

2.3 Utilities and Emergency Services

2.3.1 Affected Environment

This section describes the existing utilities and emergency services facilities and providers in the Study Area that could potentially be affected by construction of the Build Alternatives (including Design Option B). This section was prepared using a variety of informational sources including: Caltrans as-built plans, Right-of-Way Data Sheets, and Utility Plans.

2.3.1.1 Utilities

The following utility providers have facilities located within project limits:

- **Southern California Edison (SCE):** Electrical transmission lines
- **Southern California Gas Company:** Natural gas provider
- **AT&T Communications:** Overhead communication lines and conduits
- **El Toro Water District:** Portable water, sanitation and recycled water
- **Cox Communications:** Communication
- **Santa Margarita Water District:** Water Utilities

2.3.1.2 Fire Protection/Emergency Services

The project limits are within the cities of Lake Forest (OC Region E), Laguna Woods and Laguna Hills (OC Region D). Fire services in Lake Forest, Laguna Woods and Laguna Hills are provided by the Orange County Fire Authority (OCFA). OCFA is a regional fire service agency that serves 23 cities in Orange County and all unincorporated areas. The OCFA protects more than 1,680,000 residents from 71 fire stations located throughout Orange County. OCFA provides fire protection and suppression, inspection services, paramedic emergency medical services, and hazardous material response. Stations serving within the vicinity of the project limits include Station 19 (23022 El Toro Road, Lake Forest 92360), Station 42 (19159 Ridgeline Road, Lake Forest 92679), Station 54 (19811 Pauling Avenue, Lake Forest 92610), Station 22 (24001 Paseo De Valencia, Laguna Woods 92637), Fire Station 5 (23600 Pacific Island Drive, Laguna Niguel 92677), Fire Station 39 (24241 Avila Road, North Laguna Niguel 92677), and Fire Station 49 (31461 Golden Lantern, Laguna Niguel 92677).

Emergency medical services in the Study Area are provided by contracted ambulance companies. CARE Ambulance serves 25 cities in Orange County and the surrounding unincorporated areas of Orange County (OCFA).

2.3.1.3 Police Protection

The Orange County Sheriff's Department (OCSD) is responsible for providing law-enforcement protection within unincorporated areas of Orange County, as well as incorporated cities such as Lake Forest and Laguna Woods, that contract with OCSD for protection. Law enforcement services include patrol, traffic enforcement, accident analysis and investigation, parking enforcement, special investigations, and a Community Support Unit.

Police services on Interstates in California, including Interstate 5 (I-5), are provided by the California Highway Patrol. The nearest California Highway Patrol offices are in the cities of Irvine (6681 Marine Way, Irvine 92618) and San Juan Capistrano (32951 Camino Capistrano, San Juan Capistrano 92675).

2.3.2 Environmental Consequences

2.3.2.1 Temporary Impacts for Utilities

Build Alternatives (Alternatives 2 and 4 [Including Design Option B])

The construction of Build Alternatives 2 and 4 (including Design Option B) would affect existing overhead utility facilities, which could require protection in place, removal, replacement, or relocation. As shown in Tables 2.3.1 through 2.3.3, relocations of communication lines, water lines, gas and electrical utilities—such as SCE overhead communication lines—would be needed. For Alternative 2, six utility facilities would be relocated, and three would be protected in place. For Alternative 4, 21 facilities would be relocated. Impacts to underground utility facilities such as underground conduits are also anticipated during construction. Construction may result in temporary service disruptions to some utility users, however, any potential impacts to utilities or utility users during construction would be further minimized by the implementation of UES-1.

