REFERENCE INFORMATION DOCUMENTS

Calexico East Port of Entry Bridge Widening

FOR DESIGN AND CONSTRUCTION ADJACENT TO STATE ROUTE 7 IN IMPERIAL COUNTY

Off System Facility Located in Imperial County
0.7 Mile South of Route 7 Near the US/Mexico Border

ICTC CONTRACT NO. 20-101
11-IMP-007-PM0.0
PROJECT ID: 1118000265

Federal Aid Project BUILD L-6471 (017)

RFP Issue Date: September 21, 2020
Proposal Due Date: November 20, 2020
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Imperial County Transportation Commission (ICTC), Federal Highways Administration (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure approaching the Calexico East Port of Entry (POE) over the All-American Canal near the USA/Mexico border to facilitate flow to the existing inspection booths. There are no new inspection booths or lanes north of the booths leading to the State Highway System (State Route 7) being proposed in this project. The widened structure would accommodate a total of nine northbound (NB) vehicle lanes, 8-foot shoulders, and concrete barriers. The project proposes four new NB vehicle lanes (two commercial and two passenger). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property.

The result of this project would provide a larger structure which will accommodate a total of thirteen 13 lanes: two southbound (SB) passenger, two SB commercial, five NB passenger (3 existing and 2 new), and four (4) NB commercial (2 existing and 2 new). The existing NB and SB pedestrian walkways will remain with the NB pedestrian walkway shifting slightly to the east.

This project would include:

- **Constructing a new structure to the east** (tying into the existing bridge);
- **Providing two additional commercial vehicle lanes** (for a total of four NB commercial vehicle lanes),
- **Providing two additional passenger vehicle lanes** (for a total of five NB passenger vehicle lanes),
• Providing 8-foot shoulders and barriers;
• Shifting the NB pedestrian walkway to the east on the existing structure to ensure pedestrian flow. The existing concrete barriers separating the pedestrian walkway from the vehicular traveled way would have to be demolished and reconstructed to the east of its current location. The thickness of the concrete deck would have to be reduced at the location of the existing NB pedestrian walkway.
• Reconstructing a portion of existing NB pedestrian walkway (north of existing bridge), including potential removal of rock ornament, segments of concrete barrier, and steel fence.
• Constructing a NB pedestrian walkway canopy on the existing structure;
• Widening and realigning approach and departure roadways to align with the four new vehicle lanes and five existing vehicle lanes on the bridge;
• Constructing embankment north and south of the bridge;
• Constructing bridge abutments to support the new structure north and south of the bridge; It is probable that the foundation of the new abutments will consist of precast concrete pile foundation system.
• Extending Sheet piling to the east, on the north and south ends of the bridge.
• Constructing and realigning appurtenant structures on the bridge and roadways (e.g. signage and lighting);
• Extending an existing cross-culvert, north of the existing bridge, to the east to maintain existing drainage pattern;
• Modify drainage systems, as necessary, to maintain the existing drainage pattern;
• Extending underpass tunnels to the east, south and north of the bridge;
• Performing any needed maintenance on the existing structure (this may include but not be limited to bearing plate bolts at the existing abutments);
• Minimal landscape modifications (e.g. roadways and along the pedestrian walkway); and
• Replace in kind any items modified by construction actives.

There is a staging area being considered on the northeast portion of the GSA property

After reviewing the project description and aerial photo of the project footprint, and completing the Community Impact Assessment Scoping Checklist (attached), it was determined that the following community
impacts may result from this project:

- **There may be temporary construction impacts to Public Service Delivery agencies, such as fire, ambulance, Border Patrol and/or police.**

To minimize impacts, public outreach to these agencies will need to occur to inform them of the project’s construction schedule, and any potential lane closures or traffic delays.

Please contact me at x0119 with any questions or project changes.

Michelle Madigan,
Community Impact Specialist

Attachment
COMMUNITY IMPACT ASSESSMENT
Scoping Checklist

Land Use
- The project would affect, or be inconsistent with, relevant state, regional, or local plans. N/A
- The project would result in a loss of prime farmland, unique farmland, or farmland of state or local importance, or lands covered under the Williamson Act. N/A
- The project would result in a loss of timberland. N/A
- The project would impact a park or other recreational facility (including trails, bikeways, etc.). N/A

Growth
- The location of where growth occurs would shift (introduction of access to a new undeveloped area). N/A
- Development opportunities would be influenced by the project. N/A
- The population would increase as a result of the project. N/A
- The housing supply, or employment or business activity, would increase as a result of the project. N/A
- The capacity of other services, such as utilities or schools, would be pressured as a result of growth. N/A
- Related projects (often not transportation projects), including those of a state or local project in nature, would bring cumulative growth effects. N/A

Community Character & Cohesion
- Health, safety, or crime would become worse. N/A
- Public service delivery, such as fire, ambulance, police, or education would be disrupted.
There may be temporary construction impacts. To minimize impacts, public outreach to these agencies will need to occur to inform them of the project’s construction schedule, and any potential lane closures or traffic delays.

- Community character (including aesthetics, lighting, and noise) would be noticeably changed.
  N/A
- Property values and/or the quality of life would deteriorate.
  N/A

**Economic Impacts**
- Businesses would be removed.
  N/A
- Parking would be impacted.
  N/A
- Businesses would gain or lose opportunities because of changes in traffic patterns or visibility.
  N/A
- The project would result in out of direction travel to businesses.
  N/A
- Jobs or job opportunities would be changed.
  N/A
- The tax base would be altered due to relocations and/or conversion of property to state use.
  N/A
- Construction of the project would affect the local economy.
  N/A

**Relocations & Environmental Justice**
- People would be displaced from their homes.
  N/A
- The availability of affordable housing would be reduced.
  N/A
- Minority populations or low-income populations would be disproportionately affected.
  N/A

**Traffic & Transportation / Bicycle and Pedestrian**
- Through traffic in a neighborhood would increase.
  N/A
- Pedestrian and/or bicycle connectivity would be diminished.
  N/A
Memorandum

To: FILE

From: SHAY LYNN M. HARRISON
Chief, Environmental Analysis, Branch C

Date: 7/15/2019
File: 11-43050 / 1118000265
Section 4(f) No Use Determination

Subject: SECTION 4(f) NO USE DETERMINATION FOR EA 11-43050-CALEXICO BRIDGE WIDENING:

This memo is to document that there are no Section 4(f) resources for consideration in accordance with Federal Highway Administration regulation (FHWA) "Section 4(f). [49 USC 303[d] and the Highway-Aide Highway Aid Act [23 USC 138[d].

Project Description:
The California Department of Transportation (Caltrans) working cooperatively with Federal Highway Administration (FHWA) proposes to lengthen Customs and Border Protection inspection kiosk feeder lanes within existing Land Port of Entry property rights including necessary improvements not limited to the widening of the bridge over the All-American Canal near the USA/Mexico border south of State Route 7. Caltrans is acting as lead agency under CEQA and FHWA is acting lead agency under NEPA.

Applicability of Section 4(f):
The Department of Transportation Act "Section 4(f)" [49 USC 303[d] requires that all administration under the US Department of Transportation and the Federal Highway Administration, respectively, preserve and protect certain types of resources when approving transportation projects. Section 4(f) applies whenever a federal action involves the use of a publicly owned park, recreation area, wildlife or waterfowl refuge, or land from a historic site.

Assessment of Section 4(f):
Assessment of the resources and the potential project impacts using the Section 4(f) Decision Tree determined that there are no 4(f) resources present within the ½ mile study area. The closest 4(f) property is the "Heber Dunes State Vehicular Recreational Area" located over 2 miles to the north (see figure 1).

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"
STEP 1 – Is There USDOT Involvement? (funding, land, approval)
Yes, the project is programmed with funding from federal sources.

STEP 2 – Are There Publicly Owned Lands of a Public Park, Recreation Area or Wildlife & Waterfowl Refuge Or Any Lands of a Historic or Archaeological Site Listed or Eligible for the National Register of Historic Places?
In addition, the resource must meet one of the following criteria:
1. It must be publicly owned
2. It must be open to the public
3. Its major purpose must be for park, recreation, or refuge activities.

No, there are no publicly owned parks and recreation areas open to the public, wildlife/waterfowl refuges, or historic sites with ½ mile of the project area.

Conclusion
In conclusion, further studies and/or evaluation of Section 4(f) is not required. This follows the Section 4(f) Policy Paper from FHWA as the resource fell out from further consideration, as the Section 4(f) Policy Paper disqualifies when there is no publicly owned land considered to be a park, recreation area, or wildlife and waterfowl refuge (Question 1a). In addition, this is specified in the requirements of FHWA Section 4(f) [49USC 303(d)] and the Highway-aid Highway Act 23 USC 138(d) regulation and policy. The Section 4(f) regulation was considered as part of this project review process and it is determined that Section 4(f) does not apply.

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability"
Natural Environment Study (Minimal Impacts)

Imperial County, California

11-IMP-7-PM 0.0

Project ID 1118000265 / EA 430500

May 2019
State Route 7 Calexico Bridge Widening

Natural Environment Study
(Minimal Impacts)

Imperial County
California

11-IMP-7-PM 0.0

Project ID 1118000265 / EA 430500

May 2019

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List of Abbreviated Terms

amsl above mean sea level
BMPs Best Management Practices
BSA Biological Study Area
CDFW California Department of Fish and Wildlife
Caltrans California Department of Transportation
CESA California Endangered Species Act
CNDDB California Natural Diversity Database
CNPS California Native Plant Society
ESA Environmentally Sensitive Area
ft feet
FESA Federal Endangered Species Act
GSA United States General Services Administration
ICTC Imperial County Transportation Commission
MBTA Migratory Bird Treaty Act
NES (MI) Natural Environment Study (Minimal Impacts)
POE Port of Entry
RWQCB Regional Water Quality Control Board
SR-111 State Route 111
USACE United States Army Corps of Engineers
USFWS United States Fish and Wildlife Service
USGS United States Geological Survey
1. Summary

This Natural Environment Study (Minimal Impacts) (NES [MI]) was prepared by the California Department of Transportation (Caltrans) for the State Route 7 (SR-7) Calexico Bridge Widening Project.

The Imperial County Transportation Commission (ICTC), Federal Highway Administration (FHWA), and Caltrans along with the United States General Services Administration (GSA) propose to widen the existing structure of the Calexico East Port of Entry (POE) Bridge over the All American Canal near the USA/Mexico border to facilitate flow through the existing inspection booths. The project limits are at post mile (PM) 0.0 near the City of Calexico in Imperial Valley, Imperial County, California. The goal of the project is to reduce delays and idling vehicles at the Calexico East POE.

The project’s Biological Study Area (BSA) totals approximately 65 acres of bare ground, disturbed habitat, and riverine habitat of the All American Canal, and surrounding agricultural fields. Eleven sensitive species were evaluated for presence within the Calexico SE United States Geological Survey (USGS) 7.5 minute topographic quadrangle, where the project is located.

All project activities are in Caltrans right-of-way (ROW) and GSA property.

Impacts will occur only to disturbed areas with no habitat supporting any sensitive species.
2. Introduction

The ICTC, FHWA, and Caltrans along with the GSA propose to widen the existing structure of the Calexico East Port of Entry (POE) Bridge over the All American Canal near the USA/Mexico border to facilitate flow through the existing inspection booths. The new structure would accommodate a total of four northbound (NB) commercial vehicle lanes, an 8-foot shoulder, and a concrete barrier. The widened structure would accommodate an additional two new commercial vehicle lanes (for a total of four NB commercial vehicle lanes).

Alternatives

Two alternatives are being considered for this project—the Build Alternative (Figures 2a-d) and the No-Build Alternative.

Build Alternative

The “Build Alternative” would include:

- Constructing a new structure to the east (tying into the existing bridge) to provide an additional two commercial vehicle lanes (for a total of four NB commercial vehicle lanes on the new structure), an 8-foot shoulder and barriers;

- Widening and realigning approach and departure roadways to align with the new lanes on the bridge;

- Shifting the NB pedestrian walkway to the east on the existing structure to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge structure. The existing concrete barriers separating the pedestrian walkway from the vehicular traveled way would be demolished and reconstructed to the east of its current location. The thickness of the concrete deck would be reduced at the location of the existing NB pedestrian walkway;

- Reconstructing a portion of existing NB pedestrian walkway (north of existing bridge), including potential removal of rock ornament, segments of concrete barrier, and steel fence;

- Constructing a NB pedestrian walkway canopy on the existing structure;

- Constructing embankment north and south of the bridge;
• Constructing bridge abutments to support the new structure north and south of the bridge. It is probable that the foundation of the new abutments will consist of precast concrete pile foundation system;

• Extending sheet piling to the east, on the north and south ends of the bridge;

• Constructing and realigning appurtenant structures on the bridge and roadways (e.g. signage and lighting);

• Extending an existing cross-culvert, north of the existing bridge, to the east to maintain existing drainage pattern;

• Modifying drainage systems, as necessary, to maintain the existing drainage pattern;

• Extending underpass tunnels to the east, south and north of the bridge;

• Performing any needed maintenance on the existing structure (this may include bearing plate bolts at the existing abutments);

• Modifying small areas of landscaping (e.g. roadways and along the pedestrian walkway); and

• Replacing in kind any items modified by construction actives.

There is a staging area being considered on the northeast portion of the GSA property.

The result of this project would provide a revised bridge facility with a SB pedestrian walkway, a NB pedestrian walkway and a total of thirteen 13 lanes: two SB passenger, two SB commercial, five NB passenger, and four NB commercial.

**No-Build Alternative**

The “No Build” Alternative proposes that the bridge will not be widened. The No Build Alternative would not address the current traffic congestion at the Calexico East POE and will not reduce border delays and emissions from idling vehicles.
Figure 1: Imperial State Route 7 Calexico Bridge Widening Project Location.
Figure 2: Aerial showing the proposed bridge widening at the Calexico East Port of Entry along State Route 7.
3. Study Methods

In order to comply with the provisions of various State and Federal environmental statutes and executive orders, the potential impacts to natural resources of the region were investigated and documented. Potential impacts to resources were analyzed based on the proposed design of the project and ecological resources identified in the field surveys.

The BSA was defined as the area temporarily affected by the proposed project plus a 300-foot buffer and the proposed staging/storage areas (See Figure 2). Actions considered when determining the BSA include ground disturbance, equipment access, right-of-way, air quality impacts, lighting effects, and noise disturbances both during construction and after completion of the project. The project’s BSA totals approximately 65 acres of bare ground, disturbed habitat, and channel of the All American Canal.

Study methods included both reconnaissance level field inspection and query of several biological databases. The BSA was inspected by Michael Galloway, Caltrans Associate Biologist, during a field visit on April 10, 2019 to identify habitat types, potential wetlands, potential for rare species, and potential problem areas for the study. Literature reviews included the California Natural Diversity Data Base (CNDDB) (California Department of Fish and Wildlife [CDFW] 2019); United States Fish and Wildlife Service (USFWS), (USFWS 2019); and the California Native Plant Society (CNPS) Online Rare Plant Inventory (CNPS 2019).

Federal and State laws, the Federal Endangered Species Act (FESA) (16 U.S.C. section 1531 et seq.) and the California Endangered Species Act (CESA) (Fish and Game Code section 2050 et seq.), respectively, provide protection for sensitive species. A list of sensitive wildlife and plant species potentially occurring within the BSA was compiled to evaluate potential impacts resulting from the project. The list was developed based on information compiled from the USFWS, CDFW, CNDDB, CNPS, and other current publications. The list shown in Table 1 includes species, their protection status, habitat information, likelihood of occurrence within the BSA, and supporting comments as necessary. Based on the availability of suitable habitat within the species’ known range, the likelihood of a given species occurring in the BSA was determined.

Disturbed habitat, consisting mainly of bare ground, was the primary habitat found within the BSA. The All American Canal, a CDFW jurisdictional waters, consisting of riverine habitat and providing limited habitat for sensitive species, were preliminarily delineated within the BSA. (Figure 2).
4. Environmental Setting

The majority of the project site consists of the existing SR-7, which is surrounded by agricultural fields near the town of Niland, Imperial Valley.

The project is situated in the Calexico SE 7.5 minute USGS quadrangle. The average annual air temperature in this area is 79°F, the average frost-free period is 300 days, and the average annual rainfall is 2.5 inches (Western Regional Climate Center 2019).

**Biological Study Area**

Land surrounding the BSA consists of agricultural fields. The All American Canal conveys water from the Colorado River into the Imperial Valley.

4.1 Description of the Existing Biological and Physical Conditions

Habitat immediately adjacent to the northbound Calexico Bridge consists mainly of disturbed habitat with bare ground and non-native vegetation, including eucalyptus (*Eucalyptus* spp.), athel tamarisk (*Tamarix aphylla*), Bermuda grass (*Cynodon dactylon*), and salt heliotrope (*Heliotropium curvassavicum*). The vegetation within the All American Canal consist of salt cedar (*Tamarix ramosissima*), cattail (*Typha* spp.), and common reed (*Phragmites australis*).

The general soil type throughout both project areas range from fine sandy loam to fine sand, with slopes ranging between 0 and 2 percent. These types of soils are typically seen on floodplains and alluvial basin floors. The runoff is slow and the possibility of erosion is slight. These soils are used for croplands and desert recreation.

4.2 Regional Species and Habitats of Concern

Plant and animal species are considered to have special-status if they have been listed as such by federal or state agencies or one or more special interest groups, such as the CNPS.

The USFWS maintains a database regarding federally listed endangered and threatened species and critical habitats. The USFWS Species Report and Information, Planning, and Consultation System (accessed March 22, 2019) identified five federal Endangered and Threatened species potentially near the project area (See Appendix A: USFWS Trust Resources).

The CDFW publishes comprehensive lists for state-listed plants and animals through the CNDDDB. These lists include taxa officially listed as state endangered, threatened, or rare, and their vicinity of occurrence. Sensitive species within the Calexico SE 7.5 minute USGS quadrangle are shown in Table 1 and Appendix B.
CNPS has an inventory of rare and endangered plants that plays a significant role in promoting scientific research, conservation planning, and the effective enforcement of environmental laws that deal with plant conservation. The CNPS online inventory was queried for rare plants that could be found within the Calexico SE 7.5 minute USGS quadrangle (CNPS 2019).

Eleven sensitive species (three plants, one reptile, three birds, and four mammals) were evaluated. A summary of the federal and state special-status species found to have potential to occur within the BSA are listed in Table 1. This list was compiled based on information received from the USFWS, CDFW, and CNPS. A determination of the species’ potential to occur within the BSA is based on regional information regarding the species’ distributions, ecological requirements, and preferences for elevations and habitats.

Animal species observed onsite during the April 10, 2019 field survey include common grackle (*Quiscalus quiscula*), black phoebe (*Sayornis nigricans*), American coot (*Fulica americana*), European starling (*Sturnus vulgaris*), mourning dove (*Zenaida macroura*), snowy egret (*Egretta thula*), and northern mockingbird (*Mimus polyglottos*), with rock doves (*Columba livia*) nesting under the bridge and cliff swallow (*Petrochelidon pyrrhonota*) nests on both sides of the bridge. The swallows were mostly on the southbound side of the bridge.

![Ground photo of the northbound side of the State Route 7 Calexico Bridge from south of the All American Canal.](image)

**Figure 3: Ground photo of the northbound side of the State Route 7 Calexico Bridge from south of the All American Canal.**
Figure 4: Ground photo of the northbound side of the State Route 7 Calexico Bridge north of the All American Canal showing the sparse upland vegetation in the area.

Figure 5: Ground photo of the northbound side of the State Route 7 Calexico Bridge south of the All American Canal with cliff swallow nests.

Figure 6: Ground photo of the southbound side of the State Route 7 Calexico Bridge south of the All American Canal with cliff swallows and nests.
### Table 1: Species and Habitats of Concern within the Project Vicinity

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>General Habitat Description</th>
<th>Potential for Occurrence and Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Abronia villosa var. aurita</em></td>
<td>Chaparral sand-verbena</td>
<td>Fed: CA: CNPS:</td>
<td>Chaparral</td>
<td>Coastal scrub</td>
</tr>
<tr>
<td><em>Astragalus sabulonum</em></td>
<td>Gravel milkvetch</td>
<td>Fed: CA: CNPS:</td>
<td>Desert dunes</td>
<td>Mojavean desert scrub</td>
</tr>
<tr>
<td><em>Euphorbia abramsiana</em></td>
<td>Abram’s spurge</td>
<td>Fed: CA: CNPS:</td>
<td>Mojavean desert scrub</td>
<td>Sonoran desert scrub</td>
</tr>
<tr>
<td><strong>Animals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Phrynosoma mcallii</em></td>
<td>Flat-tailed horned lizard</td>
<td>Fed: FT None</td>
<td>Desert dunes</td>
<td>Mojavean desert scrub</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Athene cunicularia</em></td>
<td>Burrowing owl</td>
<td>Fed: CA: None</td>
<td>Open, dry annual or perennial grasslands</td>
<td>deserts</td>
</tr>
<tr>
<td><em>Rallus longirostris yumanensis</em></td>
<td>Yuma clapper rail</td>
<td>Fed: FE ST</td>
<td>Freshwater marsh</td>
<td>Marsh and swamp</td>
</tr>
<tr>
<td><em>Setophaga petechial</em></td>
<td>Yellow warbler</td>
<td>Fed: CA: None</td>
<td>Riparian forest</td>
<td>Riparian scrub</td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Eumops perotis californicus</em></td>
<td>Western mastiff bat</td>
<td>Fed: CA: None</td>
<td>Chaparral</td>
<td>Cismontane woodland</td>
</tr>
<tr>
<td><em>Lasiurus xanthinus</em></td>
<td>Western yellow bat</td>
<td>Fed: CA: None</td>
<td>Desert wash</td>
<td>Presumed Absent: No suitable habitat occurs within the BSA. Species not observed during biological surveys.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>General Habitat Description</td>
<td>Potential for Occurrence and Rationale</td>
</tr>
<tr>
<td>-----------------</td>
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</tr>
<tr>
<td><em>Nyctinomops femorosaccus</em></td>
<td>Pocketed free-tailed bat</td>
<td>Fed: CA:</td>
<td>Joshua tree woodland</td>
<td>Presumed Absent: No suitable habitat occurs within the BSA. Species not observed during biological surveys.</td>
</tr>
<tr>
<td><em>Taxidea taxus</em></td>
<td>American badger</td>
<td>Fed: CA:</td>
<td>Desert dunes</td>
<td>Presumed Absent: No suitable habitat occurs within the BSA. Species not observed during biological surveys.</td>
</tr>
</tbody>
</table>

**Species in bold are species on the USFWS List (Appendix A)**

**Federal Designations (Fed):**
- FE: Federally listed, endangered
- FT: Federally listed, threatened

**State Designations (CA):**
- SE: State-listed, endangered
- ST: State-listed, threatened
- SSC: State-listed, species of special concern

**California Native Plant Society (CNPS) Designations:**

*Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions.*

1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
3: Plants about which need more information; a review list.
4: Plants of limited distribution; a watch list.

**Plants 1B, 2, and 4 extension meanings:**
- 1. Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 2. Fairly endangered in California (20-80% occurrences threatened)
- 3. Not very endangered in California (<20% of occurrences threatened or no current threats known)

**Potential for Occurrence Criteria:**
- **Present:** Species was observed on site during a site visit or focused survey.
- **High:** Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site.
- **Low-Moderate:** Either low quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence occurs within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search.
- **Presumed Absent:** Focused surveys were conducted and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.

**Source:** United States Fish and Wildlife Service (2013), California Natural Diversity Data Base (2013), California Native Plant Society Electronic Inventory (CNPS 2013).
4.3 Vegetation

Based on the USFWS database and CNDDB searches, the habitat present in the BSA is sub-optimal and does not have the potential to provide habitat for the three plant species listed in Table 1.

4.4 Animals

Habitats within the BSA are not accommodating for many wildlife species due to its disturbed nature and surrounding agricultural habitat to the east; however, the bridge structure provides nesting habitat for cliff swallows. Resident species are defined as those wildlife species that spend their entire life cycle within a single habitat or habitat complex.

The habitat present in the BSA has the potential to support the federally endangered and state threatened Yuma Ridgway’s rail. However, the habitat within the area that could potentially support Yuma Ridgway’s rail is suboptimal. Yuma Ridgway’s rail was not observed during biological surveys of the BSA. The nearest occurrence of Yuma Ridgway’s rail is approximately 1 mile away from the project footprint in the Alamo River.

Following analysis of the sensitive wildlife species listed in Table 1 based on USFWS database and CNDDB searches and biological field surveys of the BSA, it was determined that the BSA does not provide adequate habitat any of the sensitive species; therefore, no impacts are anticipated. One federally listed animal species has the potential to occur onsite. The project will not result in impacts to freshwater marsh and marsh and swamp habitat suitable for the federally endangered and state threatened Yuma Ridgway’s rail. No permanent impacts will occur to the All American Canal as the construction of the new bridge abutments east of the existing bridge and extension of the sheet piling occur outside of All American Canal.
5. Project Impacts

The BSA comprises approximately 65 acres. The proposed project will not permanently impact the All American Canal. The project does not have the potential of reducing habitats of fish or wildlife species, nor will it eliminate any special-status plants or reduce the number or range of endangered plant or animal species.

No permanent of temporary impacts will occur to the All American Canal as construction of the abutments and extension of the sheet pile occurs outside of the active channel.

This project will not disturb the overall natural environmental of the project area or surrounding areas.
6. Mitigation and Minimization Measures

The following measures will be implemented in order to ensure that adverse effects on biological resources within the vicinity of the project are avoided:

**Sensitive Species**

Sensitive species within the BSA and adjacent properties were not detected during surveys conducted in the area. Assessment of the habitat within the BSA combined with previous information obtained from the USFWS and CNDDDB indicate a limited potential for sensitive species to occur within the BSA.

The USFWS and the National Marine Fisheries Service/NOAA Fisheries implement the federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from “take” (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation. Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

The California Endangered Species Act of 1970 (CESA) (California Fish and Game Code §2050 et seq., and CCR Title 14, §670.2, 670.51) prohibits “take” (defined as hunt, pursue, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for state-listed species. Under CESA, CDFW has the responsibility for maintaining a list of threatened and endangered species designated under state law (CFG Code 2070). CDFW also maintains lists of species of special concern, which serve as “watch lists.” Pursuant to requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any state-listed species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact.
impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation.

The following measures will be implemented to avoid impacts to sensitive species:

**Measure BIO-1:** Before project activities start, biologists will conduct appropriate surveys within the BSA before the construction begins. If project plans change, which may result in potential effects to federal or state listed species; if federal or state listed species are detected; or if additional information on the distribution of federal or state listed or proposed species becomes available that results in potential effects as a result of construction, Caltrans will initiate Section 7 consultation with USFWS for federally listed species or a Section 2081 Incidental Take Permit with CDFW for state listed species as appropriate.

**Aquatic Resources**

Wetlands and other waters are protected under a number of laws and regulations. The Clean Water Act (33 U.S.C. 1344) regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency. The Regional Water Quality Control Boards (RWQCB) were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. The All American Canal, as it was a man-made structure constructed in upland habitat, is not a USACE or RWQCB jurisdictional waters.

Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The following measures will be implemented to avoid impacts to aquatic resources:
**Measure BIO-2:** All American Canal, outside of Caltrans ROW, will be designated as environmentally sensitive areas (ESAs).

**Measure BIO-3:** The temporary construction staging areas and equipment storage shall be strategically placed to avoid impacts to jurisdictional waters.

**Avian Species**

Migratory bird species are protected by the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) which makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). In addition, section 33503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs or any bird, except as otherwise provided by the California Fish and Game Code or other regulation. Although bird nests were detected within the project area, no impacts to MBTA birds are expected. The following avoidance measure will be implemented prior to vegetation removal:

**Measure BIO-4:** Vegetation clearing and removal of swallow nests should occur outside of the bird breeding season; however, if shrub or tree removal or swallow nest removal is to take place during the breeding season (February 1–August 31), a pre-construction breeding bird survey shall be conducted within 7 days of these activities. A no-disturbance buffer shall be established around any active nest or breeding pair territory to limit the impacts of construction activities. The buffer shall not be removed until after the breeding season or until after a qualified wildlife biologist determines that the young have fledged (usually late June to mid-July). The extent of these buffers shall be determined by the biologist (coordinating with Caltrans, USFWS and CDFW) and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species.

**Invasive Species**

In February 1999, Executive Order 13112 was signed, requiring federal agencies to work on preventing and controlling the introduction and spread of invasive species. Protective measures, to ensure that invasive species are not introduced or spread, include landscaping with a Caltrans recommended seed mix from locally adapted species; the use of site-specific materials adapted to local conditions; and the cleaning of construction equipment.

