Project's phasing.

4.3.1 Aesthetics

The Project (including the phasing of Segment 2 and construction of Segment 4) would change the visual character of the area from rural residential, lowland foothills, and agricultural, to that of an urban arterial highway. Changes to the existing environment since certification of the 2006 SEIR include the completion of a residential development (Tract 29484) located on the north side of Clinton Keith Road as shown in Figure 3-1. As part of Tract 29484, Segment 3 of the Project was built from Trois Valley Street to Leon Road. Even with these improvements, the existing visual character of the Project site remains the same as described in Section 3.15.1 of the 2006 SEIR. The visual characteristics include agricultural, rural residential, lowland foothill, and foothill visual characteristics, including a portion of improved roadway.

Other future projects (related projects) in the area, which are expected to be consistent with the Riverside County and City of Murrieta General Plans, include primarily relatively low density residential development and some commercial uses, and are similar to existing development in the area. As stated in Section 4.3, Aesthetics of the SEIR, development in the vicinity of the Project would convert open space to urban uses, which would also result in potential significant adverse impacts to the visual character of the Project vicinity. Mitigation measures A-1 and GEO-1, as described in Section 3.1.3, Aesthetics, Mitigation Measures, of this SEIR Addendum, would reduce impacts to aesthetics. However, given other proposed development in the Project vicinity, the Project is anticipated to result in a cumulatively significant unavoidable aesthetic impact, as analyzed in the SEIR and adopted in the Findings of Fact and Statement of Overriding Considerations in the 2006 SEIR.

4.3.2 Air Quality

The proposed phasing of construction would not introduce new adverse effects to air quality, and the anticipated air quality impacts would remain consistent with those described in the 2006 SEIR.

As determined in the 2006 SEIR, the Project would result in a significant unavoidable impact related to NOx emissions during construction. Some of the future projects in the area could be constructed at the same time as the Project; therefore the Project would result in a cumulative significant unavoidable air quality impact related to NOx emissions during construction. NOx emissions would also expose a sensitive receptor, Vista Murrieta High School, to this pollutant during construction. Besides NOx emissions, no other pollutant would create significant, temporary impacts.

The mitigated PM_{10} emissions from construction of either Segment 2 or Segment 4 would be below the SCAQMD CEQA thresholds which were designed to prevent project-level and cumulative significant impacts. Therefore, phasing of Segment 2 is not expected to result in a significant cumulative impact from construction PM_{10} emissions. The localized PM_{10} and CO impacts from operation of either Segment 2 or Segment 4 would not contribute to a violation or exacerbate an existing violation of the ambient air quality standards. Therefore, operation of Segment 2 and Segment 4 is not expected to result in localized significant cumulative impacts. The Project is included in the conforming RTIP and, therefore, is not expected to result in regionally significant cumulative air quality impact during operation.

The conclusion in the 2006 SEIR for temporary construction impacts states that the Project would result in significant construction impacts from NO_x emissions after mitigation; and other construction projects are likely to occur in the area at the same time. As analyzed in the SEIR and adopted in the Findings of Fact and Statement of Overriding Considerations, the cumulative air quality impacts caused by construction of the Project would be significant. This determination would not change based on building Segments 2 in two phases.

4.3.3 Biological Resources

Phasing of Segment 2 is not expected to result in a cumulative significant impact on biological resources, since phasing does not change the footprint of the overall Project as identified in the SEIR. To address increased impacts to wetlands and other waters, appropriate permits will be obtained to ensure no net loss of wetlands would occur. Since other projects within the cumulative impact area would be required to obtain the same permits, cumulative impacts to wetlands and other waters would be less than significant. To address increased impacts to MSHCP Riparian/Riverine resources, an updated DBESP will be prepared for Segment 2 and Segment 4 to ensure compliance with MSHCP requirements, as well as, to reduce impacts to species and habitats. Implementation of the MSHCP would ensure that combined impacts of projects in the area would not result in a significant cumulative biological resources impact because the MSHCP is a regional, comprehensive plan for sensitive species in western Riverside County.