Table 2.3.1: Existing Utilities to be Relocated (Alternative 2)

Owner	Utility	Location	Utility Conflict Location/Recommendation
Southern California Edison (SCE) AT&T Cox Communications (COX) (share poles)	Electric (12 kV)(OH) Telephone (OH) Communications (OH) (Total 8 poles)	Bridger Rd and Along NB I-5	Sta 228+05 to Sta 240+80 ALT2NB5ON
Southern California Edison (SCE)	UG Conduit (12 kV)(UG)	Bridger Rd	Sta 220+00 to 227+95 ALT2NB5ON
AT&T	UG Conduit (UG)	Bridger Rd	Sta 220+00 to 225+12 ALT2NB5ON
El Toro Water District (ETWD)	Water (8-inch)	Bridger Rd	Sta 220+00 to 229+66 ALT2NB5ON
Southern California Gas (SCG)	Natural Gas (3-inch)	Bridger Rd	Sta 220+00 to 228+71 ALT2SB5OFF
Southern California Edison (SCE)	Electric (12 kV)(UG)	Bridger Rd	Traverse at Sta 222+03 ALT2NB5ON
AT&T	Telephone (UG)	Bridger Rd	Traverse at Sta 222+16 ALT2NB5ON
El Toro Water District (ETWD)	Sewer (8-inch)	Bridger Rd	Sta 222+16 to 224+78 ALT2SB5OFF
El Toro Water District (ETWD)	Water (42-inch)	Avenida De La Carlota	Sta 3+00 to 10+21 ALT2CARLOTA
Cox Communications (COX)	Fiber Optic Conduit (UG)	Avenida De La Carlota	Sta 0+63 to 9+25 ALT2CARLOTA
AT&T	Telephone Conduit (UG)	Avenida De La Carlota	Sta 0+63 to 9+25 ALT2CARLOTA

I-5 = Interstate 5
kV = kilovolt
NB = northbound

OH = overhead
R/W = right-of-way
UG = underground

Table 2.3.2: Existing Utilities to be Relocated (Alternative 4)

Owner	Utility	Location	Utility Conflict Location/Recommendation
El Toro Water District (ETWD)	Water (8-inch)	Transverse I-5	Sta 188+31 “A” Line
El Toro Water District (ETWD)	Water (16-inch)	Transverse I-5	Sta 188+47 “A” Line
Southern California Edison (SCE)	UG Conduit (12 kV)(UG)	Transverse I-5	Sta 194+82 “A” Line
Southern California Gas (SCG)	Natural Gas (8-inch)	Transverse I-5	Sta 195+22 “A” Line
El Toro Water District (ETWD)	Sewer (10-inch)	Transverse I-5	Sta 198+86 “A” Line
Southern California Edison (SCE)	Overhead Power Lines (66 kV) (Total 5 poles)	Avenida De La Carlota	Sta 20+18 “Alt4Carlota” to 27+89
El Toro Water District (ETWD)	Sewer (8-inch)	Avenida De La Carlota	Sta 22+25 “Alt4Carlota” to 27+55
El Toro Water District (ETWD)	Sewer (8-inch)	Avenida De La Carlota	Sta 22+76 “Alt4Carlota” to 22+80
AT&T	UG Conduits	Avenida De La Carlota	Sta 27+42 “Alt4Carlota” to 27+42
AT&T	UG Conduits	Avenida De La Carlota	Sta 27+42 “Alt4Carlota” to 29+59
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 26+53 “Alt4Carlota” to 27+21
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Transverse crossing Avenida De La Carlota at Sta 27+79
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenida De La Carlota	Sta 25+00 “Alt4Carlota” to 29+59
El Toro Water District (ETWD)	Water (42-inch)	Avenida De La Carlota	Sta 27+43 “Alt4Carlota” to 29+59
Southern California Gas (SCG)	Natural Gas (3-inch)	Avenida De La Carlota	Sta 17+18 “Alt4Carlota” to 24+22
Southern California Edison (SCE)	UG conduit (12 kV)	Avenida De La Carlota	Sta 17+18 “Alt4Carlota” to 19+79
El Toro Water District (ETWD)	Water (42-inch)	Avenida De La Carlota	Sta 29+59 “Alt4Carlota” to 44+62
AT&T	UG Conduit	Avenida De La Carlota	Sta 29+59 “Alt4Carlota” to 44+62
Southern California Gas (SCG)	Natural Gas (3-inch)	Avenida De La Carlota	Sta 29+59 “Alt4Carlota” to 40+55
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenida De La Carlota	Sta 29+59 “Alt4Carlota” to 44+62
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 30+25 “Alt4Carlota” to 31+14
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 36+00 “Alt4Carlota” to 40+97
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenida De La Carlota	Sta 35+80 “Alt4Carlota” to 37+08
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 29+59 “Alt4Carlota” to 33+05