**Measure BIO-5:** Best management practices for this project shall be implemented to prevent the spread of invasive plant species.
Measure BIO-6: All trash shall be kept in wildlife-proof receptacles and any non-natural food and water sources will not be left unattended for the duration of the project construction.
7. Permits Required

There are no proposed permanent or temporary impacts to the All American Canal as a result of the project. The proposed work will occur outside of the active channel and, thus, will not require permits from the California Department of Fish and Wildlife. The All American Canal, which is a man-made structure built wholly in uplands, is not within the jurisdiction of the U.S. Army Corps of Engineers and the California Regional Water Quality Control Board.
8. Conclusion

Project activities are mostly in the right-of-way of the existing SR-7 which contains disturbed habitat. The BSA does not provide suitable habitat for any sensitive species; therefore no impacts are anticipated. No permanent or temporary jurisdictional waters impacts are anticipated.
9. References


Appendix A: U.S. Fish and Wildlife Services Species List
In Reply Refer To: April 15, 2019
Consultation Code: 08ECAR00-2019-SLI-0794
Event Code: 08ECAR00-2019-E-01852
Project Name: State Route 7 Calexico Bridge Widening

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.
A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/ eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtw.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440
Project Summary

Consultation Code: 08ECAR00-2019-SLI-0794

Event Code: 08ECAR00-2019-E-01852

Project Name: State Route 7 Calexico Bridge Widening

Project Type: TRANSPORTATION

Project Description: This project would include:

- Constructing a new structure to the east (tying into the existing bridge) to provide an additional two commercial vehicle lanes (for a total of four NB commercial vehicle lanes on the new structure), an 8-foot shoulder and barriers;
- Widening and realigning approach and departure roadways to align with the new lanes on the bridge;
- Shifting the NB pedestrian walkway to the east on the existing structure; This would facilitate the addition of two new NB passenger vehicle lanes on the existing bridge structure. The existing concrete barriers separating the pedestrian walkway from the vehicular traveled way would have to be demolished and reconstructed to the east of its current location. The thickness of the concrete deck would have to be reduced at the location of the existing NB pedestrian walkway.
- Reconstructing a portion of existing NB pedestrian walkway (north of existing bridge), including potential removal of rock ornament, segments of concrete barrier, and steel fence.
- Constructing a NB pedestrian walkway canopy on the existing structure;
- Constructing embankment north and south of the bridge;
- Constructing bridge abutments to support the new structure north and south of the bridge; It is probable that the foundation of the new abutments will consist of precast concrete pile foundation system.
- Extending sheet piling to the east, on the north and south ends of the bridge.
- Constructing and realigning appurtenant structures on the bridge and roadways (e.g. signage and lighting);
- Extending an existing cross-culvert, north of the existing bridge, to the east to maintain existing drainage pattern;
- Modifying drainage systems, as necessary, to maintain the existing drainage pattern;
- Extending underpass tunnels to the east, south and north of the bridge;
- Performing any needed maintenance on the existing structure (this may include bearing plate bolts at the existing abutments);
- Modifying small areas of landscaping (e.g. roadways and along the pedestrian walkway); and
• Replacing in kind any items modified by construction actives. There is a staging area being considered on the northeast portion of the GSA property. The result of this project would provide a revised bridge facility with a SB pedestrian walkway, a NB pedestrian walkway and a total of thirteen 13 lanes: two SB passenger, two SB commercial, five NB passenger, and four NB commercial.

Project Location:
Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/32.67342188885222N115.38770944274358W

Counties: Imperial, CA
Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries\(^1\), as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office’s jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

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<tr>
<th>NAME</th>
<th>STATUS</th>
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<tbody>
<tr>
<td>Yuma Clapper Rail <em>Rallus longirostris yumanensis</em></td>
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</table>

No critical habitat has been designated for this species.
Species profile: [https://ecos.fws.gov/ecp/species/3505](https://ecos.fws.gov/ecp/species/3505)

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE’S JURISDICTION.
Appendix B: California Natural Diversity Database
<table>
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<tr>
<th>Name (Scientific/Common)</th>
<th>CNDDDB Ranks</th>
<th>Listing Status (Fed/State)</th>
<th>Other Lists</th>
<th>Elev. Range (ft.)</th>
<th>Total EO's</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>X</th>
<th>U</th>
<th>Historic &gt; 20 yr</th>
<th>Recent &lt;= 20 yr</th>
<th>Extant</th>
<th>Poss. Extirp.</th>
<th>Extirp.</th>
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Memorandum

To: JOHN SLATTON
   Associate Environmental Planner
   Project Analysis, Branch A

From: TYLER HO, P.E.
   Transportation Engineer (Civil)
   Environmental Engineering: Hazardous Waste

Date: June 7, 2019
File: 11-43050
       11-1800-0265
       11-IMP-007
       PM 0.0

Subject: HAZARDOUS WASTE REVIEW OF CALEXICO EAST PORT OF ENTRY

The proposed project is to widen the existing structure (the off-system bridge) over the All-American Canal near the USA/Mexico border approximately 0.7 miles south of State Route (SR) 7. There are no new lanes north of the inspection booths leading to the SR 7. The widened structure would accommodate an additional two new commercial vehicle lanes (for a total of four northbound (NB) commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

The project was reviewed with EnviroStor and GeoTracker databases. The EnviroStor review revealed that there are currently no permits or corrective actions at hazardous waste facilities or site cleanup projects within the project limits. The GeoTracker review revealed that no sites within the project limits would impact groundwater or have the potential to impact groundwater.

Other hazardous waste issues affecting the project include:

Aerially deposited lead (ADL)
ADL field survey was conducted on April 10 and 11, 2019, Soil samples were collected at average depth of 0.5 feet below. Soil testing for ADL using the field portable x-ray fluorescence (XRF) instrument was used to screen the 32 soil samples for total lead for this project. The ADL concentration in all potential disturbance areas is below 50mg/kg. The results determined the soil within project limits is "clean soil" (unrestricted use). SSP 7-1.02K(6)(j)(iii) Earth Material Containing Lead shall be followed.

Import Soil
The import of soil to a project must be strictly controlled as import soil exceeding the minimum soluble or total lead concentration (80 mg/kg) requires special handling and management and imparts a permanent liability to Caltrans. Soil imported for the project is subject to the conditions of the Agreement upon reaching the project area.

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Import soil from projects outside the direct control of Caltrans (i.e. local projects) must be characterized by sampling and analysis equivalent to that conducted by Caltrans when evaluating soil for a project. **Soil exceeding the minimum soluble or total lead concentration of the Agreement must not be imported into the project area.**

District Hazardous Waste shall review the import soils sampling data to ensure the results were developed using appropriate methodology.

For imported borrow from (1) a noncommercial source or (2) a commercial source located outside of the State, submit an imported borrow plan for each imported borrow site before placing the borrow. The imported borrow plan must include the details as specified in SSP 19-7.

Sample and analyze imported borrow from (1) noncommercial sources and (2) commercial sources located outside of the State:
1. Before bringing the borrow to the job site
2. As described in the imported borrow plan

The analytical test results must demonstrate that the imported borrow:
1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has a total lead concentration at or below 80 mg/kg
4. Is free of possible contaminants identified in the imported borrow plan
5. Complies with the RWQCB’s basin plan for the job site location
6. Complies with the RWQCB’s water quality objectives for the job site location

**Air Pollution Control (Asbestos NESHAP regulation, 40 CFR, Subpart M, Section 61.145)**
If the project involves removal, stripping, or disturbing of potentially asbestos containing bridge structural components exceeding 160 square feet therefore written notification is required to the US EPA and California Air Resource Board (ARB). SSP 14-9.02 Air Pollution Control must be followed.

**Asbestos-Containing Construction Materials (ACCM) in Bridges**
Project work that may cause disturbance or removal of asbestos include the following:
- Replace bridge rails – shims potentially containing asbestos
- Replace / extend bridge deck and concrete barrier – concrete potentially containing ACCM

An asbestos survey of the bridge structure is required to determine if any asbestos is present in any of the potential ACCM elements (such as shims, structural concrete bridge deck, approaches etc.) prior to any these elements being disturbed. Task Order # 6 is currently underway. Results

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from Task Order #6 will determine the appropriate specification and nSSP 14-11.16 Asbestos-Containing Construction Materials (ACCM) in Bridges may be required.

Once the results of the task order have been submitted, and the report interpreted, Environmental Engineering will coordinate with Design on the development of final contract documents.

**Lead-Based Paint (LBP):** LBP can pose a health hazard if workers are exposed to it during construction activities, testing of bridge rail support components will be conducted under TO #6. The results from Task Order #6 will determine the appropriate specifications and nSSP 14-11.13 Disturbance of Existing Paint Systems on Bridges may be required.

Once the results of the task order have been submitted, and the report interpreted, Environmental Engineering will coordinate with Design on the development of final contract documents.

**Thermoplastic, traffic stripe, and pavement marking**
If traffic stripes and/or pavement markings are removed while grinding, SSP 36-4 Residue Containing Lead from Paint and Thermoplastic shall be followed. If traffic stripes and/or pavement markings are removed separately from grinding, SSP 84-9.03C Remove Traffic Stripes and Pavement Markings Containing Lead shall be followed. Results from Task Order #6 will determine the appropriate specification.

Once the results of the task order have been submitted, and the report interpreted, Environmental Engineering will coordinate with Design on the development of final contract documents.

A Lead Compliance Plan, prepared by a Certified Industrial Hygienist (CIH), must be provided by the Contractor and implemented for all workers handling hazardous or non-hazardous soil as well as removal/application of any hazardous or non-hazardous lead-based paint, Asbestos-Containing Construction Materials in Bridges, thermoplastic, painted traffic stripe, and/or pavement marking (Bid Item 070030).

**Groundwater sampling**
In addition, groundwater sampling in support of potential construction dewatering activities, related to NPDES permit requirements, will be included in the Task Order #6.

Once the results of the task order have been submitted, and the report interpreted, Environmental Engineering will coordinate with Design on the development of final contract documents.

The Colorado River Regional Water Quality Control Board does not have jurisdiction over the All-American Canal (an irrigation water canal).

Once the groundwater results are obtained from the Task Order 6, coordination with the Imperial Irrigation District (IID) and Bureau of Reclamation (BofR) may be required to determine if returning dewatering water directly into the All-American Canal or drainage canals is acceptable.

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Project-specific information such as timing, location, and approximate amount may be required to determine next steps.

*The issues identified in this document are not considered as mitigation under CEQA. These issues are routine construction issues that are handled in the construction contract through inclusion of standard special provisions. This project can proceed with very little risk of impacts due to unanticipated hazardous wastes or other contamination related issues.*

This determination is based on the information provided in the Environmental Study Request from Shay Harrison dated March 20, 2019. Please submit a supplemental request for a hazardous waste assessment to cover any changes in the nature or scope of the project.

We do not anticipate any other hazardous waste concerns on this project. If you have any questions or comments, please contact me at (619) 688-3180.

c: Ken Johansson, Branch Chief Environmental Engineering, Caltrans District 11

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability"
Memorandum

To: JOHN SLATTON  
Environmental Planner  
District 11 Environmental Planning, Branch A

From: MARLENE GROS  
Landscape Associate PLA # 2970  
District 11 Visual Analysis, Environmental Division

Date: July 16, 2019

File/Site 11-SD-X  
1118000265  
EA 430500  
PM 0.0

Subject: Calexico East POE Bridge Widening Project  
VISUAL & LANDSCAPE IMPACT ASSESSMENT

PURPOSE
The purpose of this study is to assess the visual impacts of the proposed project and to propose measures to reduce any associated adverse visual impacts.

PROJECT DESCRIPTION
Imperial County Transportation Commission (ICTC), Federal Highways Administration (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure approaching the Calexico East Port of Entry (POE) over the All-American Canal near the USA/Mexico border to facilitate flow to the existing inspection booths. There are no new inspection booths or lanes north of the booths leading to the State Highway System (State Route 7) being proposed in this project. The widened structure would accommodate a total of nine northbound (NB) vehicle lanes, 8-foot shoulders, and a concrete barriers. The project proposes four new NB vehicle lanes (two commercial and two passenger). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property.

The result of this project would provide a larger structure which will accommodate a total of thirteen 13 lanes: two southbound (SB) passenger, two SB commercial, five NB passenger (3 existing and 2 new), and four (4) NB commercial (2 existing and 2 new). The existing NB and SB pedestrian walkways will remain with the NB pedestrian walkway shifting slightly to the east.

This project would include:
- Constructing a new structure to the east (tying into the existing bridge);

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• **Providing two additional commercial vehicle lanes** (for a total of four NB commercial vehicle lanes),
• **Providing two additional passenger vehicle lanes** (for a total of five NB passenger vehicle lanes),
• **Providing 8-foot shoulders and barriers;**
• **Shifting the NB pedestrian walkway to the east on the existing structure to ensure pedestrian flow.** The existing concrete barriers separating the pedestrian walkway from the vehicular traveled way would have to be demolished and reconstructed to the east of its current location. The thickness of the concrete deck would have to be reduced at the location of the existing NB pedestrian walkway.
• **Reconstructing a portion of existing NB pedestrian walkway (north of existing bridge),** including potential removal of rock ornament, segments of concrete barrier, and steel fence.
• **Constructing a NB pedestrian walkway canopy on the existing structure;**
• **Widening and realigning approach and departure roadways to align with the four new vehicle lanes and five existing vehicle lanes on the bridge;**
• **Constructing embankment north and south of the bridge;**
• **Constructing bridge abutments to support the new structure north and south of the bridge;** it is probable that the foundation of the new abutments will consist of precast concrete pile foundation system.
• **Extending Sheet piling to the east, on the north and south ends of the bridge.**
• **Constructing and realigning appurtenant structures on the bridge and roadways (e.g. signage and lighting);**
• **Extending an existing cross-culvert, north of the existing bridge, to the east to maintain existing drainage pattern;**
• **Modify drainage systems, as necessary, to maintain the existing drainage pattern;**
• **Extending underpass tunnels to the east, south and north of the bridge;**
• **Performing any needed maintenance on the existing structure (this may include but not be limited to bearing plate bolts at the existing abutments);**
• **Minimal landscape modifications (e.g. roadways and along the pedestrian walkway);** and
• **Replace in kind any items modified by construction activities.**

There is a staging area being considered on the northeast portion of the GSA property. The project structure design would facilitate the potential future construction of a shade canopy over the relocated NB pedestrian walkway. The potential shade canopy would be mounted on the concrete barriers which

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separate the pedestrian walkway from vehicular traffic. The canopy design would be by others. The design would conform to the “Land Port of Entry / Whole Building Design Guide”.

EXISTING VISUAL RESOURCES AND VIEWER GROUPS

The project would widen the existing structure of the Calexico East Port of Entry (POE) Bridge over the All-American Canal near the USA/Mexico border. The desert setting consists of tan colored soils with scattered trees. The bridge user has low quality views of the transportation facility including tall, concrete barriers with slotted vertical faces, concrete bollards, electronic message signs on truss support systems, tall electrolizers with an oversized light mast on a dark straight post; and a tightly woven chain link mesh with four-strands of barb wire. The northbound traffic flows toward the existing inspection booths which lead to the State Highway System (State Route 7). The booths are shaded by a graceful tension membrane canopy with a scalloped profile over the passenger and commercial vehicle lanes. The streamlined canopy is created by a post, frame and wire system. The cream-colored canopy and shade below are both the destination and a desirable focal point for bridge users. Pedestrian traffic is segregated on SB and NB walkways. The SB walkway is adjacent to the outside bridge barrier on the west side of the bridge. The NB walkway is in the middle of the bridge. Motorists and truck traffic are the primary viewer groups. Pedestrians walking on the bridge are the secondary viewer groups.

CHANGE TO VISUAL QUALITY/CHARACTER

The proposed bridge widening would add about 60 feet to the existing 159' wide bridge, which would increase the visual prominence and urban character of the border crossing. The proposed widening (paving, walkway, concrete barriers and bridge abutment) would cause a low level of change to visual character. However, the widening and associated glare would decrease the visual quality of the bridge for all users. The existing NB pedestrian walkway is flanked by 5 traffic lanes to the west and 4 lanes to the east. The shifted NB pedestrian walkway would have 7 passenger vehicle lanes to the west and 6 commercial vehicle lanes to the east. The additional lanes will increase the number of vehicles which block onsite views to the east. This will reduce the visual quality for NB pedestrians.

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Additional lighting may be required on and off the bridge. The lighting may contribute to light trespass into the sky.

Soil disturbance would result from bridge widening, extension of underpass tunnels, drainage system work, and cross culvert work. However, the soils have no vegetative cover and the visual character of the area would remain unchanged. The project should make every effort to avoid impacts to existing trees.

The project is considering a staging area at a fenced property. The site has solar panels in the center and of single row of closely spaced tall trees around the perimeter. The majority of the trees are alive. The project proposes to install a gate and remove some “dead” trees to provide construction access to the site. The project would remove the gate and replace the fence at the end of construction.

**VISUAL IMPACT ASSESSMENT**

The proposed bridge widening, and project features are compatible with the existing visual context of the facility. The anticipated change to visual character is considered low. The existing visual quality is considered low and the proposed project features will have a minimal adverse impact on the quality of the setting. The change to visual quality would be considered low.

Due to the quantity of viewers experiencing the project, the viewer exposure is considered high. While the project will increase the paved area within the existing view, these features are consistent with the existing visual environment and, therefore, viewer sensitivity to the anticipated visual change is considered low.

Collectively, the ‘low’ change in visual resources combined with the ‘low’ viewer response to those changes indicates the project will result in a ‘low’ visual impact, with the inclusion of impact avoidance measures.

**PROJECT FEATURES TO REDUCE IMPACTS**

There would be no substantial visual impacts to the project locations and surrounding areas with the inclusion of the following avoidance measures as project features.

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Structure Aesthetics:
The design would conform to the "Land Port of Entry / Whole Building Design Guide".

The bridge widening shall be visually compatible with the existing bridge. This may include railing, fencing, exterior girders, soffit, wing walls and barriers. The exposed concrete surface treatment and color of the bridge widening, underpass tunnels, reconstructed border wall, barriers, bollards, etc. shall be similar to the existing facilities. The color and finish of light fixtures and galvanized features such as fencing would be similar to the existing features. Galvanized fencing may be stained with Natina Steel to achieve a mottled brown color to reduce glare and blend with the desert color palette.

Lighting:
Lighting shall be shielded, low-Kelvin, energy efficient LED. The shielding would ideally be located at the back and side of the fixtures to limit light trespass into the sky.

Landscape Repair and Tree Protection:
Plans shall show tree canopies with a note to protect in place. Grading, access and staging areas shall be designed to minimize removal of trees. No equipment, material storage, vehicles or access paths are allowed under tree canopies. Limited access under tree canopies is allowed for pruning. Repair impacts to existing irrigation and landscaping, if the project proposes to use the solar panel property, then the access gate location should be selected to avoid removal or damage to living trees.

Drainage Facilities:
Ditch lining and drain aprons shall be colored tan to blend with native soils.
AIR QUALITY REPORT

On State Route 7 South of The Calexico East Port of Entry
(In the City of Calexico in Imperial County)
EA 11- 43050 (EFIS ID 1118000265 -PPNO 1335)
IMP Route 007 PM: 0.0

Prepared by
Tyler Ho
Caltrans/Environmental Engineering
4050 Taylor Street San Diego,
California 92101

June 2019
This document contains blank pages to accommodate two-sided printing.
AIR QUALITY REPORT

IMPERIAL COUNTY, CALIFORNIA
CALIFORNIA DEPARTMENT OF TRANSPORTATION DISTRICT 11

E.A. 43050
EFIS 1118000265
PPNO 1335

Reviewed by: [Signature]
Kenneth Johansson, P.E.
Caltrans District 11- Environmental Engineering Branch
4050 Taylor Street
San Diego, California 92101
Date: 6-26-2019

Prepared by: [Signature]
Tyler Ho, P.E.
Caltrans District 11- Environmental Engineering Branch
4050 Taylor Street
San Diego, California 92101
Date: 6-28-2019
For individuals with sensory disabilities, this document is available in alternative formats. Please call or write to the California Department of Transportation, Attn: Kenneth Johansson, or use the California Relay Service TTY number, 711, or 1-800-735-2922.
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<td>NO₂</td>
<td>Nitrogen dioxide</td>
</tr>
<tr>
<td>NOA</td>
<td>Naturally occurring asbestos</td>
</tr>
<tr>
<td>NOₓ</td>
<td>Nitrogen oxide</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operations and maintenance</td>
</tr>
<tr>
<td>O₃</td>
<td>Ozone</td>
</tr>
<tr>
<td>OMB</td>
<td>White House Office of Management &amp; Budget</td>
</tr>
<tr>
<td>OPR</td>
<td>Office of Planning and Research</td>
</tr>
<tr>
<td>PM</td>
<td>Particulate matter</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Particulate matter less than 10 microns in diameter</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Particulate matter less than 2.5 microns in diameter</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>Protocol</td>
<td>Transportation Project-Level Carbon Monoxide Protocol</td>
</tr>
<tr>
<td>ROGs</td>
<td>Reactive organic gases</td>
</tr>
<tr>
<td>RTP</td>
<td>Regional Transportation Plan</td>
</tr>
<tr>
<td>RTPA</td>
<td>Regional Transportation Planning Agency</td>
</tr>
<tr>
<td>SB</td>
<td>Senate Bill</td>
</tr>
<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
</tr>
<tr>
<td>SO$_2$</td>
<td>Sulfur dioxide</td>
</tr>
<tr>
<td>TACs</td>
<td>Toxic air contaminants</td>
</tr>
<tr>
<td>TDM</td>
<td>Transportation Demand Management</td>
</tr>
<tr>
<td>TSM</td>
<td>Transportation System Management</td>
</tr>
<tr>
<td>TIP</td>
<td>Transportation Improvement Program</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USDOT</td>
<td>United States Department of Transportation</td>
</tr>
<tr>
<td>U.S. EPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>UV</td>
<td>Ultraviolet</td>
</tr>
<tr>
<td>VHT</td>
<td>Vehicle hours traveled</td>
</tr>
<tr>
<td>VMT</td>
<td>Vehicle miles traveled</td>
</tr>
<tr>
<td>VOCs</td>
<td>Volatile organic compounds</td>
</tr>
</tbody>
</table>
1. Proposed Project Description

1.1 Introduction

Imperial County Transportation Commission (ICTC), Federal Highways (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure of the Calexico East Port of Entry (POE) Bridge over the All-American Canal near the USA/Mexico border to facilitate flow through the existing inspection booths. There are no new lanes proposed north of the inspection booths leading to the State Highway System (State Route 7). The new structure would accommodate a total of four northbound (NB) commercial vehicle lanes, an 8-foot shoulder, and a concrete barrier. The widened structure would accommodate an additional two new commercial vehicle lanes (for a total of four NB commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA) and FHWA is the lead under National Environmental Policy Act (NEPA).

1.2 Location and Background

The metropolitan planning organization responsible for the preparation of regional transportation plans and the associated air quality analyses is the Southern California Association of Governments (SCAG). The current applicable regional transportation plans are the 2016/2040 Fiscally Constrained Regional Transportation Plan / Sustainable Community Strategies (2016/2040 RTP/SCS), adopted on April 7th, 2016 and the 2019 Federal Transportation Improvement Program (2019 FTIP), received Federal approval on December 17th, 2018. A proposed project is identified in both the RTP and the FTIP which conforms to the SIP.

The project site is located in the Salton Sea Air Basin (SSAB). The SSAB extends through two different districts. The South Coast Air Quality Management District consists of the Coachella Valley, and the Imperial County Air Pollution Control District. For the purposes of this report, the focus will be the Imperial County portion of the SSAB. The SSAB meets California standards for all criteria air pollutants, except O3, particulate matter sized 10 microns or less (PM10), and particulate matter sized 2.5 microns or less (PM2.5).

The SSAB has been designated as a “moderate” nonattainment area for the 8-hour O3 standard. On December 18, 2014 the California Air Resources Board approved the Imperial County 2013 State Implementation Plan for the 2006 24-hour PM2.5 moderate nonattainment Area, and as a
1.3 Purpose and Need

The main purpose of this project is to address immediate freight efficiency needs near the Calexico POE. The Project improvements are a critical component of the region's border development strategy to make California's freight system more efficient, competitive, and environmentally sustainable. Widening the bridge over the All-American Canal allows for the expansion of the Calexico East Port of Entry and increases the commercial vehicle inspection lanes. This project will address the current traffic congestion that hinders economic competitiveness and will also reduce border delays and reduce emissions from idling vehicles. Mexico is California’s number one export market, with more than 97 percent of total trade between California and Mexico being transported.
by trucks across the border. The Calexico East POE serves roughly 23,500 vehicles daily, northbound and southbound, with over ten percent being trucks. The capacity increases due to the proposed bridge widening will be supplemented by traffic management strategies.

There is major freight congestion due to the physical constraint of the existing bridge over the All-American Canal, which creates a bottleneck or chokepoint. Current traffic demands are not being met and the Commercial Vehicle Enforcement Facility (CVEF) is being underutilized due to the bridge constraints. The bridge widening is needed to bring the CVEF to its capacity.

There is an economic loss caused by an inadequate border infrastructure that is failing to keep pace with growing levels of trade and additional security requirements. Expansion of the existing system is needed to ensure a timely binational movement of goods and people.

In addition to the economic benefits associated with the bridge widening, there are also benefits from an environmental perspective. Emissions associated with idling commercial vehicles add to the associated particulate matter and greenhouse gas (GHG) levels that degrade the air quality for the surrounding community. Operational and processing improvement will enhance traffic circulation through this area and would help reduce GHG levels from commercial vehicles.

1.4 Baseline and Forecasted Conditions for No-Build and Project Alternatives

1.4.1 Existing Roadways and Traffic Conditions

The existing bridge is located south of the Calexico East Port of Entry. The structure is a single-span steel girder that spans the Imperial Irrigation District channel. It is approximately 175 feet long with undercrossing slab bridges on each end of the bridge, bringing the total length of the structure to approximately 240 feet. The existing lane configuration provides two northbound and two southbound lanes for commercial vehicles, as well as four northbound and two southbound lanes for privately owned vehicles. There are also sidewalks in the northbound and southbound directions for pedestrian and bicycle crossing. The bridge is owned, maintained and operated by the General Services Administration (GSA).
1.4.2 No-Build Alternative

The No-Build alternative retains the existing conditions and will not address the purpose and need of the project. The consequences will be the continued major freight bottleneck and border delays (traffic demands not met), resulting in continued economic loss and continued degradation of air quality due to idling commercial vehicles.

1.4.3 Project Build Alternatives

Although Transportation System Management measures alone could not satisfy the purpose and need of the project, the following Transportation System Management measures have been
incorporated into the Build alternative for this project. The Build alternative proposes to widen the existing structure (the off-system bridge) over the All-American Canal near the USA/Mexico border approximately 0.7 miles south of State Route (SR) 7. There are no new lanes north of the inspection booths leading to the SR 7. The widened structure would accommodate an additional two new commercial vehicle lanes (for a total of four northbound (NB) commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

1.5 Construction Activities and Schedule

Construction is planned to last approximately 2 years, less than the five years threshold at any individual site. Emissions from construction-related activities are thus considered temporary as defined in 40 CFR 93.123(c)(5); and are not required to be included in PM hot-spot analyses to meet conformity requirements.

2. Regulatory Setting

Many statutes, regulations, plans, and policies have been adopted at the federal, state, and local levels to address air quality issues related to transportation and other sources. The proposed project is subject to air quality regulations at each of these levels. This section introduces the pollutants governed by these regulations and describes the regulation and policies that are relevant to the proposed project.

2.1 Pollutant-Specific Overview

The Calexico East Port of Entry project site is in Imperial County, an area within the Salton Sea Air Basin (SSAB) which extends through two different districts. The South Coast Air Quality Management District consists of the Coachella Valley, and the Imperial County Air Pollution Control District. For the purposes of this report, the focus will be the Imperial County portion of the SSAB. The metropolitan planning organization responsible for the preparation of regional transportation plans and the associated air quality analyses is the Southern California Association of Governments (SCAG).

Air pollutants are governed by multiple federal and state standards to regulate and mitigate health impacts. At the federal level, there are six criteria pollutants for which National Ambient Air Quality Standards (NAAQS) have been established: CO, Pb, NO₂, O₃, PM (PM₂.₅ and PM₁₀), and SO₂. The U.S. EPA has also identified nine priority mobile source air toxics: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter (https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/). In
California, sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride are also regulated.