4.3.4 Cultural Resources

The Project and other projects in the area may impact previously recorded and undocumented historical resources under CEQA. In addition, the Project area is encompassed by an undefined archaeological district or vernacular landscape associated with the Adobe Springs village site (CA-RIV-716) within 1.0 mile of the Project limits. Past, present, and reasonably foreseeable future

projects would result in a cumulative impact to known and undocumented historical resources. However, implementation of project-specific mitigation measures including measure CR-12, which requires the development and implementation of a cultural resource data recovery and treatment plan in coordination with Native American tribes that ascribe cultural and/or religious significance to these resources, are expected to reduce the Projects contribution to cumulative impacts on these resources to below a level of significance. It is expected that other projects would be required to mitigate cumulative impacts to previously recorded and undocumented resources including the undefined Adobe Springs archaeological district or vernacular landscape. Therefore, the Project would not result in a significant cumulative cultural resources impact.

4.3.5 Greenhouse Gas Emissions

As stated above in Section 3.5.2 of this SEIR Addendum, although the Project would result in GHG emissions during construction and operation, the GHG emissions contribution from the 3.4-mile roadway project to the state-wide GHG inventory would be negligible. The Project GHG emissions would not interfere with the AB 32 Scoping Plan, and the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Therefore, the Project would not conflict with plans, policies, or regulations intended to reduce GHGs. The Project would result in a less-than-significant impact on global climate and GHG emissions.

4.3.6 Hydrology/Water Quality

The phasing of Segment 2 would not change the cumulative impact conclusion stated in the SEIR. The conclusion in Section 4.3 of the SEIR stated the Project would not result in a significant impact after mitigation on hydrology and water quality except for the potential flooding impact due to an accidental failure of Skinner Reservoir dam, which would be a significant unavoidable impact. It is expected that other projects in the area would be required to comply with existing regulations that mitigate hydrology and water quality impacts. Other related projects in the vicinity would also be subject to this potential dam failure flooding impact. Therefore, construction of Segments 2 and 4 would still result in a significant unavoidable cumulative impact due to potential flooding associated with an accidental failure of Skinner Reservoir dam. This is consistent with the SEIR.

4.3.7 Noise

The conclusion in the 2006 SEIR stated that during construction and operation, the Project would not result in a significant noise impact with implementation of mitigation measures. Phasing of Segment 2 would not change this conclusion. The majority of the cumulative projects are residential and commercial projects that would generate some noise during construction and some of these projects

could be constructed during the same period as Segments 2 and 4. However, noise impacts from construction are not expected to be a significant cumulative impact because noise from other projects is expected to be similar or below noise levels generated from construction of either Segment 2 or Segment 4. Also, other projects are expected to be constructed during daytime hours allowed by the City of Murrieta and Riverside County. Noise impacts during operation are not anticipated to be cumulatively significant because the primary noise source associated with the other projects in the area is expected to be traffic generated by those projects. Forecast traffic data used in predicting future traffic noise levels from the Project pertain to build-out conditions, thus accounting for traffic from other projects. Therefore, with implementation of mitigation measures, cumulative traffic operations would not result in a significant noise impact, which is consistent with the findings in Section 4.3 of the SEIR.

4.3.8 Transportation/Traffic

As stated in Section 4.3 of the SEIR, the Project would not result in a significant impact on transportation/traffic after mitigation. Phasing of Segment 2 would not change this conclusion based on updated traffic studies described in Sections 3.8.2.3 and 3.8.2.4 of this SEIR Addendum. The SEIR previously stated there would be a significant unavoidable short-term (1 to 3 years) impact on traffic congestion if the Project was constructed prior to the Clinton Keith Road/I-215 Interchange project. Since this interchange project has now been completed, there would be no LOS impact on the Clinton Keith Road/I-215 interchange. The Project is expected to reduce traffic congestion on nearby roads and improve the regional transportation system and improve future conditions. The traffic impact assessment included traffic projections from Riverside County for future traffic levels based on development patterns. It is anticipated that Riverside County and City of Murrieta will meet their LOS standards for all future transportation projects connecting to Clinton Keith Road; therefore, the phasing of Segment 2 would not result in a significant cumulative traffic impact.