I-5 = Interstate 5
kV = kilovolt
NB = northbound

R/W = right-of-way
UG = underground

**Tables 2.3.3: Existing Utilities to be Relocated
(Alternative 4 with Design Option B)**

Owner	Utility	Location	Utility Conflict Location/Recommendation
El Toro Water District (ETWD)	Water (8-inch)	Transverse I-5	Sta 188+31 "A" Line
El Toro Water District (ETWD)	Water (16-inch)	Transverse I-5	Sta 188+47 "A" Line
Southern California Edison (SCE)	UG Conduit (12 kV)(UG)	Transverse I-5	Sta 194+82 "A" Line
Southern California Gas (SCG)	Natural Gas (8-inch)	Transverse I-5	Sta 195+22 "A" Line
El Toro Water District (ETWD)	Sewer (10-inch)	Transverse I-5	Sta 198+86 "A" Line
Southern California Edison (SCE)	Overhead Power Lines (66 kV) (Total 5 poles)	Avenida De La Carlota	Sta 20+18 "Alt4Carlota" to 27+89
El Toro Water District (ETWD)	Sewer (8-inch)	Avenida De La Carlota	Sta 22+25 "Alt4Carlota" to 27+55
El Toro Water District (ETWD)	Sewer (8-inch)	Avenida De La Carlota	Sta 22+76 "Alt4Carlota" to 22+80
AT&T	UG Conduits	Avenida De La Carlota	Sta 27+42 "Alt4Carlota" to 27+42
AT&T	UG Conduits	Avenida De La Carlota	Sta 27+42 "Alt4Carlota" to 29+59
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 26+53 "Alt4Carlota" to 27+21
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Transverse crossing Avenida De La Carlota at Sta 27+79
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenida De La Carlota	Sta 25+00 "Alt4Carlota" to 29+59
El Toro Water District (ETWD)	Water (42-inch)	Avenida De La Carlota	Sta 27+43 "Alt4Carlota" to 29+59
Southern California Gas (SCG)	Natural Gas (3-inch)	Avenida De La Carlota	Sta 17+18 "Alt4Carlota" to 24+22
Southern California Edison (SCE)	UG conduit (12 kV)	Avenida De La Carlota	Sta 17+18 "Alt4Carlota" to 19+79
El Toro Water District (ETWD)	Water (42-inch)	Avenida De La Carlota	Sta 29+59 "Alt4Carlota" to 44+62
AT&T	UG Conduit	Avenida De La Carlota	Sta 29+59 "Alt4Carlota" to 44+62
Southern California Gas (SCG)	Natural Gas (3-inch)	Avenida De La Carlota	Sta 29+59 "Alt4Carlota" to 40+55
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenida De La Carlota	Sta 29+59 "Alt4Carlota" to 44+62
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 30+25 "Alt4Carlota" to 31+14
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 36+00 "Alt4Carlota" to 40+97
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenida De La Carlota	Sta 35+80 "Alt4Carlota" to 37+08
Santa Margarita Water District (SMWD)	Water (16-inch)	Avenida De La Carlota	Sta 29+59 "Alt4Carlota" to 33+05
AT&T	UG conduit	Avenue De La Carlota	Sta 44+62 "Alt4Carlota" to 50+00