### 2.1.1 Criteria Pollutants

The Clean Air Act requires the U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for six criteria air contaminants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. It also permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants. Table 1 documents the current air quality standards while Table 2 summarizes the sources and health effects of the six criteria pollutants and pollutants regulated in the state of California.
### Table 1. Table of State and Federal Ambient Air Quality Standards. Accessed May 2016, www.arb.ca.gov/research/aaqs/aaqs2.pdf.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standards 1</th>
<th>National Standards 2</th>
<th>Method 1</th>
<th>Primary 3, 5</th>
<th>Secondary 3, 6</th>
<th>Method 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O3)</td>
<td>1 Hour</td>
<td>0.06 ppm (180 µg/m³)</td>
<td>0.070 ppm (137 µg/m³)</td>
<td>Ultraviolet Photometry</td>
<td>—</td>
<td>Same as Primary Standard</td>
<td>Ultraviolet Photometry</td>
</tr>
<tr>
<td></td>
<td>0 Hour</td>
<td>0.070 ppm (137 µg/m³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM10)</td>
<td>24 Hour</td>
<td>50 µg/m³</td>
<td>150 µg/m³</td>
<td>Same as Primary Standard</td>
<td>Infrared Separation and Gravimetric Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>20 µg/m³</td>
<td></td>
<td>Gravimetric or Beta Attenuation</td>
<td>—</td>
<td>Infrared Separation and Gravimetric Analysis</td>
<td></td>
</tr>
<tr>
<td>Fine Particulate Matter (PM2.5)</td>
<td>24 Hour</td>
<td>—</td>
<td>35 µg/m³</td>
<td>Same as Primary Standard</td>
<td>Infrared Separation and Gravimetric Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>12 µg/m³</td>
<td></td>
<td>Gravimetric or Beta Attenuation</td>
<td>—</td>
<td>Infrared Separation and Gravimetric Analysis</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>1 Hour</td>
<td>20 ppm (23 mg/m³)</td>
<td>35 ppm (40 mg/m³)</td>
<td>—</td>
<td>Non-Dispersive Infrared Photometry (NDIR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 Hour</td>
<td>9.0 ppm (10 mg/m³)</td>
<td>8 ppm (10 mg/m³)</td>
<td></td>
<td></td>
<td></td>
<td>Non-Dispersive Infrared Photometry (NDIR)</td>
</tr>
<tr>
<td></td>
<td>8 Hour</td>
<td>6 ppm (7 mg/m³)</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO2)</td>
<td>1 Hour</td>
<td>0.15 ppm (0.39 µg/m³)</td>
<td>100 ppb (180 µg/m³)</td>
<td>Gas Phase Chemiluminescence</td>
<td>—</td>
<td>—</td>
<td>Gas Phase Chemiluminescence</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>0.010 ppm (0.02 µg/m³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>1 Hour</td>
<td>0.25 ppm (655 µg/m³)</td>
<td>75 ppb (160 µg/m³)</td>
<td>Ultraviolet Fluorescence</td>
<td>—</td>
<td>—</td>
<td>Ultraviolet Fluorescence: Spectrophotometry (Pararosaniline Method)</td>
</tr>
<tr>
<td></td>
<td>3 Hour</td>
<td>—</td>
<td>0.5 ppm (1300 µg/m³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>0.04 ppm (105 µg/m³)</td>
<td>0.03 ppm (100 µg/m³)</td>
<td></td>
<td>Same as Primary Standard</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lead12, 15</td>
<td>30 Day Average</td>
<td>1.0 µg/m³</td>
<td>—</td>
<td>Atomic Absorption</td>
<td>—</td>
<td>—</td>
<td>High Volume Sampler and Atomic Absorption</td>
</tr>
<tr>
<td></td>
<td>Calendar Quarter</td>
<td>—</td>
<td>1.5 µg/m³</td>
<td>Same as Primary Standard</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Visibility Reducing Particles14</td>
<td>9 Hour</td>
<td>See footnote 14</td>
<td>Beta Attenuation and Transmittance through Filter Tape</td>
<td>No</td>
<td>National Standards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 Hour</td>
<td>25 µg/m³</td>
<td>—</td>
<td>Ion Chromatography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>1 Hour</td>
<td>0.03 ppm (45 µg/m³)</td>
<td>Ultraviolet Fluorescence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinyl Chloride12</td>
<td>24 Hour</td>
<td>0.01 ppm (20 µg/m³)</td>
<td>Gas Chromatography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See footnotes on next page...
1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 \( \mu g/m^3 \) is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr. ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 \( \mu g/m^3 \) to 12.0 \( \mu g/m^3 \). The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 \( \mu g/m^3 \), as was the annual secondary standard of 15 \( \mu g/m^3 \). The existing 24-hour PM10 standards (primary and secondary) of 150 \( \mu g/m^3 \) also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standards the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 \( \mu g/m^3 \) as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1998, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 California Air Resources Board (5/4/16)
Table 2. State and Federal Criteria Air Pollutant Effects and Sources.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Principal Health and Atmospheric Effects</th>
<th>Typical Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O(_3))</td>
<td>High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.</td>
<td>Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOx) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.</td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM(_{10}))</td>
<td>Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of PM(_{10}).</td>
<td>Dust- and fume-producing industrial and agricultural operations; combustion smoke &amp; vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM(_{2.5}))</td>
<td>Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM(<em>{2.5}) size range. Many toxic and other aerosol and solid compounds are part of PM(</em>{2.5}).</td>
<td>Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NOx, sulfur oxides (SOx), ammonia, and ROG.</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.</td>
<td>Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO(_2))</td>
<td>Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain &amp; nitrate contamination of stormwater. Part of the &quot;NOx&quot; group of ozone precursors.</td>
<td>Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.</td>
</tr>
<tr>
<td>Sulfate</td>
<td>Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.</td>
<td>Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.</td>
<td>Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.</td>
</tr>
<tr>
<td>Visibility-Reducing Particles (VRP)</td>
<td>Reduces visibility. Produces haze. NOTE: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other “Class I” areas. However, some issues and measurement methods are similar.</td>
<td>See particulate matter above. May be related more to aerosols than to solid particles.</td>
</tr>
<tr>
<td>Sulfate</td>
<td>Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.</td>
<td>Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.</td>
<td>Industrial processes.</td>
</tr>
</tbody>
</table>
2.1.2 Mobile Source Air Toxics

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. EPA regulate 188 air toxics, also known as hazardous air pollutants. The U.S. EPA has assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are part of U.S. EPA's Integrated Risk Information System (IRIS) (https://www.epa.gov/iris). In addition, the U.S. EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-hazard contributors from the 2011 National Air Toxics Assessment (NATA) (https://www.epa.gov/national-air-toxics-assessment). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While the Federal Highway Administration (FHWA) considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future U.S. EPA rules.

The 2007 U.S. EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using U.S. EPA's MOVES2014a model, even if vehicle activity (vehicle-miles traveled, VMT) increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emission rate for the priority MSATs is projected for the same time period, as shown in Figure 3.
Figure 3. Projected National MSAT Trends, 2010-2050 (Source: https://www fhwa dot gov/environment/air_quality/air_toxics/policy_and_guidance/msat/).
2.1.3 Greenhouse Gases

The term greenhouse gas (GHG) is used to describe atmospheric gases that absorb solar radiation and subsequently emit radiation in the thermal infrared region of the energy spectrum, trapping heat in the Earth’s atmosphere. These gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and water vapor, among others. A growing body of research attributes long-term changes in temperature, precipitation, and other elements of Earth’s climate to large increases in GHG emissions since the mid-nineteenth century, particularly from human activity related to fossil fuel combustion. Anthropogenic GHG emissions of particular interest include CO₂, CH₄, N₂O, and fluorinated gases.

GHGs differ in how much heat each traps in the atmosphere (global warming potential, or GWP). CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called “carbon dioxide equivalent” (CO₂e). The global warming potential of CO₂ is assigned a value of 1, and the warming potential of other gases is assessed as multiples of CO₂. For example, the 2007 International Panel on Climate Change Fourth Assessment Report calculates the GWP of CH₄ as 25 and the GWP of N₂O as 298, over a 100-year time horizon.¹ Generally, estimates of all GHGs are summed to obtain total emissions for a project or given time period, usually expressed in metric tons (MTCO₂e), or million metric tons (MMTCO₂e).²

As evidence has mounted for the relationship of climate changes to rising GHGs, federal and state governments have established numerous policies and goals targeted to improving energy efficiency and fuel economy and reducing GHG emissions. Nationally, electricity generation is the largest source of GHG emissions, followed by transportation. In California, however, transportation is the largest contributor to GHGs.

At the federal level, the National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. However, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) issued the first corporate fuel economy (CAFE) standards in 2010, requiring cars and light-duty vehicles to achieve certain fuel economy targets by 2016, with the intention of gradually increasing the targets and the range of vehicles to which they would apply.

California has enacted aggressive GHG reduction targets, starting with Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 is California’s signature climate change legislation. It set the goal of reducing statewide GHG emissions to 1990 levels by 2020, and required the ARB to develop a Scoping Plan that describes the approach California will take to achieve that

goal and to update it every 5 years. In 2015, Governor Jerry Brown enhanced the overall adaptation planning effort with Executive Order (EO) B-30-15, establishing an interim GHG reduction goal of 40 percent below 1990 levels by 2030, and requiring state agencies to factor climate change into all planning and investment decisions.

Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008, furthered state climate action goals by mandating coordinated transportation and land use planning through preparation of sustainable communities strategies (SCS). The ARB sets GHG emissions reduction targets for passenger vehicles for each region. Each regional metropolitan planning organization must include in its regional transportation plan an SCS proposing actions toward achieving the regional emissions reduction targets.³

With these and other State Senate and Assembly bills and executive orders, California advances an innovative and proactive approach to dealing with GHG emissions and climate change.

### 2.1.4 Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the ARB in 1986. All types of asbestos are hazardous and may cause lung disease and cancer.

Asbestos can be released from serpentine and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos-bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

Serpentine may contain chrysotile asbestos, especially near fault zones. Ultramafic rock, a rock closely related to serpentinite, may also contain asbestos minerals. Asbestos can also be associated with other rock types in California, though much less frequently than serpentinite and/or ultramafic rock. Serpentinite and/or ultramafic rock are known to be present in 44 of California’s 58 counties. These rocks are particularly abundant in counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. The California Department of Conservation, Division of Mines and Geology has developed a map showing the general location of ultramafic rock in the state (www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/index.aspx).

³ [https://www.arb.ca.gov/cc/sb375/sb375.htm](https://www.arb.ca.gov/cc/sb375/sb375.htm)
2.2 Regulations

2.2.1 Federal and California Clean Air Act

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws and related regulations by the U.S. EPA and the (ARB) set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM₂.₅), and sulfur dioxide (SO₂). In addition, national and state standards exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

2.2.2 Transportation Conformity

The conformity requirement is based on Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional—or, planning and programming level—and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. The U.S. EPA regulations at 40 CFR 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM₂.₅), and in some areas (although not in California), sulfur dioxide (SO₂). California has attainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO₂, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP), and 4 years (for the FTIP). RTP and FTIP
conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), FHWA, and Federal Transit Administration (FTA), make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and the TIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP and the project has a design concept and scope⁴ that has not changed significantly from those in the RTP and TIP. If the design concept and scope have changed substantially from that used in the RTP Conformity analysis, RTP and TIP amendments may be needed. Project-level conformity also needs to demonstrate that project analyses have used the latest planning assumptions and U.S. EPA-approved emissions models; the project complies with any control measures in the SIP in PM areas. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.2.3 National Environmental Policy Act (NEPA)

NEPA requires that policies and regulations administered by the federal government are consistent with its environmental protection goals. NEPA also requires that federal agencies use an interdisciplinary approach to planning and decision-making for any actions that could impact the environment. It requires environmental review of federal actions including the creation of Environmental Documents (EDs) that describe the environmental effects of a proposed project and its alternatives (including a section on air quality impacts).

2.2.4 California Environmental Quality Act (CEQA)

CEQA⁵ is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. CEQA documents address CCAA requirements for transportation projects. While state standards are often more strict than federal standards, the state has no conformity process.

⁴“Design concept” means the type of facility that is proposed, such as a freeway or arterial highway. “Design scope” refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

⁵For general information about CEQA, see: http://resources.ca.gov/ceqa/more/faq.html.
2.2.5 Local

The U.S. EPA has delegated responsibility to air districts to establish local rules to protect air quality. Caltrans' Standard Specification 14-9.02 (Caltrans, 2018) requires compliance with all applicable air quality laws and regulations including local and air district ordinances and rules.
3. Affected Environment

The topography of a region can substantially impact air flow and resulting pollutant concentrations. California is divided into 15 air basins with similar topography and meteorology to better manage air quality throughout the state. Each air basin has a local air district that is responsible for identifying and implementing air quality strategies to comply with the national ambient air quality standards (NAAQS).

The Calexico East Port of Entry site is in Imperial County, an area within the Salton Sea Air Basin (SSAB) which extends through two different districts. The South Coast Air Quality Management District consists of the Coachella Valley, and the Imperial County Air Pollution Control District. For the purposes of this report, the focus will be the Imperial County portion of the SSAB. The metropolitan planning organization responsible for the preparation of regional transportation plans and the associated air quality analyses is the Southern California Association of Governments (SCAG).

3.1 Climate, Meteorology, and Topography

Meteorology (weather) and terrain can influence air quality trends. Certain weather parameters are highly correlated to air quality, including temperature, the amount of sunlight and the type of winds at the surface and above the surface. Winds can transport ozone and ozone precursors from one region to another, contributing to air quality problems downwind of the source regions. Furthermore, mountains can act as a barrier that prevents ozone from dispersing.

The project is located in the SSAB, which is located in Imperial County and the air quality monitoring station that represents the project area, climate, and topography in the SSAB is the Calexico-Ethel Street monitoring station. Climatic conditions in Imperial County are governed by the large-scale sinking and warming of air in the semi-permanent tropical high-pressure center of the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms except in winter when it is weakest and farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal environments. Because of the weakened storms and barrier, Imperial County experiences clear skies, extremely hot summers, mild winters, and little rainfall. The flat terrain of the valley and the strong temperature differentials created by intense solar heating produce moderate winds and deep thermal convection.

Winters are mild and dry with daily average temperature ranges between 65 and 75°F (18-24°C). During winter months it is not uncommon to record maximum temperatures of up to 80°F. Summers are extremely hot with daily average temperatures ranging between 104 and 115°F (40-46°C). It is not uncommon during summer months to record maximum temperatures of 120°F. The annual rainfall is just over 3 inches (7.5 cm) with most of it coming in late summer or midwinter.

Humidity is low throughout the year, ranging from 28 percent in summer to 52 percent in winter. The large daily oscillation of temperature produces a corresponding large variation in the daily relative humidity. Nocturnal humidity rises to 50-60 percent but drops to about 10 percent during the day.
Summer weather patterns are dominated by intense heat induced by low-pressure areas that form over the interior desert.

The predominant wind patterns in the border region are from the northwest during the fall through spring and southeast during the summer. Under stagnant conditions, pollutants within the Calexico-Mexicali air shed tend to accumulate. The greatest numbers of low wind speed episodes occur October through February. Occasionally, Imperial County experiences periods of extremely high wind speeds. Wind speeds can exceed 30 miles per hour (mph), occurring most frequently during the months of April and May. However, speeds of less than 6.8 mph account for more than half of all the observed wind measurements. (Air Pollution Control District, Imperial County 2018).

![Buttercup California Wind Rose](image)

Figure 4. Imperial County AP California-Wind Rose (percentage) – Buttercup California.

### 3.2 Existing Air Quality

This section summarizes existing air quality conditions near the proposed project area. It includes attainment statuses for criteria pollutants, describes local ambient concentrations of criteria pollutants for the past 3 years, and discusses MSAT and GHG emissions.
3.2.1 Criteria Pollutants and Attainment Status

The project site is located in the Salton Sea Air Basin (SSAB). The SSAB extends through two different districts. The South Coast Air Quality Management District consists of the Coachella Valley, and the Imperial County Air Pollution Control District. For the purposes of this report, the focus will be the Imperial County portion of the SSAB. The SSAB meets California standards for all criteria air pollutants, except O₃, particulate matter sized 10 microns or less (PM₁₀), and particulate matter sized 2.5 microns or less (PM₂.₅).

The SSAB has been designated as a “marginal” nonattainment area for the 8-hour O₃ standard, and as a “serious” nonattainment area for particulate matter sized 10 microns or less (PM₁₀) and “moderate” nonattainment for the 2006 standard of particulate matter sized 2.5 microns or less (PM₂.₅).
Table 3 lists the state and federal attainment status for all regulated pollutants. Table 4 lists air quality trends in data collected at Calexico – Ethel Street Monitoring Station for the past 3 years. Calexico-Ethel – The Calexico-Ethel monitoring station was installed in 1994 and is operated and maintained by CARB. Located above sea level, it has an absolute location of latitude 32° 40' 34” and longitude 115° 28’ 59”. Its relative location is 1029 Belcher Street within the property boundary on the southeast corner of the Calexico High School football field parking lot. To the north is located an athletic sports field used for football, baseball, and track. The monitoring station is surrounded by a suburban neighborhood directly to the south, southeast, and southwest and is approximately 0.75 miles (1.2 kilometers) directly north of the international border crossing. The site currently records measurements for ozone (O3), CO, NO2, SO2, PM2.5, PM10, Pb, and toxics. Table 5 shows the status of EPA-approved SIPs for Imperial County.

Table 3. State and Federal Attainment Status for Imperial County (SSAB).
(Source: EPA 2011 and CARD 2011)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>State Attainment Status</th>
<th>Federal Attainment Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>O3</td>
<td>Nonattainment (1-hour and 8-hour)</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>PM10</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>PM2.5</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>CO</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>NO2</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>SO2</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Pb</td>
<td>Attainment</td>
<td>Attainment</td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Sulfates</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
### Table 4. Air Quality Concentrations for the Past 3 Years Measured at Calexico Ethel Street Monitoring Station

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Standard</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ozone</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 1-hr concentration</td>
<td></td>
<td>0.106</td>
<td>0.098</td>
<td>0.122</td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td>0.09 ppm</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Max 8-hr concentration</td>
<td></td>
<td>0.082</td>
<td>0.078</td>
<td>0.093</td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td>0.070 ppm</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>No. days exceeded: Federal</td>
<td></td>
<td>0.070 ppm</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td><strong>Carbon Monoxide</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 1-hr concentration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>20 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 8-hr concentration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>9.0 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PM&lt;sub&gt;10&lt;/sub&gt;</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 24-hr concentration</td>
<td></td>
<td>134.2</td>
<td>66.4</td>
<td>409.7</td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>50 μg/m³</td>
<td>128.2</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 μg/m³</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Max annual concentration</td>
<td></td>
<td>46.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td>20 μg/m³</td>
<td>128.2</td>
<td></td>
</tr>
<tr>
<td><strong>PM&lt;sub&gt;2.5&lt;/sub&gt;</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 24-hr concentration</td>
<td></td>
<td>87.1</td>
<td>45.3</td>
<td>49.1</td>
</tr>
<tr>
<td>No. days exceeded: Federal</td>
<td></td>
<td>35 μg/m³</td>
<td>3.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Max annual concentration</td>
<td></td>
<td>11.5</td>
<td>12.5</td>
<td>11.8</td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td>12 μg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>12.0 μg/m³</td>
<td>3.5</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Nitrogen Dioxide</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max 1-hr concentration</td>
<td></td>
<td>61</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td>0.18 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>0.01 ppm</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Max annual concentration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. days exceeded: State</td>
<td></td>
<td>0.03 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td></td>
<td>0.03 ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* There was insufficient (or no) data available to determine the value, Source CARB 2017
Table 5. Status of SIPs in Imperial County, Source: Imperial County APCD.

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O$_3$)</td>
<td>In July 1997, the U.S. Environmental Protection Agency (USEPA) established a new federal 8-hour standard for ozone (O$_3$) of 0.080 parts per million (ppm). The USEPA designated 15 areas in California that violate the federal 1997 8-hour O$_3$ standard on April 15, 2004. Each nonattainment area’s classification and attainment deadline is based on the severity of its O$_3$ problem. The USEPA designated Imperial County as a marginal non-attainment area. Subsequently, on February 13, 2008, the USEPA found that failed to meet the attainment date for the 1997 8-hour O$_3$ standard by the deadline of June 15, 2007, and as a result was reclassified as a moderate nonattainment area. On December 3, 2009, based on air monitoring data for the years 2006 through 2008, the USEPA issued a final ruling determining that Imperial County attained the 1997 8-hour O$_3$ standard. This determination did not constitute a re-designation to attainment under the Clean Air Act (CAA) Section 107(d)(3). As such, Imperial County was required to prepare the Final 2009 1997 8-Hour Ozone Modified Air Quality Management Plan (2009 Ozone AQMP). The 2009 Modified AQMP was adopted by the Imperial County Air Pollution Control District (APCD) in July 2010 along with the 2009 Reasonably Available Control Technology State Implementation Plan (2009 RACT SIP). Both plans were approved by the California Air Resources Board (ARB) in November 2010 and sent to the USEPA as revisions to the California SIP. Together, these plans addressed the CAA requirement for areas of moderate non-attainment for the 1997 8-hour O$_3$ standard. In March 2008, the USEPA revised the 8-hour O$_3$ standard to 0.075 ppm, and the 1997 8-hour O$_3$ standard was revoked effective April 6, 2015. Imperial County was initially classified as a marginal non-attainment area for the 2008 8-hour O$_3$ standard, but having missed the attainment date of July 20, 2015, was reclassified as a moderate non-attainment area. Therefore, as required, the Draft Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard (2017 Ozone SIP) was prepared demonstrating how the region would show attainment of the 2008 O$_3$ standard as expeditiously as practicable, but no later than Jul 20, 2018. CARB adopted the Imperial Ozone Plan along with the associated CARB Staff Report on October 26, 2017 and submitted them to U.S. EPA as a revision to the California SIP on November 14, 2017. The Imperial Ozone Plan demonstrated that the area would attain the 75 ppb 8-hour ozone standard by 2017 absent the impact of emissions from Mexico, and contained the required planning elements including an emission inventory and RFP demonstration with a baseline year of 2008, following all applicable U.S. EPA-published guidance available at the time.</td>
</tr>
</tbody>
</table>
Particulate Matter less than 10 microns in aerodynamic diameter (PM10)

In August 2004 the USEPA found that the Imperial County particulate matter sized 10 microns or less (PM10) non-attainment area had failed to attain by the moderate area attainment date of December 31, 1994, and as a result reclassified Imperial County from a moderate to a serious PM10 non-attainment area. The USEPA proposed a rule to find that the area had failed to attain the annual and 24-hour PM10 standards by the serious area deadline of December 31, 2001. The USEPA required the County to submit an air quality plan by December 11, 2008. Imperial County prepared the Final 2009 Imperial County State Implementation Plan for Particulate Matter Less Than 10 Microns in Aerodynamic Diameter, dated August 11, 2009, which accounts for revised transportation conformity budgets. At a public meeting held on December 13, 2018, the California Air Resources Board approved the Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less Than 10 Microns in Diameter.

Particulate Matter less than 2.5 microns in aerodynamic diameter (PM2.5)

The USEPA determined that Imperial County was in attainment of the 1997 particulate matter less than 2.5 microns (PM2.5) standard of 65 micrograms per cubic meter (μg/m³). However, on October 17, 2006, the USEPA strengthened the primary and secondary 24-hour PM2.5 standard to 35 μg/m³. The USEPA designated Imperial County as a moderate non-attainment area for the 2006 PM2.5 standard and required Imperial County to submit a PM2.5 SIP by the end of December 2014. As such, Imperial County prepared the Final Imperial County 2013 State Implementation Plan for the 2006 24-Hour PM2.5 Moderate Nonattainment Area, dated December 2, 2014, which was approved by the ARB December 18, 2014. At a public meeting held on May 25, 2018, the California Air Resources Board approved the 2018 State Implementation Plan for the Imperial County 12 ug/m3 Annual PM2.5 Standard.

3.2.2 Mobile Source Air Toxics

Priority MSAT pollutant sources in the project area are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The Clean Air Act identified 188 TACs. The EPA has assessed this expansive list of toxics and identified a group of 21 TAC’s as Mobile Source Air Toxics (MSATs). The EPA also extracted a subset of this list of 21 MSAT’s that it now labels as the six priority MSATs. These are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene. While these MSATs are considered the priority transportation toxics, the EPA stresses that the lists are subject to change and may be adjusted in future rules (FHWA 2006b). The USEPA has issued a number of regulations that will dramatically decrease MSATs through cleaner fuels and cleaner engines. According to an FHWA analysis, even if the number of vehicle miles traveled increases by 45 percent from 2010 to 2050 as forecasted, a
combined reduction of 91 percent in the total annual emissions for priority MSAT is projected for the same time period (USDOT 2016c). Project MSAT impacts are discussed in Section 4.2.3 of this report.

### 3.2.3 Greenhouse Gas and Climate Change

The project site is located in the Salton Sea Air Basin (SSAB), in the city of Calexico in Imperial County, and included in the 2016/2040 Fiscally Constrained Regional Transportation Plan / Sustainable Community Strategies (2016/2040 RTP/SCS), adopted on April 7th, 2016 and the 2019 Federal Transportation Improvement Program (2019 FTIP), received Federal approval on December 17th, 2018, which conforms to the SIP.

\( \text{CO}_2 \) as part of the carbon cycle, is an important compound for plant and animal life, but also accounted for 84% of California's total GHG emissions in 2015. Transportation, primarily on-road travel, is the single largest source of \( \text{CO}_2 \) emissions in the state.

There is growing concern about greenhouse gas emissions (GHG) and recognition of their significant adverse impacts on the world’s climate and on our environment. These impacts, known as climate change, refer to the change in the average weather of the earth that may be measured by changes in wind patterns, storms, precipitation, and temperature. Global climate change is a cumulative impact. While individual projects do not generate enough greenhouse gas emissions to significantly influence global climate change, the incremental GHG emissions from an individual project combined with the GHG emissions from all other sources contribute to the potential impact. GHG emissions are measured as carbon dioxide equivalents (\( \text{CO}_2 \text{e} \)).

Greenhouse gases are emitted as a result of the energy used when driving, using electricity, and other activities. The transportation sector’s contribution to GHG emissions is dependent on the types of vehicles on the road, the fuel the vehicles use, and the time/distance the vehicles travel. One of the main strategies for reducing GHG emissions in California is to make the transportation system more efficient. The highest levels of motor vehicle \( \text{CO}_2 \) emissions occur at speeds between zero and 25 miles per hour. Enhancing Calexico E Port of Entry operations to relieve congestion and improving travel times will lead to an overall reduction in GHG emissions.

The Build Alternative is designed to address the current traffic congestion that hinders economic competitiveness and will also reduce border delays (wait-times) and dramatically reduce emissions from idling vehicles by providing infrastructure for port of entry processing efficiencies.

### 3.3 Sensitive Receptors

On the basis of research showing that the zone of greatest concern near roadways is within 500 ft (150 meters). Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics, particulate matter, and \( \text{CO} \) are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term
health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project is located in a rural area surrounded by predominantly agricultural farm land and port related facilities. There are no sensitive receptors within the zone of greatest concern associated with this project.

3.4 Conformity Status

3.4.1 Regional Conformity “RTP and RTIP (aka FTIP)”

The proposed project is not exempt from regional emissions analyses (see Transportation Air Quality Conformity Findings Checklist in Appendix B). The metropolitan planning organization responsible for the preparation of regional transportation plans and the associated air quality analyses is the Southern California Association of Governments (SCAG). The current applicable regional transportation plans are the 2016/2040 Fiscally Constrained Regional Transportation Plan / Sustainable Community Strategies (2016/2040 RTP/SCS), adopted on April 7, 2016 and the 2019 Federal Transportation Improvement Program (2019 FTIP), received Federal approval on December 17th, 2018. A proposed project is identified in both the RTP and the FTIP which conforms to the SIP.

The proposed project (RTP ID 6120002) is fully funded and is in the 2016/2040 RTP. The project (ID IMP170701) is also included on page 3 of the 2019 FTIP, Imperial County Local Highway, Amendment 1.

The design concept and scope of the proposed project, and associated re-evaluation scope changes, are consistent with the project description in the 2016/2040 RTP, the 2019 FTIP, and the assumptions in the SCAG’s regional emissions analysis. As such, project development would not conflict with or obstruct implementation of the Air Quality Management Plan (AQMP) or Transportation Control Measures (TCMs) identified in the currently approved SIP. The project would conform to the regional conformity requirements of the Clean Air Act. Please refer to Appendix C.

3.4.2 Interagency Consultation

To meet statutory requirements, the March 10, 2006, final rule requires PM$_{2.5}$ and PM$_{10}$ hot spot analyses to be performed for “projects of air quality concern.” Qualitative hot spot analyses would be done for these projects. Projects not identified as projects of air quality concern (POAQC) are considered to meet statutory requirements without any further hot spot analyses.

The PM Guidance defines POAQC as projects within a federally designated PM$_{2.5}$ or PM$_{10}$ nonattainment or maintenance area, funded or approved by the FHWA or FTA, and one of the following types of projects:

- New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;
- Projects affecting intersections that are LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F, because of increased traffic volumes
from a significant number of diesel vehicles related to the project;

- New bus and rail terminals, and transfer points, that have a significant number of diesel vehicles congregating at a single location;

- Expanded bus and rail terminals, and transfer points, that significantly increase the number of diesel vehicles congregating at a single location; and

- Projects in, or affecting locations, areas, or categories of sites that are identified in the PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Appendix A of the PM Guidance contains examples of POAQC and examples of projects that are not an air quality concern. Under the example of POAQC, a significant volume for a new highway or expressway is defined as facilities with an annual average daily traffic (AADT) volume of 125,000 or more, and a significant number of diesel vehicles is defined as 8 percent or more of the total AADT is diesel truck traffic.

Even though the proposed project is located in federally and state designated nonattainment area for PM2.5 and PM10, it does not meet the criteria of a POAQC as defined in the PM Guidance. Because the project would not result in increases in the number of diesel vehicles utilizing the project area; does not involve intersections that are operating at LOS D, E, or F with a significant number of diesel vehicles; does not involve a new or expanded bus or rail terminal; and would not affect a location or category of site which are identified in the PM10 implementation plan as sites of violation or possible violation. Therefore, this project is not considered as POAQC and does not require PM10 or PM2.5 hot spot analyses.

The project was reviewed by Interagency Consultation on April 23rd, 2019 in Transportation Conformity Working Group (TCWG) meeting and was concurred that it is not a Project of Air Quality Concern (POAQC), therefore, hot spot analysis is not required. Conformity status information is summarized in Table 4 and SCAG’s TCWG decision in Appendix C.
4. Environmental Consequences

This section describes the methods and impact criteria used to determine air quality impacts of the proposed project.

4.1 Impact Criteria

Project-related emissions will have an adverse environmental impact if they result in pollutant emissions levels that either create or worsen a violation of an ambient air quality standard (identified in Table 1) or contribute to an existing air quality violation.

Table 6 summarizes air quality studies required under CEQA, NEPA, and transportation conformity, and the impact criteria that determine whether a project meets air quality requirements or may have an adverse impact on air quality.
Table 6. Summary of air quality studies required under CEQA, NEPA, and Conformity.