5.0 Growth-Inducing Impacts

The proposed phasing of construction and recent changes described in Sections 1.0 through 4.0 above would not change the analysis of growth-inducing impacts contained in the 2006 SEIR. The alignment is still in the same location and would connect to I-215 and SR 79 at the same locations described in the 2000 EIR and the 2006 SEIR. The number of proposed lanes for the ultimate facility has not changed; and the Project is consistent with the Riverside County and City of Murrieta General Plan Circulation Elements, which show Clinton Keith Road as an Urban Arterial. As stated in Section 5.0 of the SEIR, the proposed road has been in the Riverside County and City of Murrieta General Plan Circulation Elements for several years; therefore, the proposed road is not anticipated to cause significant unplanned population or housing growth in the vicinity. The Project would not result in a significant growth-inducing impact.

6.0 Irreversible Environmental Effects

The conclusions presented in Section 6.0, Irreversible Environmental Effects, of the SEIR would not change as a result of phasing the Project. The 2006 SEIR described the following irreversible environmental effects: aesthetic effects associated with alteration of land and change in hillside landscape; commitment of energy and material resources; and biological impacts and paleontological and archaeological resource loss. Phasing Segment 2 would result in the same types of irreversible environmental effects as the 2006 SEIR Project.

7.0 Significant Unavoidable Adverse Impacts

Significant unavoidable adverse impacts presented in Section 7.0 of the SEIR would be the same with phasing of Segment 2, except for the conclusion regarding transportation/traffic impacts. There would no longer be significant, unavoidable short-term impacts to traffic since the I-215/Clinton Keith Road Interchange Project has been constructed. The other resources described in Section 7.0 of the SEIR that would have significant unavoidable adverse impacts are listed below, and have been adopted in the Findings of Fact and Statement of Overriding Considerations for the SEIR:

7.1 Significant Unavoidable Hydrology Impact

Consistent with the SEIR, Segments 2 and 4 would result in a potentially significant unavoidable impact from flooding due to accidental Skinner Reservoir dam failure because the persons constructing the road or traveling on the road would be at risk if the dam accidentally failed. This impact would also be a significant unavoidable cumulative impact.

7.2 Significant Unavoidable Air Quality Impact - NO_x Emissions During Construction

Consistent with the SEIR, Segments 2 and 4 would result in a significant NOx emissions impact during construction. Reduction of NOx emissions below the significance threshold is unlikely even after mitigation. Expected NOx emissions during construction would need to be reduced by nearly 50 percent to be a less-than-significant impact. Additionally, other construction projects may occur in the area at the same time as the Project, adding to cumulative NOx emissions and reduced air quality. Therefore, NOx emissions during construction of the Project would result in a significant unavoidable adverse impact and a significant cumulative impact.

7.3 Significant Unavoidable Aesthetic Impact

Consistent with the 2006 SEIR, Segments 2 and 4 would result in a change in the visual character of the Project site from rural residential, lowland foothills, and agricultural to a viewshed that would include an urban arterial highway setting and related landform grading. This proposed change to the visual setting would be considered a potentially significant long-term aesthetic impact on residents who have views of the Project site. This aesthetic impact would be a significant unavoidable adverse impact and a significant cumulative impact.

8.0 List of Preparers

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Figures

Appendix A
Mitigation Monitoring and Reporting Program

Appendix B
Project Permits

Appendix C
Supplemental Jurisdictional Delineation Reports

Appendix D
Habitat Assessment at Three Locations for the Clinton Keith Road Extension Project, Riverside County, California

Appendix E
Traffic Analysis for Clinton Keith Road Extension Project