**Tables 2.3.3: Existing Utilities to be Relocated
(Alternative 4 with Design Option B)**

Owner	Utility	Location	Utility Conflict Location/Recommendation
El Toro Water District (ETWD)	Water (42")	Avenue De La Carlota	Sta 44+62 "Alt4Carlota" to 50+00
AT&T	UG Conduit	Avenue De La Carlota	Sta 45+17 "Alt4Carlota" to 50+00
AT&T	UG Conduit (4")	Avenue De La Carlota	Sta 46+64 "Alt4Carlota" to 48+03
El Toro Water District (ETWD)	Sewer (8")	Avenue De La Carlota	Sta 47+00 "Alt4Carlota" to 47+59
Southern California Edison (SCE)	UG Conduit (12 kV)	Avenue De La Carlota	Sta 44+62 "Alt4Carlota" to 50+00
Southern California Edison (SCE) AT&T Cox Communications (COX) (share poles)	Overhead Power lines (12 kV)/ Communications share poles (7 poles)	Bridger Rd & Along NB I-5	Sta 228+05 "Alt4NB5ON" Line to 240+80 "Alt4NB5ON" Line
Southern California Edison (SCE)	UG Conduit (12 kV)	Bridger Rd	Sta 220+00 "Alt4NB5ON" Line to 227+95 "Alt4NB5ON"
AT&T	UG Conduit	Bridger Rd	Sta 220+88 "Alt4NB5ON" Line to 225+02 "Alt4NB5ON"
El Toro Water District (ETWD)	Water (8")	Bridger Rd	Sta 220+57 "Alt4NB5ON" Line to 229+66 "Alt4NB5ON"
Southern California Gas (SCG)	Gas (3")	Bridger Rd	Sta 220+34 "Alt4NB5ON" Line to 229+84 "Alt4NB5ON"
Southern California Edison (SCE)	UG Conduit (12 kV)	Bridger Rd	45' Lt of Sta 222+93 "Alt4NB5ON" Line to 25' Rt of Sta "222+93 "Alt4NB5ON" (Transverse)
AT&T	UG Conduit	Bridger Rd	45' Lt of Sta 223+08 "Alt4NB5ON" Line to 25' Rt of Sta 223+09 "Alt4NB5ON" (Transverse)
El Toro Water District (ETWD)	Sewer (8")	Bridger Rd	Sta 220+90 "Alt4NB5ON" Line to 225+74 "Alt4NB5ON"
El Toro Water District (ETWD)	Water (8")	Bridger Rd	45' Lt of Sta 226+62 "Alt4NB5ON" Line to 28' Rt of Sta 226+62 "Alt4NB5ON" (Transverse)
Southern California Edison (SCE) AT&T Cox Communications (COX) (share poles)	Overhead Power lines (12 kV)/ Communications share poles (1 poles)	Bridger Rd	34' Rt of Sta 228+70 "Alt4NB5ON" Line to 48' Rt of Sta 228+70 "Alt4NB5ON" Line

I-5 = Interstate 5
kV = kilovolt
NB = northbound

R/W = right-of-way
UG = underground

2.3.2.2 Temporary Impacts for Emergency Providers

Build Alternatives (Alternatives 2 and 4 [Including Design Option B])

During construction of the Build Alternatives (including Design Option B), some impairment to emergency service delivery, including fire and police response time, may occur during the roadway closures. Traffic will be directed with flagging if there

are partial closures. Although not anticipated, if temporary full closures are required during construction, they will be allowed only during off-peak hours to minimize impacts to traffic. Long-term closures of any ramps are not anticipated under the Build Alternatives. Closures will be avoided during the peak hours between 5:30 a.m. and 9:30 a.m. and 4:30 p.m. and 6:30 p.m., Monday through Friday. If there are any potential lane closure(s) of I-5 during the construction period, traffic operations along State Route 73, State Route 133, and Interstate 405 may be affected on a temporary basis due to vehicles detouring to these routes.