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<th>Pollutant</th>
<th>Conformity</th>
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<tr>
<td>Ozone (O₃)</td>
<td>O₃ is a regional pollutant with indirect impacts and it is infeasible to model project-level impacts on O₃ due to its photochemical nature. In O₃ nonattainment and maintenance areas, document that the project is listed in the conforming RTP and TIP. In isolated rural areas, document that project is in a regional conformity analysis showing that Interim or Emission Budget tests are met. Analysis is usually only done when a regionally significant project is proposed. No hot-spot for O₃.</td>
<td>O₃ is a regional pollutant with indirect impacts and it is infeasible to model project-level impacts on O₃ due to its photochemical nature. A precursor emissions burden analysis can be performed using EMFAC or CT-EMFAC (for NOₓ and VOC). <strong>Modeling Tools: EMFAC/CT-EMFAC</strong></td>
<td>O₃ is a regional pollutant with indirect impacts and it is infeasible to model project-level impacts on O₃ due to its photochemical nature. A precursor emissions burden analysis can be performed using EMFAC or CT-EMFAC (for NOₓ and VOC). <strong>Modeling Tools: EMFAC/CT-EMFAC</strong></td>
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<td>PM$_{10}$</td>
<td>If the project is subject to conformity requirements (within a nonattainment or maintenance area), refer to 40 CFR 93.123(b) to determine if the project is a POAQC. State that the U.S. EPA guidance for PM hot-spot analysis and interagency consultation were used to determine whether the project is a POAQC and document the interagency consultation process. POAQC projects located in PM$_{10}$ nonattainment/maintenance areas require dispersion modeling (PM hot-spot analysis) and use of the U.S. EPA’s 2015 Quantitative PM Hot-Spot Analysis Guidance. Hot-spot analysis involves dispersion modeling (e.g., using AERMOD) and must include direct vehicle emissions estimates from EMFAC/CT-EMFAC and paved road dust emissions estimates. ARB’s data source for calculating road dust emissions is recommended. The project must be exempt from all conformity analyses per 40 CFR 93.126 or 128 or modeling must show that the project does not cause or contribute to a NAAQS violation. <strong>Modeling Tools/Guidance:</strong> U.S. EPA Quantitative PM Hot-Spot Guidance, EMFAC/CT-EMFAC, AERMOD (AERMOD View)</td>
<td>A comparative emissions analysis is needed and the analysis relies on modeling exhaust emissions from EMFAC or CT-EMFAC and road dust emissions estimates. ARB’s data source for calculating road dust emissions is recommended. <strong>Modeling Tools:</strong> EMFAC/CT-EMFAC,</td>
<td>Prepare a project-level comparative emissions analysis, including exhaust emissions estimates from EMFAC or CT-EMFAC and road dust emissions estimates. ARB’s data source for calculating road dust emissions is recommended. <strong>Modeling Tools:</strong> EMFAC/CT-EMFAC,</td>
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6 Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM$_{2.5}$ and PM$_{10}$ Nonattainment and Maintenance Areas; see http://www3.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm.

7 www.epa.gov/ttn/scram/dispatch_prefrec.htm#aermod
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<td><strong>PM$_{2.5}$</strong></td>
<td>For PM2.5 direct vehicle emissions (exhaust, tire wear, and brake wear from on-road vehicles), follow the same conformity requirements for PM10. Non-direct vehicle emissions of PM2.5 (road dust) are typically considered as well (follow the same analysis approach for PM10). However, note that road dust must be considered in PM2.5 hot-spot analyses only if EPA or state air agency has made a finding that such emissions are a significant contributor to the PM2.5 air quality problem in a given nonattainment or maintenance area. Modeling Tools/Guidance: U.S. EPA Quantitative PM Hot-Spot Guidance, EMFAC/CT-EMFAC, AERMOD (AERMOD View)</td>
<td>For PM2.5 direct vehicle emissions (exhaust, tire wear, and brake wear from on-road vehicles), follow the same requirements for PM10. Non-direct vehicle emissions of PM2.5 (road dust) are typically considered as well (follow the same analysis approach for PM10). <strong>Modeling Tools:</strong> EMFAC/CT-EMFAC</td>
<td>For PM2.5 direct vehicle emissions (exhaust, tire wear, and brake wear from on-road vehicles), follow the same requirements for PM10. Non-direct vehicle emissions of PM2.5 (road dust) are typically considered as well (follow the same analysis approach for PM10). <strong>Modeling Tools:</strong> EMFAC/CT-EMFAC</td>
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<td><strong>CO</strong></td>
<td>Use the Caltrans/UC Davis 1997 CO Protocol (<a href="http://www.dot.ca.gov/hq/env/air/pages/coprot.htm">http://www.dot.ca.gov/hq/env/air/pages/coprot.htm</a>) if project is located in a CO nonattainment or maintenance area. If the qualitative screening procedure indicates that a quantitative analysis is required, the latest U.S. EPA-approved version of EMFAC or CT-EMFAC must be used. In cases where an emissions analysis is not sufficient and additional screening is needed, use CALINE4 to perform dispersion modeling. Refer to Appendix B for guidance on the use of CALINE4 (<a href="http://www.dot.ca.gov/hq/env/air/main_sections/analysisistools.htm">http://www.dot.ca.gov/hq/env/air/main_sections/analysisistools.htm</a>). The project cannot cause or worsen a violation of the NAAQS. <strong>Modeling Tools:</strong> CO Protocol, EMFAC/CT-EMFAC, CALINE4 (CL4)</td>
<td>The Caltrans/UC Davis 1997 CO Protocol (<a href="http://www.dot.ca.gov/hq/env/air/pages/coprot.htm">http://www.dot.ca.gov/hq/env/air/pages/coprot.htm</a>) is commonly used for CO analyses. If the qualitative screening procedure indicates that a quantitative analysis is required, follow modeling instructions for using CALINE4 with EMFAC emissions factors. CT-EMFAC may also be used. <strong>Modeling Tools:</strong> CO Protocol, EMFAC/CT-EMFAC, CALINE4 (CL4)</td>
<td>The Caltrans/UC Davis 1997 CO Protocol (<a href="http://www.dot.ca.gov/hq/env/air/pages/coprot.htm">http://www.dot.ca.gov/hq/env/air/pages/coprot.htm</a>) is commonly used for CO analyses. If the qualitative screening procedure indicates that a quantitative analysis is required, follow modeling instructions for using CALINE4 with EMFAC emissions factors. CT-EMFAC may also be used. <strong>Modeling Tools:</strong> CO Protocol, EMFAC/CT-EMFAC, CALINE4 (CL4)</td>
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<tr>
<td>NO₂</td>
<td>If in an NO₂ nonattainment or maintenance area for the federal standard, project must also come from a conforming RTP and TIP.</td>
<td>Currently there is no federal project-level nitrogen dioxide (NO₂) analysis requirement. For project-level analysis, NO₂ assessment protocol is not available. EMFAC or CT-EMFAC provides NOₓ (combination of NO and NO₂) emissions estimates that can serve as a useful analysis surrogate for NO₂ emissions analysis. Caltrans Near-Road Nitrogen Dioxide Assessment report (Caltrans, 2012) can be used as reference. <strong>Modeling Tools:</strong> EMFAC/CT-EMFAC</td>
<td>For project-level analysis, NO₂ assessment protocol is not available. EMFAC or CT-EMFAC provides NOₓ (combination of NO and NO₂) emissions estimates that can serve as a useful analysis surrogate for NO₂ emissions analysis. Caltrans Near-Road Nitrogen Dioxide Assessment report (Caltrans, 2012) can be used as reference. <strong>Modeling Tools:</strong> EMFAC/CT-EMFAC</td>
</tr>
<tr>
<td>SO₂</td>
<td>Not required. All of California is in attainment or unclassified. Include a qualitative statement saying that SO₂ impacts are de minimis for on- and off-road vehicles (except cargo ships) because gasoline and diesel fuel is low-sulfur by ARB requirement. Cite FHWA conformity guidance that only 4/6 criteria pollutants (not SO₂) are of concern for transportation sources: <a href="http://www.fhwa.dot.gov/environment/air_quality/conformity/guide/guide04.cfm">http://www.fhwa.dot.gov/environment/air_quality/conformity/guide/guide04.cfm</a>.</td>
<td>Include qualitative statement described under Conformity; SO₂ is not of concern for transportation sources.</td>
<td>Include qualitative statement described under Conformity; SO₂ is not of concern for transportation sources.</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>Not required. Typically not an air quality issue. However, ADL (Aerially Deposited Lead) needs to be addressed under Hazardous Waste section.</td>
<td></td>
<td>Typically not an air quality issue. However, ADL (Aerially Deposited Lead) needs to be addressed under Hazardous Waste section.</td>
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<td>GHG</td>
<td>Not required.</td>
<td>Not required.</td>
<td>If the proposed project is a congestion relief project or will add capacity (including operational improvement projects that are expected to address future demand volumes), analyze GHG emissions using an EMFAC-based tool (e.g., CT-EMFAC or GHG Emissions Calculator). The latest version of the Caltrans GHG Analysis for Transportation Project report offers guidance. Non-capacity-increasing projects (e.g., pavement rehabilitation, shoulder widening, culvert/drainage/stormwater work, landscaping, CCTVs, maintenance vehicle pullouts, minor curve corrections) will likely result in a minimal increase in GHG emissions, and a qualitative discussion may be sufficient. However, EO B-30-15 requires all projects to calculate construction GHG emissions. Use a readily available model, such as CAL-CET or the Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model RCEM, to quantify the expected construction-related GHG emissions related to the proposed project. Include the calculations results in a brief sentence or two, to include the emissions per year, expected construction duration, and the total expected GHG emissions. <strong>Software/Tools:</strong> EMFAC/CT-EMFAC, GHG Emissions Calculator, CAL-CET, SMAQMD’s RCEM Model</td>
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<tr>
<td>MSATs</td>
<td>Not required.</td>
<td>Follow FHWA’s “Updated Interim Guidance on Mobile Source Air Toxics Analysis in NEPA Documents” (FHWA, 2016). The analysis must identify which of the three MSAT categories the project belongs in based on screening criteria in the guidance. Caltrans’ CT-EMFAC and Ethylbenzene tool are recommended to provide emission estimates for the nine priority MSAT pollutants directly. <strong>Modeling Tools/Guidance:</strong> FHWA Guidance, CT-EMFAC, Caltrans’s Ethylbenzene tool</td>
<td>Although its focus is on siting new residential, schools, and other sensitive uses, generally the recommendations contained in the ARB Land Use Guidance (2005) should be used to inform the MSAT analysis. (Refer to Section 4.3.4 MSAT for more info). EMFAC or CT-EMFAC may be used but CT-EMFAC is recommended because EMFAC requires “off-model” application of toxic speciation factors. <strong>Software/Tools:</strong> FHWA Guidance, ARB Land Use Guidance, CT-EMFAC, Caltrans’s Ethylbenzene tool</td>
</tr>
<tr>
<td>Asbestos</td>
<td>Not required.</td>
<td>Not a mobile source issue. Refer to Section 4.2.2</td>
<td>Not a mobile source issue. Refer to Section 4.2.2</td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>Not required.</td>
<td>Not required.</td>
<td>Typically not a transportation issue and no analysis is required. Controls under current regulations only apply to stationary sources.</td>
</tr>
<tr>
<td>Sulfates</td>
<td>Not required.</td>
<td>Not required.</td>
<td>Sulfate is typically not a mobile source issue.</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>Not required.</td>
<td>Not required.</td>
<td>H₂S is typically not a mobile source issue.</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>Not required.</td>
<td>Not required.</td>
<td>Typically not a transportation issue and no analysis is required.</td>
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4.2 Short-Term Effects (Construction Emissions)

4.2.1 Construction Equipment, Traffic Congestion, and Fugitive Dust

Construction-related activities would result in project-generated emissions of criteria air pollutants (e.g., PM10) and precursors (e.g., ROG and NOX). Emissions of fugitive PM dust (e.g., PM10 and PM2.5) are associated primarily with ground disturbance activities during site preparation; e.g., site clearing, excavation, vehicle travel on paved and unpaved roads, and grading, and vary as a function of parameters like soil silt content, soil moisture, wind speed, acreage of disturbance area, and vehicle miles traveled on- and off-site. A secondary source of pollutants during construction would be the engine exhaust from construction equipment. The primary pollutants of concern would be NOX and VOC emissions that would contribute to the formation of ozone, which is a regional pollutant. Emissions of NOX and VOC would be primarily associated with off-road (e.g., gas and diesel) construction equipment exhaust; secondary sources would include on-road trucks for import and export of materials and worker commuting.

Federal conformity regulations require analysis of construction impacts for projects when construction activities will last for more than five years. The proposed project would begin in 2020 and be completed by 2022. Because construction would last less than five years, no quantitative estimates of regional construction emissions were calculated for the purpose of demonstrating federal conformity.

Demolition, grading and site preparation would involve the greatest concentration of heavy equipment use and the highest potential for fugitive dust emissions. This analysis assumes that graded soils would be balanced on the project site and that no soil import or export would be required. The project would be required to comply with the Imperial County Air Pollution Control District (ICAPCD), which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the San Air Basin. Therefore, the following conditions, which are required to reduce fugitive dust in compliance with ICAPCD.

- **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.

- **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after
work is done for the day.

- **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.

- **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).

- **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

### 4.2.2 Asbestos

Structural asbestos (demolition) is regulated by federal and related state/air district regulations (Federal regulations include NESHAP, [www.epa.gov/ttn/atw/asbes/asbespg.html](http://www.epa.gov/ttn/atw/asbes/asbespg.html)), whereas naturally occurring asbestos (NOA) is regulated by CARB and worker-safety programs ([www.arb.ca.gov/toxics/asbestos/asbestos.htm](http://www.arb.ca.gov/toxics/asbestos/asbestos.htm)). Refer to the map on the ARB website that shows areas with Naturally Occurring Asbestos (NOA) ([www.arb.ca.gov/toxics/asbestos/geninfo.htm](http://www.arb.ca.gov/toxics/asbestos/geninfo.htm)).

The project is not located in Naturally Occurring Asbestos (NOA) area. There is bridge that would be demolished or structurally modified as part of the project. Asbestos survey will be performed prior to demolition. If asbestos is found it will be managed according to National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for investigation and notification prior to construction. If removal of asbestos is needed, documents must be presented that show commitment to use asbestos-certified contractors. Disclose any additional requirements that may exist based on local regulations.

### 4.2.3 Lead

Lead is normally not an air quality issue for transportation projects unless the project involves disturbance of soils containing high levels of aerially deposited lead or painting or modification of structures with lead-based coatings. In these cases, construction impact analysis should describe monitoring and mitigation requirements of the Department's Standard Specifications and Standard Special Provisions for aerially deposited lead or for lead paint removal and sandblasting. Survey will be performed to make sure if any portions of the project site will be subject to aerially deposited lead management or soil-bound lead.
management related to bridges during construction. Determine and document whether expected soil disturbance would generate lead concentrations high enough to trigger regulatory involvement. Disturbance of lead paint must meet EPA and air district rules (Std. Specs 14-9.02).

4.3 Long-Term Effects (Operational Emissions)

Operational emissions take into account long-term changes in emissions due to the project (excluding the construction phase). The Transportation Conformity Rule requires a statement that:

Federal projects must not cause or contribute to any new localized CO, PM10, and/or PM2.5 violations or increase the frequency or severity of any existing CO, PM10, and/or PM2.5 violations in CO, PM10, and PM2.5 nonattainment and maintenance areas.

The proposed project is in a federal attainment area for CO. Based on traffic counts of the study area the project would have no effect on truck percentages. As indicated in this guidance, pursuant to 40 CFR 93.123(b) (i) and (ii), any new and expanded highway project that does not involve a significant (greater than 8 percent) number or increase in the number of diesel vehicles is a project that is not of air quality concern and consequently does not require a PM10 or PM2.5 hotspot analysis and as indicated earlier it does not cause or contribute to CO, PM10, and/or PM2.5 concentration.

4.3.1 CO Analysis

The Transportation Conformity Rule requires a statement that:

...federal projects must not cause or contribute to any new localized CO violations or increase the frequency or severity of any existing CO violations in CO nonattainment and maintenance areas.

The CO portion of the Transportation Conformity Rule does not apply to the project because Imperial County is a federal CO attainment area.

4.3.2 PM Analysis

In November 2015, the U.S. EPA released an updated version of Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas (Guidance) for quantifying the local air quality impacts of transportation projects and comparing them to the PM NAAQS (75 FR 79370). The U.S. EPA originally released the quantitative guidance in December 2010, and released a revised version in November 2013 to reflect the approval of EMFAC 2011 and U.S. EPA’s 2012 PM NAAQS final rule. The November 2015 version reflects MOVES2014 and its subsequent minor revisions such as MOVES2014a, to revise design value calculations to be more
consistent with other U.S. EPA programs, and to reflect guidance implementation and experience in the field. Note that EMFAC, not MOVES, should be used for project hot-spot analysis in California. The Guidance requires a hot-spot analysis to be completed for a project of air quality concern (POAQC). The final rule in 40 CFR 93.123(b)(1) defines a POAQC as:

(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM\textsubscript{2.5} and PM\textsubscript{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Appendix A of the PM Guidance contains examples of POAQC and examples of projects that are not an air quality concern. Under the example of POAQC, a significant volume for a new highway or expressway is defined as facilities with an annual average daily traffic (AADT) volume of 125,000 or more, and a significant number of diesel vehicles is defined as 8 percent or more of the total AADT is diesel truck traffic.

Even though the proposed project is located in federally and state designated nonattainment area for PM\textsubscript{2.5} and PM\textsubscript{10}, however, does not meet the criteria of a POAQC as defined in the PM Guidance. Therefore, this project is not considered as POAQC and does not require PM\textsubscript{10} or PM\textsubscript{2.5} hot spot analyses.

The project was reviewed by Interagency Consultation on April 23\textsuperscript{rd}, 2019 in Transportation Conformity Working Group (TCWG) meeting and was concurred that it is not a Project of Air Quality Concern (POAQC), therefore, hot spot analysis is not required. Conformity status information is summarized in Table 3.

4.3.2.1 Mobile Source Air Toxic Analysis

FHWA released updated guidance in October 2016 (FHWA, 2016) for determining when and how to address MSAT impacts in the NEPA process for transportation projects. FHWA identified three levels of analysis:

- No analysis for exempt projects or projects with no potential for meaningful MSAT effects;
• Qualitative analysis for projects with low potential MSAT effects; and
• Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

Projects with no impacts generally include those that a) qualify as a categorical exclusion under 23 CFR 771.117, b) qualify as exempt under the FCAA conformity rule under 40 CFR 93.126, and c) are not exempt, but have no meaningful impacts on traffic volumes or vehicle mix.

Projects that have low potential MSAT effects are those that serve to improve highway, transit, or freight operations or movement without adding substantial new capacity or creating a facility that is likely to substantially increase emissions. The large majority of projects fall into this category.

Projects with high potential MSAT effects include those that:
• Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of Diesel Particulate Matter in a single location; or
• Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000, or greater, by the design year; and
• Are proposed to be located in proximity to populated areas or, in rural areas, in proximity to concentrations of vulnerable populations (i.e., schools, nursing homes, hospitals).

This project has no potential for meaningful MSAT effects on traffic volumes or vehicle mix, therefore, no analysis is required.

4.3.3 Greenhouse Gas Emissions Analysis

Project-level GHG emissions were examined by following the steps in the GHG Analysis Protocol (Bai et al., 2013). The GHG Protocol suggests a five-step procedure that includes:
1. Assess changes in traffic volume
2. Assess changes in fleet mix
3. Assess changes in vehicle speed,
4. Compare impacts from travel activities and vehicle speeds
5. Evaluate results

The construction GHG emissions will be unavoidable but that there will likely be long-term GHG benefits by improved operation. The project will cause a smoother traffic flow, therefore, there will likely be an overall reduction in GHG emitted.

4.4 Cumulative/Regional/Indirect Effects

The analysis of project impacts to regional air quality, as performed by SCAG and the APCD in conjunction with the 2016 RTP/SCS and 2019 FTIP process, is a cumulative analysis. The project
would conform to the assumptions in the conformity analyses for the 2016 RTP/SCS and 2019 FTIP, which are long-range planning documents that include roadway projects throughout the region. Therefore, the project would not result in a cumulative impact to air quality.
5. Minimization Measures

5.1 Short-Term (Construction)

Implementation of the following measures, some of which may also be required for other purposes such as storm water pollution control, will reduce air quality impacts resulting from construction activities:

- The construction contractor must comply with the Department’s Standard Specifications in Section 14-9 (2018).
  - Section 14-9-02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
  - Section 14-9.03 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18.

- Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a “no visible dust” criterion either at the point of emissions or at the right-of-way line depending on local regulations.

- Soil binder will be spread on any unpaved roads used for construction purposes, and on all project construction parking areas.

- Trucks will be washed as they leave the right-of-way as necessary to control fugitive dust emissions.

- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.

- A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.

- Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.

- ESA (Environmentally Sensitive Areas) or their equivalent will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited, to the extent feasible.

- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.

- All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust (particulate matter) during transportation.
• Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to decrease particulate matter.

• To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

• Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulate in the area.

5.2 Long-Term (Operational)

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. No significant or adverse impacts have been identified and no mitigation measures are required.
6. Conclusions

No adverse air quality impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-9.02, “Air Pollution Control”. Construction air emissions would be short-term, i.e., less than five years. Further, implementing the following measures would minimize the temporary air quality impacts from construction; It is recommended that the following measures be incorporated into the Proposed Project to minimize exposure to diesel particulate emissions:

- Locate construction equipment and truck staging and maintenance areas as far as feasible and nominally downwind of schools, active recreation areas, and other areas of high population density.
- Minimize land disturbance.
- Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas.
- Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.
- Cover all trucks hauling dirt when traveling at speeds greater than 15 miles per hour.
- Stabilize the surface of dirt piles if not removed within two days.
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
- Minimize unnecessary vehicular and machinery activities.
- Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.
- Removed unused material.

The Build alternative would result in operational air emissions that are mainly attributable to vehicles traveling on the widened structure through the border crossing, as well as vehicles idling at the border crossing. The Build alternative would also result in a net increase in average emissions, when compared to the existing condition, due to the better traffic flow at the border crossing and a decrease in peak hour emissions due to the reduction in idling time in long queues at the border crossing. The Build alternative would also result in a net decrease in average emissions, when compared to the future no Build, due to operational and processing improvements which will enhance traffic circulation through this area and would help reduce GHG levels from commercial
vehicles.

The project will not cause or contribute to adverse regional or localized air quality impacts. The Project will not cause any new localized CO, PM2.5, PM10, or MSAT violations and will not increase the frequency and/or severity of existing exceedances.
7. References


California Department of Transportation (2012) Near-Road Nitrogen Dioxide Assessment. Final report, CTAQ-RT-12-270.09.02, August.


On December 18, 2014 the California Air Resources Board approved the Imperial County 2013 State Implementation Plan for the 2006 24-hour PM$_{2.5}$ Moderate Nonattainment Area. Final PM$_{2.5}$ Plan https://www.co.imperial.ca.us/AirPollution/PlanningDocs/StatePlans/Final_PM25_SIP.pdf
Imperial County Air Pollution Control District - State Implementation Plan
https://www.co.imperial.ca.us/AirPollution/index.asp?fileinc=planstateplans

8.1 Appendix A:

Summary of Forecast Travel Activities
Imperial County Transportation Model

Notes:
1. LOS is exempted due to specialty in this case;
2. Truck percentage: 10.10% in 2022, and 10.61% in 2045.

No Build Scenario
2022 ADT: 3,879
2045 ADT: 12,155

Build Scenario
2022 ADT: 3,995
2045 ADT: 12,519

No Build Scenario
2022 ADT: 12,869
2045 ADT: 29,660

Build Scenario
2022 ADT: 13,256
2045 ADT: 30,550
8.2 Appendix B

Transportation Air Quality Conformity Finding Checklist
## Transportation Air Quality Conformity Findings Checklist

**Project Name:** Bridge Widening South of Calexico East Port of Entry  
**Dist-Co-Rte-PM:** 0.0  
**Federal-Aid No.:** Yes  
**Document Type:** 23 USC 326 CE, 23 USC 327 CE, EA, EIS

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| 1.   | Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM2.5, or PM10 per EPA's Green Book listing of non-attainment areas? | If no, go to Step 17. **Transportation conformity does not apply to the project.**  
If yes, go to Step 2. |
| 2.   | Is the project exempt from conformity per 40 CFR 93.126 or 40 CFR 93.128? | If yes, go to Step 17. **The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128)**  
(check one box below and identify the project type, if applicable).  
- 40 CFR 93.126  
- 40 CFR 93.128  
If no, go to Step 3. |
| 3.   | Is the project exempt from regional conformity per 40 CFR 93.127? | If yes, go to Step 8. **The project is exempt from regional conformity requirements (40 CFR 93.127)** (identify the project type).  
If no, go to Step 4. |
| 4.   | Is the project located in a region with a currently conforming RTP and TIP? | If yes, go to Step 4.  
If no, go to Step 5.  
**The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[l]).**  
If no and the project is located in an isolated rural area, go to Step 5.  
If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted. |
| 5.   | For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation? | If yes, go to Step 6.  
If no, go to Step 8. **The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[l]).** |
| 6.   | Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement? | If yes, go to Step 8. **The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[l]).**  
If no, go to Step 7. |
| 7.   | Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[l] and 95.105).  
1 The analysis must support this conclusion before going to the next step.  
2 Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: http://www.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm#co-hotspot.  
3 As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply. | Go to Step 8. |
| 8.   | Is the project located in a CO nonattainment or maintenance area? | If yes, go to Step 9. **CO conformity analysis is not required.**  
If no, go to Step 9. **CO conformity analysis is not required.**  
- hot-spot analysis requirements for CO per the CO Protocol (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors) have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)  
Go to Step 9. |
Step 9. Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?
☐ If no, go to Step 13. **PM2.5/PM10 conformity analysis is not required.**
☒ If yes, go to Step 10.

**Step 10.** Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA’s Transportation Conformity Guidance for PM 10 and PM 2.5?
☒ If no, the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA’s Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on **To Be Determined via IAC.** Go to Step 12.
☐ If yes, go to Step 11.

**Step 11.** The project is a POAQC.
☐ The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA’s Hot-Spot Guidance. Interagency Consultation concurred with this determination on **TBD via IAC.** Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA’s Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards. Go to Step 12.

**Step 12.** Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [(Control measures can be found in the applicable Federal Register notice at: http://www.epa.gov/otaq/stateresources/transconf/reg9sips.htm#ca.)]
☐ If yes, a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117). Go to Step 14.
☐ If no, go to Step 13.

**Step 13a.** Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project’s design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR

**Step 13b.** Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project’s NEPA document?

AND

**Step 13c** (applies only if Step 13a and/or 13b are answered “yes”). Has a written commitment been made as part of the air quality analysis to implement the identified measures?
☐ If yes to 13a and/or 13b and 13c, a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project’s NEPA document and/or as conditions of the RTP or TIP conformity determination1 (40 CFR 93.125(a)). Go to Step 14.
☐ If no, go to Step 14.

**Step 14.** Does the project qualify for a 771.117(c)(22) or 771.117(c)(23) Categorical Exclusion pursuant to 23 USC 326 and is an Air Quality Conformity Analysis required to document any analysis required by Steps 1 through 13 of this form?4
☐ If yes, then Caltrans prepares the Air Quality Conformity Analysis and makes the conformity determination. No FHWA involvement is required. See the **AQCA Annotated Outline.** Go to Step 17.
☒ If no, go to Step 15.

**Step 15.** Does the project qualify for any other Categorical Exclusion pursuant to 23 USC 326 (but NOT 771.117(c)(22) or 771.117(c)(23))? If yes, then no FHWA involvement is required and Caltrans makes the conformity determination through its signature on the CE form. **An Air Quality Conformity Analysis (AQCA) is not needed.** Go to Step 17.
☒ If no, go to Step 16.

**Step 16.** Does the project require preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327? If yes, then Caltrans submits a conformity determination to FHWA for FHWA’s conformity determination. **An AQCA is needed.** See the AQCA Annotated Outline.

Date of FHWA air quality conformity determination: **TBD**
Go to Step 17.

**Step 17.** STOP as all air quality conformity requirements have been met.

---

4 Please note that for ALL projects the project file must include evidence that one of the three following situation applies: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.

**Signature:**

**Printed Name:** TYLER HO  **Date:** 2/4/2019

**Title:** Noise and Air Specialist
8.3 Appendix C

2019 Federal Transportation Improvement Program (FTIP) Imperial County
## 2019 Federal Transportation Improvement Program

### Imperial County
#### Local Highway
##### Including Amendment 1

(In $000's)

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## 2019 Federal Transportation Improvement Program

**Imperial County**  
**Local Highway**  
Including Amendment 1  
(In $000's)

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### 2019 Federal Transportation Improvement Program

**Imperial County**

**Local Highway**

**Including Amendment 1**

(In $000’s)

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**Description:** Sidewalk Improvements on Rio Vista Street in Seeley California

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**Description:** Calexico East Port of Entry Truck Crossing Improvement. Widen the bridge over the All-American Canal near the U.S./Mexico border and State Route 7 California Commercial Vehicle Enforcement Facility

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**Description:** Parking lot paving and ADA access improvements on CA-78 in the City of Brawley, Imperial County. Using Toll Credits as match for EARREPU funds

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### Imperial County
#### Local Highway
##### Including Amendment 1

#### (in $000's)

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#### Description:

- **IMP171001**
  - County: Imperial
  - Air Basin: SSAB
  - RTP ID: 7120004
  - Program: PLN40
  - Route: L
  - Signage: PTC
  - Total: 224
  - Description: Project Ride, Walk, Learn

- **IMP160411**
  - County: Imperial
  - Air Basin: SSAB
  - RTP ID: 7120001
  - Program: NCR31
  - Route: L
  - Signage: PTC
  - Total: 429
  - Description: Paving of dirt roads H Street and 8th Street. Street segments are on H street from 7th Street to 8th Street; and 8th Street from H Street to I Street.

#### Funding Sources:

- CMAQ
- AGENCY
- IMPA

#### Total Funding:

- **CMAQ**: 30, 350, 380, 30, 350
- **AGENCY**: 4, 45, 4, 4, 45
- **IMP**: 34, 395, 429, 34, 395
- **Total**: 4,161, 2,609, 34,209, 9,120, 13,833, 928, 2,350, 14,748, 40,979

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Print Date: 12/20/2018 11:17:17 AM

Page: 4 of 4
PM Hot Spot Analysis Project Lists

Review of PM Hot Spot Interagency Review Forms

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Lists of PM hot spot interagency review forms, qualitative analyses and quantitative analyses

SEARCH BY: SEARCH

PM Hot Spot Forms

- April, 2019
- March, 2019
- February, 2019
- December, 2018
- October, 2018
- August, 2016
- July, 2015
- October, 2014
- March, 2014
- December, 2013
- August, 2018
- August, 2016
- March, 2016
- September, 2015
- July, 2015
- May, 2015
AERIALLY DEPOSITED LEAD SURVEY REPORT
STATE ROUTE 7
(PM 0.0)
IMPERIAL COUNTY, CALIFORNIA
CALTRANS DISTRICT 11
11-430500
April 26, 2019

THIS DOCUMENT MAY ONLY BE USED FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED
AERIALLY DEPOSITED LEAD SURVEY REPORT
STATE ROUTE 7, (PM 0.0)
IMPERIAL COUNTY, CALIFORNIA
CALTRANS DISTRICT 11
11-430500
April 26, 2019

Prepared by:

[Signature]
Tyler Ho, P.E. C66737
Caltrans, Environmental Engineering

Reviewed by:

[Signature]
Ken Johansson, P.E. C70391
Caltrans, Environmental Engineering
1.0 PROJECT DESCRIPTION

Imperial County Transportation Commission (ICTC), Federal Highways (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure of the Calexico East Port of Entry (POE) Bridge over the All-American Canal near the USA/Mexico border to facilitate flow through the existing inspection booths. There are no new lanes proposed north of the inspection booths leading to the State Highway System (State Route 7). The new structure would accommodate a total of four northbound (NB) commercial vehicle lanes, an 8-foot shoulder, and a concrete barrier. The widened structure would accommodate an additional two new commercial vehicle lanes (for a total of four NB commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

2.0 BACKGROUND

2.1 Soil Management Agreement for ADL-Contaminated Soil
On June 29, 2016, the Department of Toxic Substances Control (DTSC) and Caltrans entered into the Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils (DTSC Agreement) for the management of ADL-contaminated soils generated by Caltrans in the course of State highway projects in all Caltrans districts, statewide.

“Clean soil” is defined as soil, based on a 95 percent upper confidence limit (95% UCL), containing total lead less than or equal to 80 milligrams per kilogram (mg/kg) and soluble WET lead less than 5 milligrams per liter (mg/l), and not containing other constituents at concentrations that pose an unacceptable threat to human health or the environment.

2.1 Hazardous Waste Determination Criteria
Regulatory criteria to classify a waste as California hazardous for handling and disposal purposes are contained in the CCR, Title 22, Division 4.5, Chapter 11, Article 3, §66261.24. Criteria to classify a waste as Resource, Conservation, and Recovery Act (RCRA) hazardous are contained in Chapter 40 of the Code of Federal Regulations (40 CFR), Section 261.

For waste containing metals, the waste is classified as California hazardous when: 1) the representative total metal content equals or exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the representative soluble metal content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste has the potential of exceeding the STLC when the waste’s total metal content is greater than or equal to 10 times the respective STLC value since the WET uses
metal content is greater than or equal to 10 times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to 10 times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or Federal hazardous, when the representative soluble metal content equals or exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability and corrosivity; however, for the purposes of this investigation, toxicity (i.e., representative lead concentrations) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or other criteria. Waste that is classified as either California hazardous or RCRA hazardous requires management as a hazardous waste. For soil characterized using XRF technology, TTLC value of 50 mg/kg was selected for "clean soil" instead of 80 mg/kg due to the 1:10 dilution ratio described above.

3.0 SAMPLING ACTIVITIES

3.1 Pre-field Activities
Prepared a Health and Safety Plan (HSP) in April 2019. The HSP provides guidelines on the use of personal protective equipment and the health and safety procedures implemented during the proposed survey activities as specified in T8 CCR §1529, T8 CCR §3203, T8 CCR §3204, T8 CCR §§5095-5100, T8 CCR §5144, and T8 CCR §5192.

3.2 Methodology
District 11 has a Thermo-Scientific NITON model XL3T XRF analyzer and field supplies to perform this data analysis study as a compliance tool for the 2016 DTSC Soil Management Agreement for Aerially-Deposited Lead Contaminated Soils (DTSC ADL Agreement) to screen soil on low-risk projects. Implementation of XRF technology to screen low-risk projects is applied using professional judgement on the assessment of anticipated low total lead concentrations adjacent to roadways using the following criteria:

- Roadway age (i.e., newer roads typically have lower concentrations);
- Traffic volume (i.e., lower volume results in lower concentrations);
- Distance from the road (i.e., concentrations decrease with proximity to the roadway);
- Depth below ground surface (i.e., concentrations typically decrease with depth).
- Project activities (i.e., prior activities may have redistributed lead).
- Roadway grade (i.e. vehicles under load emit more exhaust).
- Locations of increased vehicle idling (e.g. intersections, railroad crossings, etc.).
If the XRF screening criteria threshold is not met, the District will collect representative borings and use laboratory sampling and analysis to characterize and classify soil from proposed excavation areas.

Portable XRF equipment is an excellent field-screening tool that offers rapid, cost-effective analysis of ADL in soil by in-situ or ex-situ methods. It is versatile enough to provide ex-situ, prepared-sample analysis (drying, sieving, and homogenization) in the field with accuracy that can correlate directly to that of standard laboratory analysis. The field XRF data can be used to pre-screen samples (directly through a plastic zip-lock bag) and identify if a site has ADL concentrations at lower levels to quickly classify soil and establish worker health and safety for risk assessment. The field portable XRF analyzer can be used to obtain a large number of data points in a relatively short period of time to evaluate whether a site requires further action with respect to soil characterization by laboratory analysis. When used in conjunction with global positioning system (GPS) technology, the XRF data can show patterns at a site where ADL in soil is present. Since XRF is non-destructive, samples collected and measured in the field can be retained for verification by a laboratory for further confirmatory analysis.

The quality of the data produced by XRF can vary with site conditions, soil composition, and sample preparation; therefore, District 11 follows a strict sample preparation protocol (Attachment 1) to mitigate the potential for skewed data. The XRF field readings and confirmatory lab data from a variety of ADL-contaminated project sites shows a high correlation and consistency of XRF ADL soil results under different site conditions and sampling depths.

The Caltrans District 11 XRF analyzer screening proposal is an alternative method to meet DTSC compliance, in alignment with the Department’s Mission of Sustainability, Vision of Transparency and Accountability, and Goals of Health & Safety and Stewardship & Efficiency. District 11 can ethically screen ADL soils using XRF technology for Caltrans construction projects that:

- Is protective of human health and the environment;
- Complies with federal, state, and local regulations and the 2016 DTSC ADL Agreement;
- Minimizes long-term liability;
- Is cost-effective.

3.3 Sampling and Analysis

Portable XRF analyzer was used to screen the 32 soil samples for total lead for this project. Soil samples were collected at average depth of 0.5 feet below.

Locations where average concentration of total lead using 95% UCL showed total lead to be below 50 mg/kg were characterized as “Clean Soil”. If the XRF reading showed total lead to be equal or above 50 mg/kg, full comprehensive ADL survey shall be performed to ascertain a better understanding of the ADL levels in the soil.
4.0 CONCLUSIONS

4.1 Lead in Soil
All 32 locations (Attachment 2) within U.S. Customs and Border Protection and General Service Administration’s Right of Way were tested for ADL showing lead readings well below 50 mg/kg and can be characterized as “clean soil”.

4.2 Worker Protection
The contractor(s) should prepare a project-specific lead compliance plan to prevent or minimize worker exposure to lead-contaminated soil.

The plan should include:
1. Documentation of the contractor's compliance program to prevent or minimize worker exposure to lead
2. The items listed in 8 CA Code of Regs 1532.1(e)(2)(B)
3. Sealed and signed by a CIH with knowledge of and experience complying with 8 CA Code of Regs

5.0 LIMITATIONS

The results are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Caltrans Environmental Engineering makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

The scope of services described here is not intended to be inclusive, to identify all potential concerns, or to eliminate the possibility of other environmental problems. Within current technology, no level of assessment can show conclusively that a property or its structures are completely free of environmental liability.

It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more-detailed and extensive studies yield more information, which may help understand and manage the level of risk.

Attachments:
1. Guidance for ADL with XRF
2. Sample Locations / XRF Results / UCL Statistics
Caltrans ADL Soil Sampling Protocol
with Field Screening by X-Ray Fluorescence (XRF)

Equipment List

- Stainless steel hand auger bucket and rods
- Rubber mallet
- XRF analyzer with extra battery.
- 8-oz glass sample jars
- USGS sieve for sample homogenization
- XRF calibration check blanks (SiO$_2$) and Standard Reference Materials (SRM) provided with unit.
- Stainless steel mixing bowl or large plastic Ziploc bags (2 gallon) for sample homogenization.
- Soil moisture meter capable of reading moisture in relative percentage.
- Plastic Ziploc bags, sandwich or quart-size for transition from stainless steel bowl if necessary.
- Three-stage decontamination station for hand auger equipment.

Procedure

Prior to screening, run a system check and allow the unit to warm up for fifteen minutes. Next perform a calibration energy check against SRM and blanks provided with unit. Record calibration readings in calibration log and soil screening form. It is recommended that calibration be performed at start of the day, after every 20 readings, and at end of day.

1. Collect soil sample using hand auger equipment (standard ADL sampling procedures).
2. Place soil sample into sieve with two-gallon size Ziploc bag attached or sieve soil into a stainless-steel bowl to eliminate organic material that may cause interference (rocks, plants, etc.), and additionally create a uniform particle size.
3. Place a portion of the homogenized soil into Ziploc bag if needing to be transferred from stainless steel bowl. Remaining portion of soil should be placed in glass sample jars for submittal to laboratory. Label bags and jars with sample ID and depth. Record laboratory samples on COC.
4. Mix soil in bag by kneading (if clay) or by turning end over end. Lay bag on flat surface and flatten soil in bag to create screening surface. Minimum thickness of soil should be approximately ¼ to ½ inch. Be sure no air is between soil and plastic bag and no creases are present in plastic bag.
5. Perform visual check of XRF window to confirm window is not torn and no residual soil is present on the window. Place X-ray window against bag with soil, screen for at least 60 seconds. Record value for lead and XRF reading # on field screening form along with date/time and sample Identification.
6. Screen soil sample for moisture content and allow to dry if necessary. Record reading on soil screening form.
   a. Note: Method 6200 indicates soil with high moisture content (> 20%) will interfere with XRF performance and provide inaccurate screening results. However, Thermo Scientific guidelines indicate their XRF units use Compton Normalization to correct for moisture content changes and should not have significant effect on accuracy.
7. Decontaminate hand auger, sieve and stainless-steel bowl, if utilized, with three-stage decontamination procedure.

8. At the end of the day, generate an electronic ADL report from the analyzers internal memory with the readings collected from the soil as well as the system check and energy calibration checks performed throughout the day.
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Imagery Source: Esri Online Imagery Services

NOTE: mg/kg = milligrams per kilogram

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Imagery Source: Esri Online Imagery Services

NOTE: mg/kg = milligrams per kilogram

Project No: 11A2880
Author: Chris Espina
Date: 4/26/2019

SAMPLE LOCATIONS
Aerially Deposited Lead Survey
SR-7
Imperial County, CA
11-430500

FIGURE 4
NOTE: mg/kg = milligrams per kilogram

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Imagery Source: Esri Online Imagery Services

PROJECT NO: 11A2880
Author: Chris Espina
Date: 4/26/2019

SAMPLE LOCATIONS
Aerially Deposited Lead Survey
SR-7
Imperial County, CA
11-430500

FIGURE 1
BRIDGE WIDENING AT SR-7 CALEXICO POINT OF ENTRY, PM 0.0
IN IMPERIAL COUNTY 0.7 MILE SOUTH OF ROUTE 7 NEAR THE US/MEXICO BORDER

FOR PRELIMINARY STUDY ONLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 11
TRADE CORRIDOR

DATE PLOTTED => 11:19 22-FEB-2019

USERNAME => s129879
DGN FILE => 11-43050k SHEET 1.dgn

DESIGNED BY: Rey Quiambao

NO SCALE

IS IN INCHES
RELATIVE BORDER SCALE
DESIGNED BY
CALCULATED-FOR PRELIMINARY STUDY ONLY
LESS OTHERWISE SHOWN
ALL DIMENSIONS ARE IN FEET

DISTRICT 11
Designed by: Rey Quiambao

DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA
Noise Study Report

On State Route 7, south of the Calexico East Port of Entry
(In the City of Calexico in Imperial County)

11-IMP-007--PM 0.0

EA 11-43050 (EFIS ID 1118000265 -PPNO 1335)

July 2019
Noise Study Report

On State Route 7, south of the Calexico East Port of Entry
(In the City of Calexico in Imperial County)
11-IMP-007-PM 0.0

EA 11-43050 (EFIS ID 1118000265 -PPNO 1335)

July 2019

Prepared By: Tyler Ho, P.E.  Date: 7-13-19

Approved By: Ken Johansson, P.E.
Environmental Engineering Branch Chief
Phone Number  (619) 688-0182
Office Name Caltrans, San Diego
District/Region 11

Caltrans
Summary

The purpose of this Noise Study Report (NSR) is to evaluate traffic noise impacts and possible abatement measures under the requirements of Title 23, Part 772 of the Code of Federal Regulations (Title 23 CFR 772) “Procedures for Abatement of Highway Traffic Noise.” Title 23 CFR 772 provides procedures for preparing operational and construction noise studies as well as evaluating noise abatement considered for federal and federal-aid highway projects. According to Title 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The existing bridge is located south of the Calexico East Port of Entry (POE) in Imperial County. Imperial County Transportation Commission (ICTC), Federal Highways (FHWA), and Caltrans, along with U.S. General Services Administration (GSA) propose widening the existing structure of the Calexico East POE Bridge over the All-American Canal near the USA/ Mexico border to facilitate flow through the existing inspection booths. There are no new lanes proposed north of the inspection booths leading to State Route 7 (SR-7). The new structure would add an 8-foot shoulder, a new concrete barrier, and an additional two new commercial vehicle lanes (for a total of four northbound (NB) commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or construction area is included and would be located on GSA Property. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

This report discusses potential noise impacts from the construction and operation of the project. Existing traffic noise near the project area is predominantly from the Calexico POE truck traffic crossing over the existing bridge. A field investigation was conducted to identify frequent human outdoor use areas that could be subject to traffic noise impacts. The project is in a rural area surrounded by mostly agricultural farm land and port related facilities that are not noise-sensitive. There are no frequent human use outdoor areas identified within 500 feet of the project limit. One short-term measurement and one long-term measurement were conducted simultaneously for existing traffic noise levels, the results show that the existing traffic noise level is well below the Noise Abatement Criteria (NAC), as evaluated in this report, and therefore, preparation of a noise abatement decision report is not required.

No adverse noise impacts from construction are anticipated because construction noise control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications and 14-8.02 “Noise Control” of the Standard Special Provisions. The requirements state that all equipment shall be fitted with adequate mufflers and operated according to the manufacturers’ specifications. Additionally, contractors are expected to comply with applicable local noise guidelines. Construction noise would be short-term and intermittent.
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<th>Full Form</th>
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<td>CAD</td>
<td>Computer-aided design</td>
</tr>
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<td>Caltrans</td>
<td>California Department of Transportation</td>
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<td>CEQA</td>
<td>California Environmental Quality Act</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
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<td>CNEL</td>
<td>Community Noise Equivalent Level</td>
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<td>dB</td>
<td>Decibels</td>
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<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
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<td>HOV</td>
<td>High Occupancy Vehicle</td>
</tr>
<tr>
<td>Hz</td>
<td>Hertz</td>
</tr>
<tr>
<td>IVM</td>
<td>Imperial Valley Mall</td>
</tr>
<tr>
<td>kHz</td>
<td>Kilohertz</td>
</tr>
<tr>
<td>L&lt;sub&gt;dn&lt;/sub&gt;</td>
<td>Day-Night Level</td>
</tr>
<tr>
<td>L&lt;sub&gt;eq&lt;/sub&gt;</td>
<td>Equivalent Sound Level</td>
</tr>
<tr>
<td>L&lt;sub&gt;eq(h)&lt;/sub&gt;</td>
<td>Equivalent Sound Level over one hour</td>
</tr>
<tr>
<td>L&lt;sub&gt;max&lt;/sub&gt;</td>
<td>Maximum Sound Level</td>
</tr>
<tr>
<td>LOS</td>
<td>Level of Service</td>
</tr>
<tr>
<td>L&lt;sub&gt;n&lt;/sub&gt;</td>
<td>Percentile-Exceeded Sound Level</td>
</tr>
<tr>
<td>µPa</td>
<td>micro Pascals</td>
</tr>
<tr>
<td>mph</td>
<td>miles per hour</td>
</tr>
<tr>
<td>NAC</td>
<td>Noise Abatement Criteria</td>
</tr>
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<td>NADR</td>
<td>Noise Abatement Decision Report</td>
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<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<td>NSR</td>
<td>Noise Study Report</td>
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<td>R/W</td>
<td>Right of way</td>
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<td>SPL</td>
<td>sound pressure level</td>
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<td>TeNS</td>
<td>Caltrans’ Technical Noise Supplement</td>
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<td>TNM 2.5</td>
<td>FHWA Traffic Noise Model Version 2.5</td>
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<tr>
<td>VPH</td>
<td>Vehicles per hour</td>
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Chapter 1. Introduction

1.1. Purpose of the Noise Study Report

The purpose of this Noise Study Review Memo is to evaluate traffic noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (Title 23 CFR 772) “Procedures for Abatement of Highway Traffic Noise.” Title 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to Title 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.


This study includes (a) one short-term noise measurement; (b) one long-term noise measurement.

1.2. Project Purpose and Need

1.2.1. Purpose and Need:

The main purpose of this project is to address immediate freight efficiency needs near the Calexico POE. The Project improvements are a critical component of the region’s border development strategy to make California's freight system more efficient, competitive, and environmentally sustainable. Widening the bridge over the All-American Canal allows for the expansion of the Calexico East Port of Entry and increases the commercial vehicle inspection lanes. This project will address the current traffic congestion that hinders economic competitiveness and will also reduce border delays and reduce emissions from idling vehicles. Mexico is California’s number one export market, with more than 97 percent of total trade between California and Mexico being transported by trucks across the border. The Calexico East POE serves roughly 23,500 vehicles daily, northbound and southbound, with over ten percent being trucks. The capacity increases due to the proposed bridge widening will be supplemented by traffic management strategies.

There is major freight congestion due to the physical constraint of the existing bridge over the All-American Canal, which creates a bottleneck or chokepoint. Current traffic demands are not being met and the Commercial Vehicle Enforcement Facility (CVEF) is being underutilized due to the bridge constraints. The bridge widening is needed to bring the CVEF to its capacity.
There is an economic loss caused by an inadequate border infrastructure that is failing to keep pace with growing levels of trade and additional security requirements. Expansion of the existing system is needed to ensure a timely binational movement of goods and people.

In addition to the economic benefits associated with the bridge widening, there are also benefits from an environmental perspective. Emissions associated with idling commercial vehicles add to the associated particulate matter and greenhouse gas (GHG) levels that degrade the air quality for the surrounding community. Free flowing traffic through this area would help reduce GHG levels from commercial vehicles.
Chapter 2. Project Description

ICTC, FHWA, and Caltrans, along with GSA, propose to widen the existing structure of the Calexico East POE Bridge over the All-American Canal near the USA/Mexico border to facilitate flow through the existing inspection booths. There are no new lanes proposed north of the inspection booths leading to State Route 7 (SR-7). The new structure would add an 8-foot shoulder, a new concrete barrier, and an additional two new commercial vehicle lanes (for a total of four northbound (NB) commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or construction area is included and would be located on GSA Property. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA) and FHWA is the lead under National Environmental Policy Act (NEPA).

2.1. No-Build Alternative

This alternative retains the existing conditions and will not address the purpose and need of the project. The consequences will be the continued major freight bottleneck and border delays (traffic demands not met), resulting in continued economic loss and continued degradation of air quality due to idling commercial vehicles.

2.2. Build Alternatives

This alternative proposes to widen the existing structure (the off-system bridge) over the All-American Canal near the USA/Mexico border approximately 0.7 miles south of SR-7. There are no new lanes north of the inspection booths leading to SR-7. The widened structure would accommodate an additional two new commercial vehicle lanes (for a total of four NB commercial vehicle lanes). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes on the existing bridge.

Figures 2-1 and 2-2 show the project vicinity and project location maps, respectively.
Figure 2-1. Project Vicinity Map
Figure 2-2. Project Location Map
Chapter 3. Fundamentals of Traffic Noise

The following is a brief discussion of fundamental traffic noise concepts. For a detailed discussion, please refer to Caltrans’ Technical Noise Supplement (TeNS) (Caltrans, 2009), a technical supplement to the Protocol, that is available on the Caltrans Web site (http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf).

3.1. Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

3.2. Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

3.3. Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this huge range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

3.4. Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an
SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB—rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

### 3.5. A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA. Table 3-1 describes typical A-weighted noise levels for various noise sources.

### 3.6. Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3 dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3 dB increase in sound, would generally be perceived as barely detectable by the average person.
Table 3-1. Typical A-Weighted Noise Levels

<table>
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<th>Common Outdoor Activities</th>
<th>Noise Level (dBA)</th>
<th>Common Indoor Activities</th>
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<td>Jet fly-over at 1000 feet</td>
<td>110</td>
<td>Rock band</td>
</tr>
<tr>
<td>Gas lawn mower at 3 feet</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Diesel truck at 50 feet at 50 mph</td>
<td>90</td>
<td>Rock band</td>
</tr>
<tr>
<td>Noisy urban area, daytime</td>
<td>80</td>
<td>Vacuum cleaner at 10 feet</td>
</tr>
<tr>
<td>Gas lawn mower, 100 feet</td>
<td>70</td>
<td>Normal speech at 3 feet</td>
</tr>
<tr>
<td>Commercial area</td>
<td>60</td>
<td>Large business office</td>
</tr>
<tr>
<td>Heavy traffic at 300 feet</td>
<td>50</td>
<td>Dishwasher next room</td>
</tr>
<tr>
<td>Quiet urban daytime</td>
<td>40</td>
<td>Theater, large conference room (background)</td>
</tr>
<tr>
<td>Quiet urban nighttime</td>
<td>30</td>
<td>Library</td>
</tr>
<tr>
<td>Quiet suburban nighttime</td>
<td>20</td>
<td>Bedroom at night, concert</td>
</tr>
<tr>
<td>Quiet rural nighttime</td>
<td>10</td>
<td>Broadcast/recording studio</td>
</tr>
<tr>
<td>Lowest threshold of human hearing</td>
<td>0</td>
<td>Lowest threshold of human hearing</td>
</tr>
</tbody>
</table>

Source: Caltrans, 2009.

3.7. Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis:

- **Equivalent Sound Level (Leq):** Leq represents an average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level (Leq[h]) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and FHWA.

- **Percentile-Exceeded Sound Level (Ln):** Ln represents the sound level exceeded for a given percentage of a specified period (e.g., L10 is the sound level exceeded 10% of the time, and L90 is the sound level exceeded 90% of the time).

- **Maximum Sound Level (Lmax):** Lmax is the highest instantaneous sound level measured during a specified period.
Day-Night Level ($L_{dn}$): $L_{dn}$ is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.

Community Noise Equivalent Level (CNEL): Similar to $L_{dn}$, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m., and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

3.8. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

3.8.1. Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 decibels for each doubling of distance from a line source.

3.8.2. Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 decibels per doubling of distance for a line source.

3.8.3. Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.
3.8.4. Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receiver rarely effective in reducing noise because it does not create a solid barrier.
Chapter 4. Federal Regulations and State Policies

This report focuses on the requirements of Title 23 CFR 772, as discussed below.

4.1. Federal Regulations

4.1.1. Title 23 CFR 772

Title 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. Under Title 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects. FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a federal or federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

Type I projects are those which include(s): the construction of a highway in a new location or the physical alteration of an existing highway where there is a substantial change in the horizontal or vertical alignment, or the addition of an interchange, high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, ramp, or truck-climbing lane to an existing highway, or the addition of an auxiliary lane, except for when an auxiliary lane is a turning lane, or restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane, or the addition of a new substantial alteration of a weigh station, rest stop, ride share lot, or toll plaza. Projects unrelated to increased noise levels, such as lighting, signing, and landscaping projects would be considered Type III.

Under Title 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, Title 23 CFR 772 requires that the project sponsor “consider” noise abatement before adoption of the final NEPA document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project, and of noise impacts for which no apparent solution is available.

Traffic noise impacts, as defined in Title 23 CFR 772.5, occur when the predicted noise level in the design year approaches or exceeds the Noise Abatement Criteria (NAC) specified in Title 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a “substantial” noise increase). Title 23 CFR 772 does not specifically define the terms “substantial increase” or “approach”; these criteria are defined in the Protocol, as described in the next subsection.
Table 4-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual land use in a given area.

### Table 4-1. Activity Categories and Noise Abatement Criteria

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>Activity L&lt;sub&gt;eq&lt;/sub&gt;[h]&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Evaluation Location</th>
<th>Description of Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57</td>
<td>Exterior</td>
<td>Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.</td>
</tr>
<tr>
<td>B&lt;sup&gt;2&lt;/sup&gt;</td>
<td>67</td>
<td>Exterior</td>
<td>Residential.</td>
</tr>
<tr>
<td>C&lt;sup&gt;2&lt;/sup&gt;</td>
<td>67</td>
<td>Exterior</td>
<td>Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.</td>
</tr>
<tr>
<td>D</td>
<td>52</td>
<td>Interior</td>
<td>Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.</td>
</tr>
<tr>
<td>E</td>
<td>72</td>
<td>Exterior</td>
<td>Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.</td>
</tr>
<tr>
<td>F</td>
<td>--</td>
<td>--</td>
<td>Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing</td>
</tr>
<tr>
<td>G</td>
<td>--</td>
<td>--</td>
<td>Undeveloped lands that are not permitted (without building permits)</td>
</tr>
</tbody>
</table>

<sup>1</sup> The L<sub>eq</sub>[h] activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).

<sup>2</sup> Includes undeveloped lands permitted for this activity category.

Source: 23 CFR Part 772, 2011

In identifying noise impacts, primary consideration is given to exterior areas of frequent human use occurs that would benefit from a lowered noise level. In situations where no exterior activities are to be affected by the traffic noise, or where the exterior activities occur far from the roadway or physically shielded from the roadway in a manner that prevents an impact on exterior activities, Activity Category D is used as the basis for determining noise impacts. Indoor analysis is conducted at Category D land uses only after all outdoor analysis options have been exhausted and after a determination has been made that exterior abatement measures will not be feasible and reasonable.
4.2. State Regulations and Policies

4.2.1. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects

The Protocol specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of federal or federal-aid highway projects. The NAC specified in the Protocol are the same as those specified in Title 23 CFR 772. The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dB. The Protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in Title 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

The Technical Noise Supplement (TeNS) to the Protocol provides detailed technical guidance for the evaluation of highway traffic noise. This includes field measurement methods, noise modeling methods, and report preparation guidance.

4.2.2. Section 216 of the California Streets and Highways Code

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed an $L_{eq}(h)$ of 52 dBA in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. This requirement does not replace the “approach or exceed” NAC criterion for FHWA Activity Category C for classroom exteriors, but it is a requirement that must be addressed in addition to the requirements of Title 23 CFR 772.

If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below an $L_{eq}(h)$ of 52 dBA. If the noise levels generated from freeway and non-freeway sources exceed an $L_{eq}(h)$ of 52 dBA prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.
Chapter 5. Study Methods and Procedures

5.1. Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations

Field investigation was conducted to identify frequent human outdoor use areas that could be subject to traffic noise impacts and to consider the physical setting of the freeway alignment relative to those areas. Land uses in the project area were categorized as defined in the Activity Category of Table 4-1. As stated in the Protocol, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. The project is located in a rural area surrounded by predominantly agricultural farm land and port related facilities and there are no frequent human use outdoor areas identified within 500’ of the project limit. Figures in Appendix A indicate the locations of relevant land use types within the study corridor.