Detour routes would be provided to direct traffic. Although detour routes would allow for traffic flow, the temporary closure of I-5 lanes or any roadway at the interchanges would result in increased travel times. As a result, emergency service providers could experience travel delays when travelling to/from emergency scenes during the off-peak closures of I-5 and local streets at the interchange. Close coordination will be necessary with neighboring cities' emergency service providers to provide support during emergencies. This would be addressed by the implementation of Project Features PF-UES-1 and PF-UES-2.

PF-UES-1 All temporary closures and detour plans would be coordinated with law enforcement, fire protection, and emergency medical service providers to minimize temporary delays in emergency response times, including the identification of alternate routes for emergency vehicles and routes across the construction areas that are developed in coordination with the affected agencies.

PF-UES-2 To ensure that emergency response times are not disrupted, the Orange County Sheriff's and Fire Departments will be informed of the project construction schedule, lane closures (if any), and detour plans well in advance of any detour plan or lane closure being implemented throughout the construction period.

As discussed in Project Feature PF-TRA-1, the Transportation Management Plan (TMP), described in more detail in Chapter 1 and Section 2.4, Traffic and Transportation, all traffic handling and detours will be coordinated with the Cities of Lake Forest, Laguna Hills, Laguna Woods. Caltrans has and will continue to coordinate with stakeholders, such as the affected cities, emergency responders, the California Highway Patrol, and others. A TMP would be prepared to minimize effects during the construction period. As discussed earlier in Chapter 1, Project Description, the TMP is a standard condition placed on all Caltrans construction projects and is designed to minimize construction activity-related motorist delays, queuing, and accidents by the effective application of traditional traffic-handling practices and innovative approaches. The TMP will be finalized during final design. With the implementation of the Project Feature described above, temporary impacts to emergency services during construction would not be adverse.

No Build Alternative

No improvements to this interchange are proposed under the No Build Alternative. Therefore, the No Build Alternative would not result in temporary impacts to utilities and emergency services.

2.3.2.3 Permanent Impacts to Utilities

Build Alternatives (Alternatives 2 and 4 [including Design Option B])

The Build Alternatives would also not result in increased demand for any public utility services. Therefore, the Build Alternatives (including Design Option B) would not result in permanent adverse effects on utility facilities and providers.

2.3.2.4 Permanent Impacts to Emergency Providers

Build Alternatives (Alternatives 2 and 4 [including Design Option B])

After project completion, operational improvements are expected to reduce congestion at the I-5/EI Toro Road Interchange area, which in turn could improve response times for emergency services. Because the Build Alternatives would not induce growth or increase residential developments, there would be no change in demand for emergency services.

No Build Alternative

No improvements to this Interchange are proposed under the No Build Alternative and would leave the interchange in its current configuration. The No Build Alternative would not result in permanent impacts to utilities and emergency services. In addition, the response times of emergency service providers (police, fire, and emergency vehicle services) could be affected by projected freeway congestion associated with the future No Build Conditions.

2.3.3 Avoidance, Minimization, and/or Mitigation Measures

Project Features have been incorporated into the Build Alternatives (including Design Option B) as discussed above and in Section 2.4, Traffic and Transportation, to address the potential temporary impacts of construction of the Build Alternatives on utilities and emergency services. Other than UES-1, no further avoidance, minimization and/or mitigation measures are required.

UES-1 During final design, utility relocation plans for those utilities that will need to be relocated, removed, or protected-in-place will be prepared in consultation with the affected utility relocation providers/owners. If relocation is necessary, the final design will focus on relocating utilities within the State right-of-way or other existing public rights-of-way and/or easements. If relocation outside of existing rights-of-way or additional public rights-of-way and/or easements required for the project are necessary, the final design will focus on relocating those facilities to minimize environmental impacts as a result of project construction and ongoing maintenance and repair activities. The utility relocation plans will be included in the project specifications.

Prior to and during construction, the construction contractor will implement the components of the utility relocation plans provided in the project specifications.

Prior to utility relocation activities, the Resident Engineer will coordinate with affected utility providers regarding potential utility

relocations and inform affected utility users in advance of the date and timing of potential service disruptions.