All short-term and long-term measurement sites were selected so that unusual noise from sources such as barking dogs, air-conditioners, pool pumps, etc. would not affect the measurement.

5.2. Field Measurement Procedures

Noise measurements were conducted at selected locations to evaluate the existing noise environment. Noise measurements were conducted in conformance with the TeNS and with the guidelines outlined in the FHWA’s “Measuring of Highway Related Noise,” FHWA-DP-96-046. The following is a brief description of the measurement procedures used for this project:

- Microphones were placed approximately 5 feet above the ground and were positioned more than 10 feet from any wall or building to prevent reflections or unrepresentative shielding of the noise.
- Sound level meters were calibrated before and after each set of measurements.
- Following the calibration of equipment, a windscreen was placed over the microphone.
- Frequency weighting was set on “A”, and the slow detector response was selected.
- Results of the short-term noise measurements were recorded on data sheets in the field. Long-term measured data were downloaded to the computer for tabulation and graphing. This information is located in Appendix B.
- During the short-term noise measurements, any noise contaminations such as local traffic, barking dogs, etc. were noted.
Wind speed, temperature, humidity, and sky conditions were observed and documented during the short-term noise measurements. This information is located in Appendix B.

Instruments used for the noise measurements included the following:

- Sound Level Meters – Larson Davis models 812, 820, and LxT1.
- Microphone Systems:
  - Larson Davis 812 and 820 Systems – Larson Davis model PRM 828 microphone preamp; Larson Davis model 2560, ½-inch pressure microphone.
  - Larson Davis LxT1 System – Larson Davis model PRMLxT1 microphone preamps; PCB model 377B02, ½-inch pressure microphone.
- Acoustic Field Calibrators – Larson Davis models CA200 and CA250 constant pressure microphone calibrators.
- 4-inch diameter windscreens; and tripods.
- Wind Monitor/Temperature and Humidity Gauge – Kestrel 3000 Pocket Weather Meter.

Instrumentation serial numbers, calibration data, noise measurement dates and times, noise measurement data, meteorological data, and measurement locations are noted on the noise measurement field forms located in Appendix C. Noise measurement instrumentation calibration records are located in Appendix E.

5.2.1. Short-Term Measurements

Short-term monitoring was conducted at one location in June of 2019 using a Larson-Davis model LxT 831 Precision Type 1 sound level meter. Measurement was taken for duration of 20-minutes. Short-term monitoring was conducted at or adjacent to Activity Categories F and G land uses. The short-term measurement location is identified in Appendix A, and addresses are listed in Table 6-1 of Section 6.0 Existing Noise Environment. Noise measurement field notes are located in Appendix B and measurement site photographs are presented in Appendix D.

During the short-term measurement (20 minutes in duration), field staff attended each meter. Dominant noise sources observed were also identified and logged during the measurement period. Using this approach, other non-traffic noise sources (such as local traffic and dogs barking), which potentially contributed significantly to measured noise levels could be identified. The calibration of the meter was checked before and after the measurement using a Larson-Davis Model CAL200 calibrator. Temperature, wind speed, and humidity were recorded manually during each short-term monitoring session using a Kestrel 3000 portable weather station.

5.2.2. Long-Term Measurements

Long-term monitoring was conducted in June of 2019 using Larson-Davis model LxT 831 Precision Type 1 sound level meter. The purpose of these measurements was to
identify variations in sound levels throughout the day. The long-term sound level data was collected for 24-hour periods. Long-term monitoring location is shown in Appendix A and addresses are listed in Table 6-2 of Section 6.0 Existing Noise Environment. Noise measurement field notes are located in Appendix B and measurement site photographs are presented in Appendix D.
Chapter 6. Existing Noise Environment

6.1. Existing Land Uses

A field investigation was conducted to identify land uses that could be subject to traffic noise impacts from the proposed project. Adjacent commercial and industrial land was identified as activity category F, and adjacent undeveloped land was identified as category G surrounding the Calexico East POE. The project site is in a rural area surrounded by mostly agricultural farm land and port related facilities and there are no existing noise sensitive land uses in the project area under existing condition and there are no frequent human use outdoor areas identified within 500-feet of the project area.

The following noise analysis is focused on the existing noise environment in the project area, which is considered the existing background traffic noise level and serves as the baseline for traffic noise levels in the project area.
Figure 6-1. Noise Measurement locations,
Calexico East Port of Entry Project

Proposed
Number of Lanes:
4 NB Lanes (CV)
2 SB Lanes (CV)
5 NB Lanes (PV)
2 SB Lanes (PV)
13 Lanes Total

Future (Proposed) Configuration
For Preliminary Study Only
6.2. **Noise Measurement Results**

The existing noise environment in the project area is characterized in the following sections based on short-term and long-term noise measurements completed in the project area.

6.2.1. **Short-Term Monitoring**

One short-term noise measurement (ST1) was obtained in June of 2019 for duration of 20 minutes. The primary objective of this short-term noise measurement was to evaluate the existing noise environment. Existing traffic noise exposure near ST-1 was dominated by Calexico East POE truck route traffic. Table 6-1 presents this short-term noise measurement result. Also included in Table 6-1 is the land use type for this measurement site. Figures in Appendix A present the measurement locations. Appendix B includes noise measurement data sheets recorded in the field and meteorological data. Appendix C contains equipment calibration records. Appendix D includes the noise measurement site photographs. The measurement result presented in Table 6-1 indicates that the existing traffic noise along the project corridor adjacent to the Calexico East POE is well below the NAC of 72 dBA.

6.2.2. **Long-Term Monitoring**

One long-term noise measurement (LT1) was also obtained in June of 2019 for 24-hour duration using Larson-Davis model LxT 831 Precision Type 1 sound level meter. This long-term noise measurement was obtained to observe hourly noise distribution throughout the day and identify the peak noise hour. Table 6-2 presents this long-term measurement result, the land use type for this measurement site, and the monitoring location. Appendix B includes field survey sheets and hourly Leq graphs, Appendix C contains equipment calibration records, and Appendix D includes the noise measurement site photographs.
### Table 6-1. Short-Term Noise Measurement Result

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Street Address, City</th>
<th>Land Use</th>
<th>Meter Location</th>
<th>Noise Abatement Category (Criterion)</th>
<th>Meas. Date</th>
<th>Start Time</th>
<th>Meas. Leq, dBA</th>
<th>Adjusted Peak-Hour Leq, dBA</th>
<th>Adjusted to Long-Term Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST1</td>
<td>Calexico East POE</td>
<td>Vacant</td>
<td>Northside of All-American Canal</td>
<td>F, G</td>
<td>6/5 to 6/6 of 2019</td>
<td>11:20am</td>
<td>54.4</td>
<td>LT1</td>
<td>59</td>
</tr>
</tbody>
</table>

Notes:
1. SFR: Single-Family Residential; REC: Recreational

### Table 6-2. Long-Term Noise Measurement Result

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Street Address, City</th>
<th>Area</th>
<th>Land Use</th>
<th>Noise Abatement Category (Criterion)</th>
<th>Meter Location</th>
<th>Meas. Dates</th>
<th>Start Time</th>
<th>Duration, No. of Hours</th>
<th>Peak Hour Time</th>
<th>Measured Peak Hour Leq, dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT1</td>
<td>Calexico East POE</td>
<td>1</td>
<td>Vacant</td>
<td>F, G</td>
<td>outdoor</td>
<td>6/5 to 6/6 of 2019</td>
<td>11:20am</td>
<td>24</td>
<td>4am-5am</td>
<td>59</td>
</tr>
</tbody>
</table>

Notes:
1. SFR: Single-Family Residential; MFR: Multi-Family Residential
Chapter 7. Construction Noise

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 7-1 summarizes noise levels produced by construction equipment commonly used on roadway construction projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 89 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Table 7-1. Construction Equipment Noise

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Maximum Noise Level (dBA at 50 feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrapers</td>
<td>89</td>
</tr>
<tr>
<td>Bulldozers</td>
<td>85</td>
</tr>
<tr>
<td>Heavy Trucks</td>
<td>88</td>
</tr>
<tr>
<td>Backhoe</td>
<td>80</td>
</tr>
<tr>
<td>Pneumatic Tools</td>
<td>85</td>
</tr>
<tr>
<td>Concrete Pump</td>
<td>82</td>
</tr>
</tbody>
</table>

Source: Federal Transit Administration, 2006

Construction noise varies greatly depending on the construction process, type and condition of equipment used, as well as layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable at areas located immediately adjacent to the proposed project alignment.

The noise level requirement specified herein shall apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor.

Sound control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications. According to requirements of these specifications, construction noise cannot exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.

Using alternative warning methods instead of a sound signal should be considered unless required by safety laws. All internal combustion engines must be equipped with the manufacturer-recommended muffler. An internal combustion engine cannot be operated on the job site without the appropriate muffler.

Minor deviations from this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the Contractor, if in the opinion of the Resident Engineer, the work will be expedited and sound levels resulting from this work will not cause adverse public reaction.

As directed by Caltrans, the contractor will implement appropriate additional noise
mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activities, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.
Chapter 8. References


Appendix A  Noise Measurement Data Forms and Graphs
## CALTRANS - District 11
### NOISE MEASUREMENT DATA SHEET

<table>
<thead>
<tr>
<th>County:</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route:</td>
<td>SR-7</td>
</tr>
<tr>
<td>P.M.:</td>
<td>0.0</td>
</tr>
<tr>
<td>Site No.</td>
<td>LT</td>
</tr>
</tbody>
</table>

**Test By:** BB/TH

**Date:** 6/5/19

**Day:** Wednesday / Thursday

**Site Location:** Calexico E/C

**Occupant/Owner:** CBP / SH

**Single Family** | **Multi-family** | **Recreational** | **Commercial** | **Other** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Phone</td>
<td>Home Phone</td>
<td>Work Phone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Meterological Conditions:
- **Temp (°F):** 90°F
- **Humidity:** 30%
- **Wind:** Calm / Light / Moderate / Variable
- **Windspeed (mph):**
  - Note: Must be less than 12 mph
- **Sky:** Sunny / Clear / Overcast / Partial Cloudy / Fog / Rain / Other

### Acoustic Measurements:
- **Instrument:** Larson Davis LA-932 / 831 / 820 or other
- **Calibrator:** Larson Davis LAC-2000 / LAC-1000
- **Freq. Hz:** Other
- **Serial #:** 1100 7939 / 6450 59
- **Calibration Check:** Pre-Test: 114.9 spl (A) SPL / Post-Test: 113.2 spl (A) SPL

### Meter Settings:
- **A Weighted**
- **Fast / Slow**
- **Intervals (minute):** 20 / 15 / 10 / 5

### Noise Source Info:
- **Primary Noise Source:** Freeway / Frontage road or Local
- **Other Noise Sources:** DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL/DIST. CHILDREN
- **PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITY / AMBIENT / Other**

### Traffic Counts:
- **Start Time:** ______
- **End Time:** ______
- **Handcount:** ______
- **Video:** ______
- **Other:** ______

### Speed Estimated by:
- **Radar:** ______
- **Driving:** ______
- **Observer:** ______ (mph)

### Other Info:
- **Camera NOS:** ______
- **Taken Photo:** ______
- **Photo NOS:** ______

(Other check or circle if appropriate)
Site ST1 Hourly Noise Levels, Leq(h)

Location: Northside of ALL-American Canal
Source: Calexico East Port of Entry
Date: 06/05/2019 to 08/06/2019

Notes: See attached Noise Measurement Form.

Noise Abatement Criteria - Exterior Threshold Level 72 dB(A)

ST 1
Leq(h) Avg = 54.4 dB(A)
CALTRANS - District 11
NOISE MEASUREMENT DATA SHEET

County: Imperial Route: SR-7 P.M.: 0.0 Site No.: 01 ST-1

Test By: BB/MH Date: 6/5/19 Day: Wednesday / Thursday

Site Location: Calexico POE Street Address: ( )
City: Calexico CA ZIP: ( )

Occupant/Owner: C.B. / USA Home Phone: ( ) Work Phone: ( )

Single Family Multi-family Recreational Commercial Other

Meteorological Conditions:
Temp (F): 90 Humidity: 30 % Wind*: Calm Light / Moderate / Variable
Windspeed (mph):
Note: Must be less than 12 mph

Sky*: Sunny / Clear / Overcast / Partial Cloudy / Fog / Rain / Other:

Acoustic Measurements:
Instrument*: Larson Davis LTR822 / 831 / 820 or other Type: 3 or Serial #: D8007B36
Calibrator: Larson Davis Cal 200D-114 Freq. Hz: Other Serial #: D80008B9
Calibration Check: Pre-Test: 1256 dBA SPL Post-Test: ( ) dBA SPL

Meter Settings* Weighted / Slow / Fast / Other: 
Intervals (minute) 20 15 10 1 or 
Record #: Start End L eq L max L min Descriptions

Noise Source Info*:
Primary Noise Source: Freeway / Frontage road or Local Must Traffic on the Bridge
Other Noise Sources:
Traffic Counts:

(Directions)

Autos: 
Medium Trucks: 
Heavy Trucks: N/A
Buses: 
Motorcycles: 

Speed Estimated by Radar / Driving / Observer ___ (mph)

Other Info: Camera NOs Yes or No Taken Photo YES or No Photo NOs

(* check or circle if applicable)
Site LT1 Hourly Noise Levels, \( \text{Leq}(h) \)

**Location:** Northside of ALL-American Canal  
**Source:** Calexico East Port of Entry  
**Date:** 06/05/2019 to 05/06/2019  

Notes: See attached Noise Measurement Form.

<table>
<thead>
<tr>
<th>TIME</th>
<th>Leq, dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:20 AM</td>
<td>55</td>
</tr>
<tr>
<td>11:40 AM</td>
<td>55</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>56</td>
</tr>
<tr>
<td>1:00 PM</td>
<td>56</td>
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<tr>
<td>2:00 PM</td>
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<tr>
<td>3:00 PM</td>
<td>56</td>
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<tr>
<td>4:00 PM</td>
<td>56</td>
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<tr>
<td>5:00 PM</td>
<td>59</td>
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<tr>
<td>6:00 PM</td>
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<td>7:00 PM</td>
<td>57</td>
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<tr>
<td>8:00 PM</td>
<td>51</td>
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<tr>
<td>9:00 PM</td>
<td>48</td>
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<td>11:00 PM</td>
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<td>44</td>
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<td>3:00 AM</td>
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<td>4:00 AM</td>
<td>41</td>
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<td>5:00 AM</td>
<td>45</td>
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<tr>
<td>6:00 AM</td>
<td>54</td>
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<tr>
<td>7:00 AM</td>
<td>54</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>55</td>
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<tr>
<td>9:00 AM</td>
<td>55</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>56</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>57</td>
</tr>
</tbody>
</table>

Noise Abatement Criteria - Exterior Threshold Level 72 dB(A)

- **Wednesday**
- **Thursday**

Calexico East Port of Entry

Leq (h) Avg = 54.4 dB(A)
Calibration Certificate

Certificate Number 2019001665

Customer:
California Department of Transportation
4050 Taylor Street
San Diego, CA 92110, United States

Model Number LxT SE
Serial Number 0003619
Test Results Pass
Initial Condition AS RECEIVED same as shipped

Description Sound Expert LxT
Class 1 Sound Level Meter
Firmware Revision: 2.302

Procedure Number D0001.8378
Technician Ron Harris
Calibration Date 8 Feb 2019
Calibration Due 8 Feb 2020
Temperature 23.11 °C ± 0.25 °C
Humidity 50.5 %RH ± 2.0 %RH
Static Pressure 86.37 kPa ± 0.13 kPa

Evaluation Method
Tested electrically using Larson Davis PRMLxT1L S/N 028002 and a 12.0 pF capacitor to simulate microphone capacitance. Data reported in dB re 20 μPa assuming a microphone sensitivity of 23.6 mV/μPa.

Compliance Standards
Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8384:

- IEC 60651:2001 Type 1
- IEC 60804:2000 Type 1
- IEC 61252:2002
- IEC 61260:2001 Class 1
- IEC 61672:2013 Class 1

- ANSI S1.4-2014 Class 1
- ANSI S1.4 (R2006) Type 1
- ANSI S1.11 (R2009) Class 1
- ANSI S1.25 (R2007)
- ANSI S1.43 (R2007) Type 1

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. Test points marked with a ✦ in the uncertainties column do not fall within this laboratory’s scope of accreditation.

The quality system is registered to ISO 9001:2015.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 μPa

LARSON DAVIS - A PCB PIEZOTRONICS DIV.
1681 West 820 North
Provo, UT 84601, United States
716-684-0001
Periodic tests were performed in accordance with procedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part3.

No Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 available.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full specifications of IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 because (a) evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the class 1 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 or correction data for acoustical test of frequency weighting were not provided in the Instruction Manual and (b) because the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3 cover only a limited subset of the specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cal Date</th>
<th>Cal Due</th>
<th>Cal Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hart Scientific 2626-H Temperature Probe</td>
<td>2018-08-19</td>
<td>2019-08-19</td>
<td>006798</td>
</tr>
<tr>
<td>SRS DS360 Ultra Low Distortion Generator</td>
<td>2018-10-04</td>
<td>2019-10-04</td>
<td>007167</td>
</tr>
</tbody>
</table>
Calibration Certificate

Certificate Number 2019001677
Customer:
California Department of Transportation
4050 Taylor Street
San Diego, CA 92110, United States

Model Number  LxT SE
Serial Number  0003619
Test Results  Pass
Initial Condition  AS RECEIVED same as shipped
Description  Sound Expert LxT
Class 1 Sound Level Meter
Firmware Revision: 2.302

Procedure Number  D0001.8384
Technician  Ron Harris
Calibration Date  8 Feb 2019
Calibration Due  8 Feb 2020
Temperature  23.49 °C ± 0.25 °C
Humidity  50.2 %RH ± 2.0 %RH
Static Pressure  86.27 kPa ± 0.13 kPa

Evaluation Method

Tested with:
- Larson Davis PRMLxT11L, S/N 028002
- PCB 377B02, S/N LW138732
- Larson Davis CAL200, S/N 9079
- Larson Davis CAL291, S/N 0108

Compliance Standards
Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8378:

- IEC 60651:2001 Type 1
- IEC 60604:2000 Type 1
- IEC 61252:2002
- IEC 61260:2001 Class 1
- IEC 61672:2013 Class 1
- ANSI S1.4-2014 Class 1
- ANSI S1.4 (R2006) Type 1
- ANSI S1.11 (R2009) Class 1
- ANSI S1.25 (R2007)
- ANSI S1.43 (R2007) Type 1

Data reported in dB re 20μPa.

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.

Test points marked with a ‡ in the uncertainties column do not fall within this laboratory’s scope of accreditation.

The quality system is registered to ISO 9001:2015.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the organization issuing this report.

Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

LARSON DAVIS - A PCB PIEZOTRONICS DIV.
1681 West 820 North
Provo, UT 84601, United States
716-684-0001
For 1/4" microphones, the Larson Davis ADP024 1/4" to 1/2" adaptor is used with the calibrators and the Larson Davis ADP043 1/4" to 1/2" adaptor is used with the preamplifier.

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 μPa

Periodic tests were performed in accordance with procedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part3.

No Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 available.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full specifications of IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 because (a) evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the class 1 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 or correction data for acoustical test of frequency weighting were not provided in the Instruction Manual and (b) because the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3 cover only a limited subset of the specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

### Standards Used

<table>
<thead>
<tr>
<th>Description</th>
<th>Cal Date</th>
<th>Cal Due</th>
<th>Cal Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larson Davis CAL291 Residual Intensity Calibrator</td>
<td>2018-09-19</td>
<td>2019-09-19</td>
<td>001250</td>
</tr>
<tr>
<td>SRS DS360 Ultra Low Distortion Generator</td>
<td>2018-06-21</td>
<td>2019-06-21</td>
<td>006311</td>
</tr>
<tr>
<td>Hart Scientific 2626-H Temperature Probe</td>
<td>2018-08-19</td>
<td>2019-08-19</td>
<td>006798</td>
</tr>
<tr>
<td>Larson Davis Model 831</td>
<td>2018-02-28</td>
<td>2019-02-28</td>
<td>007182</td>
</tr>
<tr>
<td>PCB 377A13 1/2 inch Prepolarized Pressure Microphone</td>
<td>2018-03-07</td>
<td>2019-03-07</td>
<td>007185</td>
</tr>
</tbody>
</table>

### Acoustic Calibration

Measured according to IEC 61672-3:2013 10 and ANSI S1.4-2014 Part 3: 10

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 Hz</td>
<td>114.01</td>
<td>113.80</td>
<td>114.20</td>
<td>0.14</td>
<td>Pass</td>
</tr>
</tbody>
</table>

As Received Level: 112.98
Adjusted Level: 114.01

--- End of measurement results---

### Acoustic Signal Tests, C-weighting

Measured according to IEC 61672-3:2013 12 and ANSI S1.4-2014 Part 3: 12 using a comparison coupler with Unit Under Test (UUT) and reference SLM using slow time-weighted sound level for compliance to IEC 61672-1:2013 5.5; ANSI S1.4-2014 Part 1: 5.5

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>125</td>
<td>-0.09</td>
<td>-0.20</td>
<td>-1.20</td>
<td>0.80</td>
<td>0.23</td>
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<tr>
<td>1000</td>
<td>0.21</td>
<td>0.00</td>
<td>-0.70</td>
<td>0.70</td>
<td>0.23</td>
<td>Pass</td>
</tr>
<tr>
<td>8000</td>
<td>-4.25</td>
<td>-3.00</td>
<td>-5.50</td>
<td>-1.50</td>
<td>0.32</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---
Self-generated Noise

Measured according to IEC 61672-3:2013 11.1 and ANSI S1.4-2014 Part 3: 11.1

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Test Result [dB]</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-weighted</td>
<td>40.22</td>
</tr>
</tbody>
</table>

-- End of measurement results--

-- End of Report--

Signatory: **Ron Harris**
Calibration Certificate

Certificate Number 2019001699

Customer:
California Department of Transportation
4050 Taylor Street
San Diego, CA 92110, United States

Model Number  CAL200
Serial Number  5021
Test Results  Pass
Initial Condition  Adjusted
Description  Larson Davis CAL200 Acoustic Calibrator

Procedure Number  D0001.8386
Technician  Scott Montgomery
Calibration Date  8 Feb 2019
Calibration Due  8 Feb 2020
Temperature  24 °C ± 0.3 °C
Humidity  29 %RH ± 3 %RH
Static Pressure  101.1 kPa ± 1 kPa

Evaluation Method  The data is acquired by the insert voltage calibration method using the reference microphone’s open circuit sensitivity. Data reported in dB re 20 µPa.

Compliance Standards  Compliant to Manufacturer Specifications per D0001.8190 and the following standards:
IEC 60942:2017
ANSI S1.40-2006

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. Test points marked with a ± in the uncertainties column do not fall within this laboratory’s scope of accreditation.

The quality system is registered to ISO 9001:2015.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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<table>
<thead>
<tr>
<th>Description</th>
<th>Cal Date</th>
<th>Cal Due</th>
<th>Cal Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent 34401A DMM</td>
<td>09/06/2018</td>
<td>09/06/2019</td>
<td>001021</td>
</tr>
<tr>
<td>Larson Davis Model 2900 Real Time Analyzer</td>
<td>04/10/2018</td>
<td>04/10/2019</td>
<td>001051</td>
</tr>
<tr>
<td>Microphone Calibration System</td>
<td>03/07/2018</td>
<td>03/07/2019</td>
<td>005446</td>
</tr>
<tr>
<td>1/2&quot; Preamplifier</td>
<td>09/20/2018</td>
<td>09/20/2019</td>
<td>006506</td>
</tr>
<tr>
<td>Larson Davis 1/2&quot; Preampifier 7-pin LEMO</td>
<td>08/07/2018</td>
<td>08/07/2019</td>
<td>006507</td>
</tr>
<tr>
<td>1/2 inch Microphone - RH - 200V</td>
<td>05/10/2018</td>
<td>05/10/2019</td>
<td>006510</td>
</tr>
<tr>
<td>Pressure Transducer</td>
<td>07/18/2018</td>
<td>07/18/2019</td>
<td>007368</td>
</tr>
</tbody>
</table>
## Output Level

<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>101.2</td>
<td>114.00</td>
<td>113.80</td>
<td>114.20</td>
<td>0.14</td>
<td>Pass</td>
</tr>
<tr>
<td>94</td>
<td>101.1</td>
<td>94.01</td>
<td>93.80</td>
<td>94.20</td>
<td>0.15</td>
<td>Pass</td>
</tr>
</tbody>
</table>

-- End of measurement results--

## Frequency

<table>
<thead>
<tr>
<th>Nominal Level</th>
<th>Pressure [kPa]</th>
<th>Test Result [Hz]</th>
<th>Lower Limit [Hz]</th>
<th>Upper Limit [Hz]</th>
<th>Expanded Uncertainty [Hz]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>101.2</td>
<td>1,000.11</td>
<td>990.00</td>
<td>1,010.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>94</td>
<td>101.1</td>
<td>1,000.13</td>
<td>990.00</td>
<td>1,010.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
</tbody>
</table>

-- End of measurement results--

## Total Harmonic Distortion + Noise (THD+N)

<table>
<thead>
<tr>
<th>Nominal Level</th>
<th>Pressure [kPa]</th>
<th>Test Result [%]</th>
<th>Lower Limit [%]</th>
<th>Upper Limit [%]</th>
<th>Expanded Uncertainty [%]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>101.2</td>
<td>0.35</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>94</td>
<td>101.1</td>
<td>0.41</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
</tbody>
</table>

-- End of measurement results--

## Level Change Over Pressure

Tested at: 114 dB, 24 °C, 31 %RH

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>108.0</td>
<td>108.0</td>
<td>-0.04</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>101.3</td>
<td>101.4</td>
<td>0.00</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>92.0</td>
<td>92.0</td>
<td>0.05</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>83.0</td>
<td>83.0</td>
<td>0.08</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>74.0</td>
<td>73.9</td>
<td>0.06</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>65.0</td>
<td>65.0</td>
<td>-0.01</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
</tbody>
</table>

-- End of measurement results--

## Frequency Change Over Pressure

Tested at: 114 dB, 24 °C, 31 %RH

<table>
<thead>
<tr>
<th>Nominal Pressure [kPa]</th>
<th>Pressure [kPa]</th>
<th>Test Result [Hz]</th>
<th>Lower Limit [Hz]</th>
<th>Upper Limit [Hz]</th>
<th>Expanded Uncertainty [Hz]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>108.0</td>
<td>108.0</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>101.3</td>
<td>101.4</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>92.0</td>
<td>92.0</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>83.0</td>
<td>83.0</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>74.0</td>
<td>73.9</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>65.0</td>
<td>65.0</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
</tbody>
</table>

-- End of measurement results--

LARSON DAVIS - A PCB PIEZOTRONICS DIV.
1681 West 820 North
Provo, UT 84601, United States
716-684-9001

2/8/2019 3:09:45PM

Page 2 of 3
## Total Harmonic Distortion + Noise (THD+N) Over Pressure

*Tested at: 114 dB, 24 °C, 31 %RH*

<table>
<thead>
<tr>
<th>Nominal Pressure [kPa]</th>
<th>Pressure [kPa]</th>
<th>% Difference</th>
<th>Lower Limit [%]</th>
<th>Upper Limit [%]</th>
<th>Expanded Uncertainty [%]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>108.0</td>
<td>108.0</td>
<td>0.36</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>101.3</td>
<td>101.4</td>
<td>0.35</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>92.0</td>
<td>92.0</td>
<td>0.33</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>83.0</td>
<td>83.0</td>
<td>0.31</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>74.0</td>
<td>73.9</td>
<td>0.30</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>65.0</td>
<td>65.0</td>
<td>0.29</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
</tbody>
</table>

---

*End of measurement results*

---

**Signatory: Scott Montgomery**
Calibration Certificate

Certificate Number 2019001667
Customer: California Department of Transportation
4050 Taylor Street
San Diego, CA 92110, United States

Model Number LxT SE
Serial Number 0003705
Test Results Pass
Initial Condition AS RECEIVED same as shipped
Description Sound Expert LxT
Class 1 Sound Level Meter
Firmware Revision: 2.302

Procedure Number D0001.8378
Technician Ron Harris
Calibration Date 8 Feb 2019
Calibration Due 8 Feb 2020
Temperature 23.02 °C ± 0.25 °C
Humidity 49.5 %RH ± 2.0 %RH
Static Pressure 86.35 kPa ± 0.13 kPa

Evaluation Method
Tested electrically using Larson Davis PRMLxT1L S/N 028004 and a 12.0 pF capacitor to simulate microphone capacitance. Data reported in dB re 20 μPa assuming a microphone sensitivity of 23.6 mV/μPa.

Compliance Standards
Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8384:

- IEC 60951:2001 Type 1
- IEC 60804:2000 Type 1
- IEC 61252:2002
- IEC 61260:2001 Type 1
- IEC 61672:2013 Type 1

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. Test points marked with a $ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2015.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 μPa
Certificate Number 2019001667

Periodic tests were performed in accordance with procedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part3.

No Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 available.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full specifications of IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 because (a) evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the class 1 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 or correction data for acoustical test of frequency weighting were not provided in the Instruction Manuel and (b) because the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3 cover only a limited subset of the specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cal Date</th>
<th>Cal Due</th>
<th>Cal Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hart Scientific 2626-H Temperature Probe</td>
<td>2018-08-19</td>
<td>2019-08-19</td>
<td>006798</td>
</tr>
<tr>
<td>SRS DS360 Ultra Low Distortion Generator</td>
<td>2018-03-16</td>
<td>2019-03-16</td>
<td>007174</td>
</tr>
</tbody>
</table>
Calibration Certificate

Certificate Number 2019001672

Customer:
California Department of Transportation
4050 Taylor Street
San Diego, CA 92110, United States

Model Number       LxT SE
Serial Number       0003705
Test Results        Pass
Initial Condition   AS RECEIVED same as shipped
Description         Sound Expert LxT
                     Class 1 Sound Level Meter
                     Firmware Revision: 2.302

Procedure Number    D0001.8384
Technician          Ron Harris
Calibration Date    8 Feb 2019
Calibration Due     8 Feb 2020
Temperature         23.24 °C ± 0.25 °C
Humidity            49.1 %RH ± 2.0 %RH
Static Pressure     86.31 kPa ± 0.13 kPa

Evaluation Method

Tested with:

- Larson Davis PRMLxT1L, S/N 028004
- PCB 377B02, S/N 164374
- Larson Davis CAL200, S/N 9079
- Larson Davis CAL291, S/N 0108

Data reported in dB re 20 µPa.

Compliance Standards

Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8378:

- IEC 60651:2001 Type 1
- ANSI S1.4-2014 Class 1
- IEC 60804:2000 Type 1
- ANSI S1.4 (R2006) Type 1
- IEC 61252:2002
- ANSI S1.11 (R2009) Class 1
- IEC 61260:2001 Class 1
- ANSI S1.25 (R2007)
- IEC 61672:2013 Class 1
- ANSI S1.43 (R2007) Type 1

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.

Test points marked with a $ in the uncertainties column do not fall within this laboratory’s scope of accreditation.

The quality system is registered to ISO 9001:2015.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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LARSON DAVIS - A PCB PIEZOTRONICS DIV.
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

2019-2-8T11:13:32
Certificate Number 2019001672

For 1/4" microphones, the Larson Davis ADP024 1/4" to 1/2" adaptor is used with the calibrators and the Larson Davis ADP043 1/4" to 1/2" adaptor is used with the preamplifier.

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 μPa

Periodic tests were performed in accordance with procedures from IEC 6172-3:2013 / ANSI/ASA S1.4-2014/Part3.

No Pattern approval for IEC 6172-1:2013 / ANSI/ASA S1.4-2014/Part 1 available.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 6172-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full specifications of IEC 6172-1:2013 / ANSI/ASA S1.4-2014/Part 1 because (a) evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the class 1 specifications in IEC 6172-1:2013 / ANSI/ASA S1.4-2014/Part 1 or correction data for acoustical test of frequency weighting were not provided in the Instruction Manual and (b) because the periodic tests of IEC 6172-3:2013 / ANSI/ASA S1.4-2014/Part 3 cover only a limited subset of the specifications in IEC 6172-1:2013 / ANSI/ASA S1.4-2014/Part 1.

<table>
<thead>
<tr>
<th>Standards Used</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Cal Date</td>
</tr>
<tr>
<td>Larson Davis CAL291 Residual Intensity Calibrator</td>
<td>2018-09-19</td>
</tr>
<tr>
<td>SRS DSS60 Ultra Low Distortion Generator</td>
<td>2018-06-21</td>
</tr>
<tr>
<td>HarT Scientific 2626-H Temperature Probe</td>
<td>2018-08-19</td>
</tr>
<tr>
<td>Larson Davis Model 831</td>
<td>2018-02-28</td>
</tr>
<tr>
<td>PCB 377A13 1/2 inch Prepolarized Pressure Microphone</td>
<td>2018-03-07</td>
</tr>
</tbody>
</table>

### Acoustic Calibration

Measured according to IEC 6172-3:2013 10 and ANSI S1.4-2014 Part 3: 10

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 Hz</td>
<td>114.00</td>
<td>113.80</td>
<td>114.20</td>
<td>0.14</td>
<td>Pass</td>
</tr>
</tbody>
</table>

As Received Level: 111.71
Adjusted Level: 114.00

--- End of measurement results---

### Acoustic Signal Tests, C-weighting

Measured according to IEC 6172-3:2013 12 and ANSI S1.4-2014 Part 3: 12 using a comparison coupler with Unit Under Test (UUT) and reference SLM using slow time-weighted sound level for compliance to IEC 6172-1:2013 5.5; ANSI S1.4-2014 Part 1: 5.5

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>125</td>
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<td>-1.20</td>
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<td>0.23</td>
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<tr>
<td>1000</td>
<td>0.06</td>
<td>0.00</td>
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<td>0.70</td>
<td>0.23</td>
<td>Pass</td>
</tr>
<tr>
<td>8000</td>
<td>-2.34</td>
<td>-3.00</td>
<td>-5.50</td>
<td>-1.50</td>
<td>0.32</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---

LARSON DAVIS - A PCB PIEZOTRONICS DIV.
1681 West 820 North
Provo, UT 84601, United States
716-584-0001

2019-2-8T11:13:32
Self-generated Noise

Measured according to IEC 61672-3:2013 11.1 and ANSI S1.4-2014 Part 3: 11.1

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Test Result [dB]</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-weighted</td>
<td>40.45</td>
</tr>
</tbody>
</table>

-- End of measurement results--

-- End of Report--

Signatory: Ron Harris
Calibration Certificate

Certificate Number 2019001696

Customer:
California Department of Transportation
4050 Taylor Street
San Diego, CA 92110, United States

Model Number: CAL200
Serial Number: 5020
Test Results: Pass
Initial Condition: AS RECEIVED same as shipped
Description: Larson Davis CAL200 Acoustic Calibrator

Procedure Number: D0001.8386
Technician: Scott Montgomery
Calibration Date: 8 Feb 2019
Calibration Due: 8 Feb 2020
Temperature: 24 °C ± 0.3 °C
Humidity: 31 %RH ± 3 %RH
Static Pressure: 101.3 kPa ± 1 kPa

Evaluation Method: The data is acquired by the insert voltage calibration method using the reference microphone's open circuit sensitivity. Data reported in dB re 20 μPa.

Compliance Standards: Compliant to Manufacturer Specifications per D0001.8190 and the following standards:
IEC 60942:2017
ANSI S1.40-2006

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. Test points marked with a * in the uncertainties column do not fall within this laboratory’s scope of accreditation.

The quality system is registered to ISO 9001:2015.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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### Output Level

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>101.3</td>
<td>113.99</td>
<td>113.80</td>
<td>114.20</td>
<td>0.14</td>
<td>Pass</td>
</tr>
<tr>
<td>94</td>
<td>101.3</td>
<td>94.00</td>
<td>93.80</td>
<td>94.20</td>
<td>0.15</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---

### Frequency

<table>
<thead>
<tr>
<th>Nominal Level</th>
<th>Pressure [kPa]</th>
<th>Test Result [Hz]</th>
<th>Lower Limit [Hz]</th>
<th>Upper Limit [Hz]</th>
<th>Expanded Uncertainty [Hz]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>101.3</td>
<td>1,000.22</td>
<td>990.00</td>
<td>1,010.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>94</td>
<td>101.3</td>
<td>1,000.25</td>
<td>990.00</td>
<td>1,010.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---

### Total Harmonic Distortion + Noise (THD+N)

<table>
<thead>
<tr>
<th>Nominal Level</th>
<th>Pressure [kPa]</th>
<th>Test Result [%]</th>
<th>Lower Limit [%]</th>
<th>Upper Limit [%]</th>
<th>Expanded Uncertainty [%]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>101.3</td>
<td>0.45</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
<tr>
<td>94</td>
<td>101.3</td>
<td>0.49</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---

### Level Change Over Pressure

Tested at 114 dB, 24 °C, 29 %RH

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>108.0</td>
<td>107.9</td>
<td>0.01</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>101.3</td>
<td>101.2</td>
<td>0.00</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>92.0</td>
<td>92.0</td>
<td>-0.01</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>83.0</td>
<td>83.2</td>
<td>-0.02</td>
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<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
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<td>74.3</td>
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<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
<tr>
<td>65.0</td>
<td>65.3</td>
<td>-0.08</td>
<td>-0.30</td>
<td>0.30</td>
<td>0.04</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---

### Frequency Change Over Pressure

Tested at 114 dB, 24 °C, 29 %RH

<table>
<thead>
<tr>
<th>Nominal Pressure</th>
<th>Pressure [kPa]</th>
<th>Test Result [Hz]</th>
<th>Lower Limit [Hz]</th>
<th>Upper Limit [Hz]</th>
<th>Expanded Uncertainty [Hz]</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>108.0</td>
<td>107.9</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>101.3</td>
<td>101.2</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>92.0</td>
<td>92.0</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>83.0</td>
<td>83.2</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>74.0</td>
<td>74.3</td>
<td>-0.01</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
<tr>
<td>65.0</td>
<td>65.3</td>
<td>0.00</td>
<td>-10.00</td>
<td>10.00</td>
<td>0.20</td>
<td>Pass</td>
</tr>
</tbody>
</table>

--- End of measurement results---

LARSON DAVIS - A PCB PIEZOTRONICS DIV.
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

Page 2 of 3
Certificate Number 2019001696
Total Harmonic Distortion + Noise (THD+N) Over Pressure

Tested at: 114 dB, 24 °C, 29 %RH

<table>
<thead>
<tr>
<th>Nominal Pressure (kPa)</th>
<th>Pressure (kPa)</th>
<th>Test Result</th>
<th>Lower limit</th>
<th>Upper limit</th>
<th>Expanded Uncertainty</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>108.0</td>
<td>107.9</td>
<td>0.46</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25 †</td>
<td>Pass</td>
</tr>
<tr>
<td>101.3</td>
<td>101.2</td>
<td>0.45</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25 †</td>
<td>Pass</td>
</tr>
<tr>
<td>92.0</td>
<td>92.0</td>
<td>0.43</td>
<td>0.00</td>
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<td>0.25 †</td>
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<td>83.0</td>
<td>83.2</td>
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<td>0.00</td>
<td>2.00</td>
<td>0.25 †</td>
<td>Pass</td>
</tr>
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<td>74.0</td>
<td>74.3</td>
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<td>0.00</td>
<td>2.00</td>
<td>0.25 †</td>
<td>Pass</td>
</tr>
<tr>
<td>65.0</td>
<td>65.3</td>
<td>0.38</td>
<td>0.00</td>
<td>2.00</td>
<td>0.25 †</td>
<td>Pass</td>
</tr>
</tbody>
</table>

-- End of measurement results--

Signatory:  

LARSON DAVIS - A PCB PIEZOTRONICS DIV.  
1681 West 820 North  
Provo, UT 84601, United States  
716-684-0001
Appendix C  Noise Measurement Site Photographs
ST 1, northside of All-American Canal, looking west.
LT 1, northside of All-American Canal, looking west.
Memorandum

To: FILE

From: John Slatton
Environmental Analysis, Branch C

Date: 7/17/2019

File: 11-43050 /
1118000265
Section 6(f) No
Effect/Use
Determination

Subject: SECTION 6(F) NO USE DETERMINATION FOR EA 11-43050

Project Description:
Imperial County Transportation Commission (ICTC), Federal Highways Administration (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure approaching the Calexico East Port of Entry (POE) over the All-American Canal near the USA/Mexico border to facilitate flow to the existing inspection booths. There are no new inspection booths or lanes north of the booths leading to the State Highway System (State Route 7) being proposed in this project. The widened structure would accommodate a total of nine northbound (NB) vehicle lanes, 8-foot shoulders, and concrete barriers. The project proposes four new NB vehicle lanes (two commercial and two passenger). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property.

The result of this project would provide a larger structure which will accommodate a total of thirteen 13 lanes: two southbound (SB) passenger, two SB commercial, five NB passenger (3 existing and 2 new), and four (4) NB commercial (2 existing and 2 new). The existing NB and SB pedestrian walkways will remain with the NB pedestrian walkway shifting slightly to the east.

Applicability of Section 6(f):
The Land Port of Entry is not a transportation project on a State or Federal Highway which would make it subject to the Transportation Act, nor is there a conversion of any property. Therefore the Department of Transportation Act “Section 6(f)” [49 USC § 303] requirement that all administrations under the US Department of Transportation and the Federal Highway Administration, respectively, preserve and protect certain types of resources when approving transportation projects does not meet an Applicability review test. Section 6(f)

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability"
applies whenever a federal action involves the conversion of property previously acquired, developed or improved as parks or recreational areas financed with grants through the Land and Water Conservation Fund Act. When use of a publicly owned park, recreation area, wildlife or waterfowl refuge, or land from a historic site being converted for highway projects, replacements will be necessary.

Section 6(f) does not apply to this project for the following reason
All work will be either within General Services Administration (GSA) Land Port of Entry facilities as authorized under Presidential Permit, in easement, or on existing infrastructure in federal control or held in Public Reserve as authorized by Congress along the California/Mexico border. There are no anticipated impacts or conversions to publicly owned parks and recreation areas open to the public; wildlife/waterfowl refuges; or historic sites.

Conclusion:
The Section 6(f) regulation was considered as part of this project review process and it is determined that Section 6(f) does not apply, and project will have “No Effect/Use” as written under in the text of the regulation.
Memorandum

To: FILE

From: John Slatton
Associate Environmental Planner
Environmental Analysis: Branch C

Subject: ENVIRONMENTAL IMPACTS RELATED TO CUMULATIVE IMPACTS FOR EA 11-43050

Project Description:
Imperial County Transportation Commission (ICTC), Federal Highways Administration (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure approaching the Calexico East Port of Entry (POE) over the All-American Canal near the USA/Mexico border to facilitate flow to the existing inspection booths. There are no new inspection booths or lanes north of the booths leading to the State Highway System (State Route 7) being proposed in this project. The widened structure would accommodate a total of nine northbound (NB) vehicle lanes, 8-foot shoulders, and concrete barriers. The project proposes four new NB vehicle lanes (two commercial and two passenger). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property.

The result of this project would provide a larger structure which will accommodate a total of thirteen 13 lanes: two southbound (SB) passenger, two SB commercial, five NB passenger (3 existing and 2 new), and four (4) NB commercial (2 existing and 2 new). The existing NB and SB pedestrian walkways will remain with the NB pedestrian walkway shifting slightly to the east.

Applicability of Technical Studies for Cumulative Impacts:
Per Caltrans guidance, if environmental consequences related to project approval result in Cumulative Impacts, the regulatory setting would need to be identified within an environmental document. A cumulative impact analysis, while complex, can be broken down into several steps that will facilitate the overall analysis. Gathering the necessary information about each resource, pulling the needed specifics from the whole, and organizing this into a usable

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format for the analysis are generally the most time-consuming parts of a cumulative impacts analysis. The affected environment would be described (either in this technical review or in the appropriate technical report of the impacts that would be caused by proposed project and any proposed measure to lessen those impacts.

The following eight steps serve as guidelines for identifying and assessing cumulative impacts. Document and discuss each step in the environmental review disclosure:

1. Identify/define the project-specific resources to consider in a cumulative effect analysis. None identified other than the air quality impacts analyzed under the Regional Transportation Plan (RTP).

2. Define the geographic boundary or resource study area (RSA) for each resource to be addressed in the cumulative impact analysis. For air quality it is the boundaries of the RTP..

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3. Describe the current health and the historical context of each resource, practical or necessary to provide an exhaustive list of past projects that have affected the resource. Not applicable for RTP.

4. Identify the direct and indirect impacts of each of the proposed project alternatives that might contribute to a cumulative impact on the identified resources. Only one alternative exists plus No Build. No comparison of alternative against alternative is feasible.

5. Identify other current and reasonably foreseeable future actions or projects and their associated environmental impacts. Performance and level of integration of supply chains in the Imperial County region is directly linked to characteristics of border-crossing processes. The movement of goods across the border in the region is undoubtedly sensitive to border-crossing wait times at the LPOEs. Technological advances can be applied to different stages of the border-crossing process to expedite it. It has been recommended that Imperial County Transportation Commission promote the use of streamlined processes and state of the art technological advances. There are several streamlined processes and state-of-the-art technologies that can be applied to the freight border-crossing experience that would reduce wait times at LPOEs and allow for a larger degree of integration of the supply chains on both sides of the border. Some specific improvements include the use of non-intrusive inspection methods for cargo, the electronic transmission of data of cargo prior to arriving at LPOE and the use of pre-inspection at point of origin (for example, maquiladora plant) combined with the use of GPS tracking of trucks between the origin and the LPOE. The implementation of the proposed improvements at a border-wide scale requires the agreement and buy-in from several stakeholders and may not occur in the short-term. However, Cali-Baja authorities could request CBP and other agencies the implementation of pilot programs at the local level that can eventually be transformed into a permanent component of the border-crossing process.


8. Assess the need for avoidance, minimization, and/or mitigation measures and/or recommendations for actions by other agencies to address a cumulative impact. Not Applicable.

Further Land Use technical analysis does not apply to this project for the following reason:
All work is proposed within General Services Administration (GSA) Land Port of Entry facilities as authorized under Presidential Permit, in easement, or on existing infrastructure in federal control or held in Public Reserve as authorized by Congress along the California/Mexico border. Creation of a new international

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land port of entry would need to be analyzed under the context of existing State Department objectives and policy. No project improvements extend beyond the existing Calexico East Land Port of Entry (LPOE) onto the State Highway System.

There are no anticipated changes to Land Port of Entry location, inspection kiosks, or ownership interests due to the nature and scope of project improvements as this subject matter impact of Growth remains constant when reviewing either a No Build or Proposed Project framework. Operational efficiency of improved project as contemplated by the original project design will be improved through these internal changes to the facility under the original FEIR/EIS approved in 1993 for this LPOE. The companion Land Port of Entry at Calexico West has been modified under a separate Presidential Permit Amendment and environmental document. The changes for commercial traffic under that project was analyzed under that disclosure.

**Conclusion:**
Cumulative impacts were considered as part of this project review process and it is determined the need for expanded technical analysis does not apply.

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Memorandum

To: FILE

From: John Slatton
Associate Environmental Planner
Environmental Analysis: Branch C

Date: 7/17/2019

File: 11-43050 /
1118000265
Utility/Emergency Services No Effect Determination

Subject: UTILITY/EMERGENCY SERVICES: NO EFFECT DETERMINATION FOR EA 11-43050

Project Description:
Imperial County Transportation Commission (ICTC), Federal Highways Administration (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure approaching the Calexico East Port of Entry (POE) over the All-American Canal near the USA/Mexico border to facilitate flow to the existing inspection booths. There are no new inspection booths or lanes north of the booths leading to the State Highway System (State Route 7) being proposed in this project. The widened structure would accommodate a total of nine northbound (NB) vehicle lanes, 8-foot shoulders, and concrete barriers. The project proposes four new NB vehicle lanes (two commercial and two passenger). All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or Construction area is included and would be located on GSA Property.

The result of this project would provide a larger structure which will accommodate a total of thirteen 13 lanes; two southbound (SB) passenger, two SB commercial, five NB passenger (3 existing and 2 new), and four (4) NB commercial (2 existing and 2 new). The existing NB and SB pedestrian walkways will remain with the NB pedestrian walkway shifting slightly to the east.

Applicability of Technical Studies for Utility Emergency Services:
Per Caltrans guidance, if utility relocations are proposed, then the environmental document would then describe (either in this technical review or in the appropriate technical report) the impacts that would be caused by relocating the utilities and any proposed measure to lessen those impacts.

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Relocation of Utilities/Emergency Services Mitigation does not apply to this project for the following reason:
Project Design Team (PDT) reviewed design plans and after consideration of the resources with the potential to be affected by the project it was determined there would be "No Effect". All work is proposed within General Services Administration (GSA) Land Port of Entry facilities as authorized under Presidential Permit, in easement, or on existing infrastructure in federal control or held in Public Reserve as authorized by Congress along the California/Mexico border. PDT determined there are no anticipated utility impacts or modification to existing Emergency Services including the "on property" power transmission poles and lines in the project vicinity which might have required relocation or special construction protection.

Conclusion:
The Utilities Relocation Potential/Emergency Services were considered as part of this project review process and it is determined "No Effect" is the project finding for this resource classification.

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Traffic Study
Calexico Bridge Widening
EA 11-43050

April 2020
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1. TRAFFIC STUDY OVERVIEW

1.1 Purpose of Report

The purpose of this Traffic Study is to identify and document the existing and future transportation flow of the idling vehicles queuing along the bridge leading to the existing inspection booths along the Calexico Bridge south of the Calexico East Port of Entry (POE) in Imperial County.

1.2 Project Background

Imperial County Transportation Commission (ICTC), Federal Highway Administration (FHWA), and Caltrans along with U.S. General Services Administration (GSA) propose to widen the existing structure approaching the Calexico East Port of Entry (POE) over the All-American Canal near the USA/Mexico border to facilitate flow to the existing inspection booths.

State, regional, and local transportation agencies consistently identify the need for improvements to enhance capacity throughout the Border Region. An important component of these enhancements is this project that proposes widening of the existing bridge. The widening includes adding four lanes, two each for passenger and commercial vehicles, and accommodation of the northbound (NB) pedestrian walkway and other appurtenant structures for bridges and roadways over the All-American Canal which connects the POE to the border. These infrastructure improvements are necessary to reduce existing congestion and accommodate future growth in bi-national trade and traffic. This project was identified in the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and the 2014 Border Master Plan Update.

1.3 Project Study Area

The Calexico Bridge is south of the Calexico East POE in Imperial County over the All-American Canal north of the US/Mexico border, located 0.7 miles south of State Route 7 (SR 7). The Calexico Bridge is owned by GSA and located on their right-of-way. See Figure 1: Project Vicinity Map and Figure 2: Project Location Map. At the Calexico POE commercial (cargo/truck) and passenger vehicles use different lanes accessible to travelers listed below.

The types of lanes are as follows:
- **SENTRI (Secured Electronic Network for Travelers Rapid Inspection) Lanes** are dedicated commuter lanes that allow for the expedited clearance for pre-approved, low-risk travelers upon arrival in the United States.
- **Ready Lanes** are dedicated processing lanes for both vehicle passengers and pedestrians traveling with Ready Lane-eligible travel cards (RFID enabled).
• **Regular Lanes** are lanes that all travelers without machine readable documents use to cross the border.

• **FAST (Free And Secure Trade) Lanes** allow for the expedited clearance of pre-approved low risk commercial vehicles entering the United States.

Land uses in the project vicinity include predominantly agricultural farm land and port related facilities. There are no single-family residential, school, places of worship, or hospital facilities nearby. No changes to surrounding land uses will occur as a result of project implementation.

### 1.4 Analysis Proposed

The traffic analysis prepared for this study were performed in accordance with FHWA and Caltrans Traffic Study Guidelines to provide a factual basis for good decision-making. This is a qualitative analysis based on quantitative data to understand the traffic conditions and patterns by comparing the No Build and Build scenarios and projections for both existing and future conditions.

Based on SCAG’s sub-regional transportation model, the Imperial County Transportation Model (ICTM), traffic analyses will forecast highway volumes that will cross the bridge toward SR 7 in opening and horizon years in both south and north directions under the No-Build and Build alternatives. A 2.5 percent traffic increase is projected between the 2045 No-Build and the 2045 Build alternatives as this is an accurate representation of the traffic volume change.

#### 1.4.1 Methodologies of Traffic Analysis

Socio-economic data, historical statistics of border crossing/entry activities, and demographic data (SED) related to the project area were used as a base to analyze local travel characteristics and to understand traffic growth patterns through comparisons of existing traffic volumes with traffic forecasts for opening and horizon years. This data is seen in *Figure 3: Project Limits and Existing Conditions* for the no-build scenario and *Figure 4: Population Growth* from 2017 Imperial County Local Profile. The final traffic projections include Average Daily Traffic (ADTs) both southbound and northbound for 2022 (opening year) and 2045 (horizon Year), with No Build and Build scenarios incorporated. Figure 3 demonstrates the population growth trend in the Imperial Valley, while Figure 4 shows the historical statistics of border crossing activities the Calexico East POE.
2. PROJECT PURPOSE AND NEED

2.1 Purpose and Need

2.1.1 Purpose:
The purpose of this project is to enhance traffic efficiency needs south of the Calexico East POE. The Project improvements are a critical component of the region’s border development strategy to make California’s freight system more efficient, more competitive, and more environmentally sustainable. This bridge widening over the All-American Canal will reduce current traffic congestion that hinders economic competitiveness.

2.1.2 Need:
There is congestion due to the physical constraints of the existing bridge. The current traffic demands are not being met as the Calexico East POE serves roughly 23,500 vehicles daily, NB and SB, with over ten percent being trucks. There is an economic loss caused by inadequate border infrastructure that is failing to keep pace with the growing levels of trade and addition security requirements. Expansion of the existing bridge is needed to ensure a timely binational movement of goods and people.

3. PROJECT DESCRIPTION

3.1 Project Description
ICTC, FHWA, and Caltrans, along with GSA, propose to widen the existing Calexico East POE Bridge over the All-American Canal near the US/ Mexico border to facilitate flow through the existing inspection booths. There are no new lanes proposed north of the inspection booths leading to State Route 7 (SR 7). The new structure would add four additional northbound lanes on the structure, two commercial and two passenger vehicle lanes, an 8-foot shoulder, and new concrete barriers. All widening will occur to the east of the existing structure. In addition, this project would include minimal modification to landscape, drainage, signage, and lighting. The staging and/or construction area is included and would be located on GSA Property. The existing NB pedestrian walkway (on the existing structure) would be shifted to the east to facilitate the addition of two new NB passenger vehicle lanes.

3.2 No-Build Alternative
This alternative retains the existing conditions and will not address the purpose and need of the project. The consequences will be the continued major freight bottleneck (traffic demands not being met), resulting in continued economic loss and continued degradation of air quality due to idling vehicles.
3.3 Build Alternatives

This alternative proposes to widen the existing structure (the off-system bridge) over the All-American Canal.

Specifically, this project would provide a larger structure which will accommodate a total of thirteen 13 lanes: two southbound passenger, two southbound commercial, five northbound passenger (3 existing and 2 new), and four (4) northbound commercial (2 existing and 2 new). The existing northbound and southbound pedestrian walkways will remain with the northbound pedestrian walkway shifting slightly to the east. There will be replacement of items modified by construction activities including appurtenant structures, drainage, and landscaping.

4. Existing and Future Traffic Conditions

4.1 2020, Existing Traffic Conditions

The Calexico East POE has designated lanes for passenger vehicles that include SENTRI, Ready, and Regular lanes. Designated lanes for commercial vehicles include both Regular I and FAST lanes. The percentage of travel is broken down between passenger and commercial vehicles by type of lanes in Table 1: Percentage of Travel Per Lane Type. Tables 2 through 6 identify the conditions of the existing traffic.

The existing year 2020 ADT on the Calexico Bridge is 3,688 southbound and 12,407 northbound. See Table 9: Summary of ADT. The truck use is about 10%.

<table>
<thead>
<tr>
<th>Type of Northbound Lanes</th>
<th>Percentage of Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>SENTRI (passenger vehicles)</td>
<td>20%</td>
</tr>
<tr>
<td>READY (passenger vehicles)</td>
<td>55%</td>
</tr>
<tr>
<td>Regular (passenger vehicles)</td>
<td>25%</td>
</tr>
<tr>
<td>FAST (commercial vehicles)</td>
<td>26%</td>
</tr>
<tr>
<td>Regular (commercial vehicles)</td>
<td>74%</td>
</tr>
</tbody>
</table>
Table 2 – Peak Hour and Approximate Delay for Northbound Lanes

<table>
<thead>
<tr>
<th>Type of Lane</th>
<th>Peak Hour (weekdays)</th>
<th>Peak Hour (weekends and holidays)</th>
<th>Delay in Approximate Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>8 am to 12 pm</td>
<td>8 am to 12 pm</td>
<td>60-90 mins</td>
</tr>
<tr>
<td>Regular</td>
<td>1 pm and 7 pm</td>
<td>1 pm and 7 pm</td>
<td>60-90 mins</td>
</tr>
<tr>
<td>SENTRI</td>
<td>7 am to 10</td>
<td>--</td>
<td>15-25 mins</td>
</tr>
<tr>
<td>SENTRI</td>
<td>12 pm to 5 pm</td>
<td>12 pm to 5 pm</td>
<td>15 mins</td>
</tr>
</tbody>
</table>

Table 3 – Traffic Volumes Per Hour for Northbound Lanes

<table>
<thead>
<tr>
<th>Time</th>
<th>READY</th>
<th>SENTRI</th>
<th>Regular</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 am</td>
<td>404</td>
<td>61</td>
<td>56</td>
</tr>
<tr>
<td>10 am</td>
<td>449</td>
<td>183</td>
<td>46</td>
</tr>
<tr>
<td>11 am</td>
<td>215</td>
<td>151</td>
<td>61</td>
</tr>
<tr>
<td>12 am</td>
<td>295</td>
<td>110</td>
<td>49</td>
</tr>
<tr>
<td>1 pm</td>
<td>262</td>
<td>131</td>
<td>65</td>
</tr>
<tr>
<td>2 pm</td>
<td>332</td>
<td>107</td>
<td>40</td>
</tr>
<tr>
<td>3 pm</td>
<td>374</td>
<td>121</td>
<td>44</td>
</tr>
<tr>
<td>4 pm</td>
<td>388</td>
<td>146</td>
<td>42</td>
</tr>
<tr>
<td>5 pm</td>
<td>440</td>
<td>104</td>
<td>45</td>
</tr>
<tr>
<td>6 pm</td>
<td>241</td>
<td>100</td>
<td>31</td>
</tr>
<tr>
<td>7 pm</td>
<td>378</td>
<td>101</td>
<td>48</td>
</tr>
</tbody>
</table>

Table 4 – POE Wait Times for Commercial (Cargo/Truck) Vehicles for Northbound Lanes

<table>
<thead>
<tr>
<th>Time</th>
<th>FAST</th>
<th>REGULAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 am</td>
<td>22 min</td>
<td>35 min</td>
</tr>
<tr>
<td>11 am</td>
<td>24 min</td>
<td>32 min</td>
</tr>
<tr>
<td>12 pm</td>
<td>33 min</td>
<td>39 min</td>
</tr>
<tr>
<td>1 pm</td>
<td>33 min</td>
<td>27 min</td>
</tr>
<tr>
<td>2 pm</td>
<td>27 min</td>
<td>39 min</td>
</tr>
<tr>
<td>3 pm</td>
<td>21 min</td>
<td>33 min</td>
</tr>
<tr>
<td>4 pm</td>
<td>37 min</td>
<td>58 min</td>
</tr>
<tr>
<td>5 pm</td>
<td>37 min</td>
<td>51 min</td>
</tr>
<tr>
<td>6 pm</td>
<td>24 min</td>
<td>55 min</td>
</tr>
</tbody>
</table>
Three intersections north of the POE were used to evaluate traffic operations for the Existing Year 2020 traffic volumes. In addition, the existing peak hour analysis used the highest volumes from the 3 day counts to calculate the most conservative estimation of delay. The following tables provide the results for the no build and build scenarios for the project at the SR 7 intersections with Menvielle Road, Maggio Road, and SR 98. The delay and level of service (LOS) results are determined by using Synchro software and HCM 6 methodology.

### Table 5 – Existing Year 2020 – Intersection Delay and LOS

<table>
<thead>
<tr>
<th>Existing 2020</th>
<th>No Build Delay (seconds)</th>
<th>No Build LOS</th>
<th>Build Delay (seconds)</th>
<th>Build LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 7 and Menvielle Road</td>
<td>31.9</td>
<td>C</td>
<td>32.5</td>
<td>C</td>
</tr>
<tr>
<td>SR 7 and Maggio Road</td>
<td>14.3</td>
<td>B</td>
<td>14.9</td>
<td>B</td>
</tr>
<tr>
<td>SR 7 and SR 98</td>
<td>22.4</td>
<td>C</td>
<td>22.6</td>
<td>C</td>
</tr>
</tbody>
</table>

Note: Using the existing 2020 traffic counts an annual growth rate of 1.85% was applied in Synchro to the northbound SR 7 intersection approaches, an annual growth rate of 2.55% was applied to the southbound SR 7 intersection approaches, and an average of the two approaches 2.20% was applied to the other eastbound and westbound approaches and non-SR 7 intersections.

### 4.2 Future Traffic Volumes

Then the SCAG sub-regional transportation model, ICTM, was used to project future ADTs in 2020 and 2040 for no-build and build scenarios. The model results were then used to extrapolate traffic volumes in 2022 (opening year) and 2045 (horizon year) by utilizing annual growth rates derived from consulting the historical and existing SED data, as well as the model results. Table 6 – ADT Forecasts at the Calexico East POE Bridge shows the ICTM model outputs of 2020 and 2040 ADTs for southbound and northbound traffic. Figure 5: Lane Configuration Build Scenario shows the bridge lane configurations for the build scenario.

### Table 6 – ADT Forecasts at Calexico POE Bridge

<table>
<thead>
<tr>
<th>Year</th>
<th>Scenario</th>
<th>Southbound</th>
<th>Northbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>No Build</td>
<td>3,688</td>
<td>12,407</td>
</tr>
<tr>
<td>2022</td>
<td>No Build</td>
<td>3,879</td>
<td>12,869</td>
</tr>
<tr>
<td>2022</td>
<td>Build</td>
<td>3,955</td>
<td>13,256</td>
</tr>
<tr>
<td>2040</td>
<td>No Build</td>
<td>10,719</td>
<td>27,065</td>
</tr>
<tr>
<td>2040</td>
<td>Build</td>
<td>11,040</td>
<td>27,877</td>
</tr>
</tbody>
</table>

*ICTM model outputs of 2020 and 2040 ADTs from SCAG sub-regional Transpiration Model*
4.2 2022, Open to Traffic Conditions

The Open to Traffic No Build Scenario ADT for year 2022 is 3,879 southbound and 12,869 northbound. The Build Scenario ADT for year 2022 will be 3,995 southbound and 13,256 northbound. See Table 9: Summary of ADT.

Three intersections north of the POE were used to examine traffic operations for the Future Traffic Conditions, Year 2022 traffic volumes. Again, the existing peak hour analysis used the highest volume from the three-day counts which result in the most conservative estimation of delay. The following tables provide the results for the no build and build scenarios at the SR 7 intersections with Menvielle Road, Maggio Road, and SR 98. The delay and LOS results are determined by using Synchro software and HCM 6 methodology.

Table 7 – Opening Year 2022 – Intersection Delay and LOS

<table>
<thead>
<tr>
<th>Opening Year 2022</th>
<th>No Build Delay (seconds)</th>
<th>No Build LOS</th>
<th>Build Delay (seconds)</th>
<th>Build LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 7 and Menvielle Road</td>
<td>33.7</td>
<td>C</td>
<td>35.2</td>
<td>D</td>
</tr>
<tr>
<td>SR 7 and Maggio Road</td>
<td>16.0</td>
<td>B</td>
<td>16.8</td>
<td>B</td>
</tr>
<tr>
<td>SR 7 and SR 98</td>
<td>22.8</td>
<td>C</td>
<td>23.0</td>
<td>C</td>
</tr>
</tbody>
</table>

Note: Using the existing 2020 traffic counts an annual growth rate of 1.85% was applied in Synchro to the northbound SR 7 intersection approaches, an annual growth rate of 2.55% was applied to the southbound SR 7 intersection approaches, and an average of the two approaches 2.20% was applied to the other eastbound and westbound approaches and non-SR 7 intersections.

4.3 2045, Design Year or Future Traffic Conditions

The future No Build Scenario ADT for year 2045 is 12,155 southbound and 29,660 northbound. The Build Scenario ADT for year 2045 will be 12,519 southbound and 30,550 northbound. See Table 9: Summary of ADT.

Three intersections north of the POE were used to examine traffic operations for the Future Traffic Conditions, Year 2045 traffic volumes. Again, the existing peak hour analysis used the highest volume from the three-day counts which result in the most conservative estimation of delay. The following tables provide the results for the no build and build scenarios at the SR 7 intersections with Menvielle Road, Maggio Road, and SR 98. The delay and LOS results are determined by using Synchro software and HCM 6 methodology.
Table 8 – Horizon Year 2045 – Intersection Delay and LOS

<table>
<thead>
<tr>
<th>Horizon Year 2045</th>
<th>No Build Delay (seconds)</th>
<th>No Build LOS</th>
<th>Build Delay (seconds)</th>
<th>Build LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 7 and Menvielle Road</td>
<td>189.0</td>
<td>F</td>
<td>203.4</td>
<td>F</td>
</tr>
<tr>
<td>SR 7 and Maggio Road</td>
<td>53.1</td>
<td>D</td>
<td>57.2</td>
<td>E</td>
</tr>
<tr>
<td>SR 7 and SR 98</td>
<td>28.0</td>
<td>C</td>
<td>28.5</td>
<td>C</td>
</tr>
</tbody>
</table>

Note: Using the existing 2020 traffic counts an annual growth rate of 1.85% was applied in Synchro to the northbound SR 7 intersection approaches, an annual growth rate of 2.55% was applied to the southbound SR 7 intersection approaches, and an average of the two approaches 2.20% was applies to the other eastbound and westbound approaches and non-SR 7 intersections.

5. Finding

The following Table 9 – Summary of ADT is along the Calexico Bridge adjacent to the Calexico East POE. The increase of ADT between the 2022 no-build and Build (open to traffic) scenarios shows additional 116 ADT for southbound and 387 ADT for northbound.

Table 9 – Summary of ADT

<table>
<thead>
<tr>
<th>Year</th>
<th>Scenario</th>
<th>Southbound</th>
<th>Northbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Existing</td>
<td>3,688</td>
<td>12,407</td>
</tr>
<tr>
<td>2022</td>
<td>No Build</td>
<td>3,879</td>
<td>12,869</td>
</tr>
<tr>
<td>2022</td>
<td>Build</td>
<td>3,995</td>
<td>13,256</td>
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<tr>
<td>2045</td>
<td>No Build</td>
<td>12,155</td>
<td>29,660</td>
</tr>
<tr>
<td>2045</td>
<td>Build</td>
<td>12,519</td>
<td>30,550</td>
</tr>
</tbody>
</table>

Note: A 2.5% traffic volume change between the 2045 Build and No Build scenarios was applied.

The increase of ADT between the Existing (2020) and Future Build Scenario (2045) shows that an additional 8,640 ADT for southbound and 17,681 ADT for northbound.

The proposed project involves a change in the capacity of the existing Calexico Bridge over the All-American Canal but would not include a new or expanded highway. The existing bridge serves as a “local terminal roadway” approximately 0.7 miles south of SR 7. The truck percentage is projected to remain the same or likely higher volume for both the 2022 opening year and the 2045 horizon year. The change in truck volumes as a percentage of the total traffic volumes is less than 1%. The percentage of truck volumes in 2022 is 10.10% and in 2045 is 10.61%.
The Calexico Bridge Widening Project will add more lanes on the bridge to shorten the border crossing waiting time, while the network links north and south of the bridge remain the same. The length of the added lanes is approximately 600 feet, or approximately 0.11 mile.

The project area intersections are not anticipated to exceed capacity nor have a substantial increase in delay for traffic operations, based upon the studied intersections. The negligible change in the operating conditions of the studied intersections is consistent with the regional traffic model in traffic volumes for Existing 2019, Open to Traffic 2022, and Future Traffic 2045.

Therefore, there is no substantive difference projected for the traffic operations in the area and no mitigation is required.

6. References

6.1 References

Sources referenced in this study are as follows:
1. Population growth trends in Imperial Valley, SCAG 2017 “Local Profiles” and from California Dept. of Finance, E-5, for 2016 (see Figure 4);
2. Border crossing/entry data at Calexico East Point POE, USDOT Bureau of Transportation Statistics (see Figure 6);
3. Model outputs of SCAG sub-regional transportation model, ICTM (see Table 5).
Figure 1: Project Vicinity Map
Figure 2: Project Location Map
Figure 3: Project Limits and Existing Conditions (No Build Scenario)
Source: California Department of Finance, E-5, 2016
For the 2017 Imperial County Profile

Figure 4: Population Growth
Figure 5: Lane Configuration for Build Scenario
Figure 6: Historical Statistics of Border Crossing/Entry Activities at Calexico East POE
CALTRANS NEPA DETERMINATION

Determining that this project:

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

• does not individually or cumulatively have a significant impact on the environment as defined by NEPA, and
• is excluded from the

Based on an examination of this proposal, supporting information, and the above statements, the project is:

☐ Not Applicable – Caltrans is not the CEQA Lead Agency
☐ Not Applicable – Caltrans has prepared an Initial Study or Environmental Impact Report under CEQA

Exempt by Statute. (PRC 21080[b]; 14 CCR 15260 et seq.)

Categorically Exempt. Class 1. (PRC 21084; 14 CCR 15300 et seq.)

Based on an examination of this proposal and supporting information, the following statements are true and exceptions do not apply:

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law.
- There will not be a significant cumulative effect by this project and successive projects of the same type in the same place, over time.
- There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
- This project does not damage a scenic resource within an officially designated state scenic highway.
- This project is not located on a site included on any list compiled pursuant to Govt. Code § 65962.5 (“Cortese List”).
- This project does not cause a substantial adverse change in the significance of a historical resource.

☐ Common Sense Exemption. [This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3]).]

Shay Lynn M. Harrison
Print Name: Senior Environmental Planner or Environmental Branch Chief

Nicola Bernard
Print Name: Project Manager

4/10/2020
Signature
Date

4/13/20
Signature
Date

NEPA COMPLIANCE

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

• does not individually or cumulatively have a significant impact on the environment as defined by NEPA, and is excluded from the requirements to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS), and
• has considered unusual circumstances pursuant to 23 CFR 771.117(b).

CALTRANS NEPA DETERMINATION (Check one)

☒ 23 USC 326: The State has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). As such, the project is categorically excluded from the requirements to prepare an EA or EIS under the National Environmental Policy Act. The State has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to Chapter 3 of Title 23, United States Code, Section 326 and a Memorandum of Understanding dated May 31, 2016, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

☐ 23 CFR 771.117(c): activity (c)( 27 )
☐ 23 CFR 771.117(d): activity (d)(___)

☐ Activity ___ listed in Appendix A of the MOU between FHWA and the State

☒ 23 USC 327: Based on an examination of this proposal and supporting information, the State has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Shay Lynn M. Harrison
Print Name: Senior Environmental Planner or Environmental Branch Chief

Nicola Bernard
Print Name: Project Manager/DELA Engineer

4/10/2020
Signature
Date

4/13/20
Signature
Date

Date of Categorical Exclusion Checklist completion: 3/1/2020
Date of ECR or equivalent: 3/1/2020
The Environmental Commitments Record (ECR) lists all the required environmental commitments for this project including the following commitments.

**NPDES/STORM WATER COMPLIANCE**
This project will be designed in conformance with the NPDES Permit Order 2012-0011DWQ and Appendix E of the Caltrans Project Planning and Design Guide (PPDG).

**HAZARDOUS WASTE**
Adherence to the Standard Specifications for Aerially deposited lead (ADL) and lead compliance plan (LCP).

**VISUAL RESOURCES**
Visual Impact Analysis Memo project design and construction matters identified will be commitments as identified within the ECR and include material color palette, lighting, landscaping and design guidance.

**CULTURAL RESOURCES**
Adherence to the Standard Specifications that support Caltrans’ policy to avoid cultural resources whenever possible.

The following documentation is of the environmental analysis showcasing the compliance on this CE/CE:

- Biological Resources with the Natural Environmental Study, as revised
- Community Impact Assessment (CIA) with a Memorandum
- Cumulative Impacts with a Memorandum
- Cultural and Historic Resources with the Historic Property Survey Report (HPSR), and First Supplemental
- Hazardous Waste with a Memorandum and Aerial Deposited Lead (ADL) Report
- Hydrology and Floodplain with the Summary Floodplain Encroachment Report
- Paleontological Resources with a Memorandum
- Visual and Landscape Impact Assessment with a Memorandum
- Air Quality Report that includes GHG and Climate Change
- National Pollutant Discharge Elimination System (NPDES) Memorandum
- Noise Study Report (NSR)
- Section 4(f) with a Memorandum
- Section 6(f) with a Memorandum
- Utilities / Emergency Services with a Memorandum
- Traffic Study
- Water Quality with a Memorandum
### Calexico East Land Port of Entry
#### Bridge Widening and Stripping Project

**Environmental Commitments Record (ECR)**

Caltrans Environmental Generalist: John Slatton

Phone: (619) 688-0258

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Reference</th>
<th>PS&amp;E Responsible Branch / Staff</th>
<th>Construction Responsible Branch / Staff</th>
<th>Timing / Phase</th>
<th>NSSP, SSP, Std Spec, Permit</th>
<th>Action Taken to Comply/Remarks</th>
<th>Design Task Completed</th>
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<tr>
<td>1. No permanent or temporary impacts to the All American Canal are included in Project design which currently eliminates permit requirements from the California Department of Fish and Wildlife which has the potential of being required should design change as to include waterway activity</td>
<td>Biologist Natural Environment Study May 2019 M.Galloway</td>
<td>PE, Biologist, RE, ECL, Biologist</td>
<td>Design / Construction</td>
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<td>Task and Brief Description</td>
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<td>Construction Responsible Branch / Staff</td>
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<tr>
<td>Vegetation clearing and removal of swallow nests should occur outside of the bird breeding season; however, if shrub or tree removal or swallow nest removal is to take place during the breeding season (February 1–August 31), a pre-construction breeding bird survey shall be conducted within 7 days of these activities. A no-disturbance buffer shall be established around any active nest or breeding pair territory to limit the impacts of construction activities. The buffer shall not be removed until after the breeding season or until after a qualified wildlife biologist determines that the young have fledged (usually late June to mid-July). The extent of these buffers shall be determined by the biologist (coordinating with Caltrans, USFWS and CDFW) and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species.</td>
<td>Biologist Natural Environment Study May 2019 M.Galloway</td>
<td>PE, Biologist</td>
<td>RE, ECL, Biologist</td>
<td>Design / Construction</td>
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<tr>
<td>Construction materials and debris must be contained within project limits to avoid pollution impacts jurisdictional waters of the United States.</td>
<td>Biologist Natural Environment Study May 2019 M.Galloway</td>
<td>PE, Biologist</td>
<td>RE, ECL, Biologist</td>
<td>Design / Construction</td>
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<tr>
<td>All trash shall be kept in wildlife-proof receptacles and any non-natural food and water sources will not be left unattended for the duration of the project construction.</td>
<td>Biologist Natural Environment Study May 2019 M.Galloway</td>
<td>PE, Biologist</td>
<td>RE, ECL, Biologist</td>
<td>Design / Construction</td>
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<td>NSSP, SSP, Std Spec, Permit</td>
<td>Action Taken to Comply/Remarks</td>
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<tr>
<td>11 Protective measures, to ensure that invasive species are not introduced or spread, include landscaping with a Caltrans recommended seed mix from locally adapted species; the use of site-specific materials adapted to local conditions; and the cleaning of construction equipment.</td>
<td>Biologist Natural Environment Study May 2019 M.Galloway</td>
<td>PE, Biologist</td>
<td>RE, ECL, Biologist</td>
<td>Design / Construction</td>
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<tr>
<td>12 Project changes to involve the active channel will require re-evaluation of biological impacts.</td>
<td>Biologist Natural Environment Study May 2019 M.Galloway</td>
<td>PE, Biologist</td>
<td>RE, ECL, Biologist</td>
<td>Design / Construction</td>
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<tr>
<td>13 Cultural Resources</td>
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<tr>
<td>14 Any changes to the proposed activities, or if additional locations are added to this undertaking will require additional review by the cultural resource unit.</td>
<td>Project Screening Preliminary</td>
<td>PE, Cultural</td>
<td>RE, Cultural</td>
<td>Design / Construction</td>
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<td>15 Hazardous Waste:</td>
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</tr>
<tr>
<td>16 A Lead Compliance Plan, prepared by a Certified Industrial Hygienist (CIH), must be provided by the Contractor and implemented for all workers handling hazardous or non-hazardous soil.</td>
<td>Hazardous Waste Memo 6/7/19 T. Ogiso</td>
<td>PE, Haz Waste Specialist</td>
<td>RE, ECL, Haz Waste Specialist</td>
<td>Design / Construction</td>
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</tr>
<tr>
<td>17 Work associated with landscaping will be considered minimal soil disturbance and SSP for Minimal Disturbance shall be followed</td>
<td>Hazardous Waste Memo 6/7/19 T. Ogiso</td>
<td>PE, Haz Waste Specialist</td>
<td>RE, ECL, Haz Waste Specialist</td>
<td>Design / Construction</td>
<td>SSP 14-11.09</td>
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<tr>
<td>18 Clean soil released shall be used as backfill. Soil characterized as Z2 must be disposed at offsite Class I landfill.</td>
<td>Hazardous Waste Memo 6/7/19 T. Ogiso</td>
<td>PE, Haz Waste Specialist</td>
<td>RE, ECL, Haz Waste Specialist</td>
<td>Design, Pre-Constr., Constr.</td>
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<td>Task and Brief Description</td>
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<tr>
<td>SSP-Regulated Material Containing Aerially Deposited Lead shall be followed for Z2 soil.</td>
<td>Hazardous Waste Memo 6/7/19 T. Ogiso</td>
<td>PE, Haz Waste Specialist</td>
<td>RE, ECL, Haz Waste Specialist</td>
<td>Design, Pre-Constr., Constr.</td>
<td>SSP 7-1.02K(6)(j)(ii)</td>
<td>To be included in the PS&amp;E and final plans package</td>
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<td>NPDES/Water Quality Compliance:</td>
<td>NPDES Memo 07/17/19 Roy Santos</td>
<td>PE, NPDES Specialist</td>
<td>RE, ECL, Haz Waste Specialist</td>
<td>Design, Pre-Constr., Constr.</td>
<td>SSP 7-1.02K(6)(j)(ii)</td>
<td>To be included in the PS&amp;E and final plans package</td>
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</tbody>
</table>

Note: The design would conform to the “Land Port of Entry / Whole Building Design Guide”. The bridge widening shall be visually compatible with the existing bridge. This may include railing, fencing, exterior girders, soffit, wing walls and barriers. The exposed concrete surface treatment and color of the bridge widening, underpass tunnels, reconstructed border wall, barriers, bollards, etc. shall be similar to the existing facilities. The color and finish of light fixtures and galvanized features such as fencing would be similar to the existing features. Galvanized fencing may be stained with Natina Steel to achieve a mottled brown color to reduce glare and blend with the desert color palette,
<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Reference</th>
<th>PS&amp;E Responsible Branch / Staff</th>
<th>Construction Responsible Branch / Staff</th>
<th>Timing / Phase</th>
<th>NSSP, SSP, Std Spec, Permit</th>
<th>Action Taken to Comply/Remarks</th>
<th>Design Task Completed</th>
<th>Const. Task Completed</th>
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</thead>
<tbody>
<tr>
<td>24 Plans shall show tree canopies with a note to protect in place. Grading, access and staging areas shall be designed to minimize removal of trees. No equipment, material storage, vehicles or access paths are allowed under tree canopies. Limited access under tree canopies is allowed for pruning. Repair impacts to existing irrigation and landscaping. If the project proposes to use the solar panel property, then the access gate location should be selected to avoid removal or damage to living trees.</td>
<td>VIA Memo07162019 M. Gros</td>
<td>PE, Landscape Architect</td>
<td>RE, ECL, Visual Resources Specialist</td>
<td></td>
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<td>Design, Constr.</td>
<td>Initial</td>
<td>Date Initial Date</td>
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<tr>
<td>25 Ditch lining and drain aprons shall be colored tan to blend with native soils.</td>
<td>VIA Memo07162019 M. Gros</td>
<td>PE, Landscape Architect</td>
<td>RE, ECL, Visual Resources Specialist</td>
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<td>Design, Constr.</td>
<td>Initial</td>
<td>Date Initial Date</td>
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<tr>
<td>26 Lighting shall be shielded, low-Kelvin, energy efficient LED. The shielding would ideally be located at the back and side of the fixtures to limit light trespass into the sky.</td>
<td>VIA Memo07162019 M. Gros</td>
<td>PE, Landscape Architect</td>
<td>RE, ECL, Visual Resources Specialist</td>
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<td>Design, Constr.</td>
<td>Initial</td>
<td>Date Initial Date</td>
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## PROJECT PERSONNEL
### I-5 Reclaimed Water Main Project

Caltrans Environmental Generalist: John Slatton  
Rte: 11-IMP-7, South of  
Land Port of Entry  
Phone: (619) 688-0258  
P ID 1119000066

<table>
<thead>
<tr>
<th>Initial</th>
<th>Full Name</th>
<th>Title / Area</th>
<th>Phone Number</th>
<th>Assigned to Project</th>
<th>Transferred from Project</th>
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<tr>
<td>TM</td>
<td>Tim Mann</td>
<td>Project Manager</td>
<td>619-688-4255</td>
<td>11/1/2018</td>
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<tr>
<td>KM</td>
<td>Kenny Mah</td>
<td>Project Landscape Architect</td>
<td>619-688-5384</td>
<td>11/1/2018</td>
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<td>SW</td>
<td>Steve Warren</td>
<td>Landscape Architect</td>
<td>619-688-3100</td>
<td>11/1/2018</td>
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<td>JS</td>
<td>John Slatton</td>
<td>Environmental Planner</td>
<td>619-688-0258</td>
<td>11/1/2018</td>
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<td>TO</td>
<td>Tyler Ho</td>
<td>Hazardous Waste/AQ/Noise Engineer</td>
<td>619-688-3180</td>
<td>11/1/2018</td>
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<td>KV</td>
<td>Karemy Valdez</td>
<td>District Archaeologist</td>
<td>619-688-0188</td>
<td>11/1/2018</td>
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<td>RA</td>
<td>Michael Galloway</td>
<td>District Biologist</td>
<td>619-688-0191</td>
<td>11/1/2018</td>
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<td>RS</td>
<td>Roy Santos</td>
<td>NPDES/Storm Water Engineer</td>
<td>619-688-3645</td>
<td>11/1/2018</td>
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<td>MM</td>
<td>Michelle Madigan</td>
<td>Community Impacts Specialist</td>
<td>619-688-0119</td>
<td>11/1/2018</td>
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<td>ET</td>
<td>Marlene Gros</td>
<td>Visual Resources</td>
<td>618-688-0226</td>
<td>11/1/2018</td>
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<td></td>
</tr>
<tr>
<td>LK</td>
<td>Lauren Kemp</td>
<td>Env Construction Liaison (ECL)</td>
<td>858-518-2116</td>
<td>11/1/2018</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Memorandum

To: MR. DAWIT WORKU
   Acting Chief, Bridge Design Branch 21
   Office of Bridge Design South

   Attention: Prem Rimal

From: SUNNY YANG
   Geotechnical Services
   Office of Geotechnical Design South, Branch-B

Subject: PRELIMINARY FOUNDATION REPORT FOR CALEXICO EAST PORT-OF-ENTRY BRIDGE WIDENING

SCOPE OF WORK

Pursuant to your request on May 14, 2019, this Preliminary Foundation Report (PFR) presents preliminary foundation recommendations for the proposed widening of Calexico East Port-of-Entry bridge. The bridge is located on the south end of Highway 7, at the Port-of-Entry to Mexico, in Imperial County. This bridge is located over All-American Canal and serves roughly 23,500 vehicles daily. The bridge belongs to the United States General Services Administration and does not have a Caltrans bridge number.

Development of this PFR included field investigation, research of archived information, and engineering analyses. The recommendations in this report are based on the preliminary plans and structure loads provided by your office on 5/22/2019.

PROJECT DESCRIPTION

This project is to widen an existing 174 feet long, 160 feet wide single span composite steel welded plate girder bridge by adding 60 feet of additional width in kind to the east side of the bridge. There are culverts for vehicles to pass under the roadway on the south and north sides of the bridge. These culverts will be extended. Also, canopies will be installed at the north bound pedestrian walkway. The existing bridge is supported by driven precast concrete piles at both abutments. The widening bridge is proposed to be founded on driven steel pipe piles.

All elevations in this memorandum are referenced to the 1988 North American Vertical Datum (NAVD 88).

EXCEPTIONS TO POLICIES AND PROCEDURES

None.
FIELD INVESTIGATION AND FIELD TESTING PROGRAM

In July 2019, two rotary wash borings were advanced at the bridge site. One is at the proposed northern abutment widening; the other is on the west side of the existing southern abutment. Both borings were advanced to 101.5 feet depth. Field testing included Standard Penetration Tests and Pocket Penetrometer tests. The Log-of-Test-Borings (LOTB), which provide details of the subsurface materials encountered, will be included in the project plans.

LABORATORY TESTING PROGRAM

Soil samples collected from 2019 subsurface investigations will be tested for corrosivity.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

The project lays in the southern sector of the Colorado Desert Geomorphic Province of California. The project is located in the Imperial Valley section of the Salton Trough physiographic province. The Salton Trough is a topographic and geologic structural depression resulting from large scale regional faulting. At its northeast flank the trough is bounded by the San Andreas Fault and the Chocolate Mountains. To the east it is bounded by the Peninsular Ranges and faults of the San Jacinto Fault Zone. The Salton Trough represents the northern extension of the Gulf of California, containing both marine and non-marine sediments.

The Imperial Valley is underlain by lacustrine deposits related to the ancient fresh water Lake Cahuilla, consisting of silts, clays, and sands. These soils were deposited from the Late Pleistocene to Holocene and they were derived from periodic flooding of the Colorado River. These floodings formed the Lake Cahuilla. Lacustrine deposits of Lake Cahuilla are less than 100 feet thick. They are underlain by the Miocene to Pleistocene non-marine and marine sediments deposited during intrusions of the Gulf of California. Basement rock consists of Mesozoic granite and Paleozoic metamorphic rock estimated to exist at a depth of 15,000 – 20,000 feet. Locally sand dune aerial deposits can be found within the Imperial Valley.

The 2019 boring logs indicate that the subsurface materials beneath northern abutment consist of approximately 32 feet of very loose to medium dense sand and silty sand with thin beds of medium stiff lean clay, underlain by very stiff to hard lean clay to a depth of 50 feet. Below that are interlayers of stiff to hard fat clay and medium dense to very dense sand and silty sand, to the maximum explored depth of 101.5 feet. On the west side of the southern abutment, the subsurface soil consists of 15 feet of very loose to medium dense sand underlain by interlayers of stiff to hard lean clay and medium dense to very dense sand and silt, to the maximum explored depth of 101.5 feet.

GROUNDWATER

A piezometer was installed in the boring at the northern abutment. On July 16, 2019, groundwater was measured to be 5.25 feet below ground surface. It appeared that groundwater level matches the water level in the canal.

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AS-BUILT FOUNDATION DATA

The existing bridge is founded, at each abutment, on two rows of 14-inch square driven precast concrete piles. The piles in the front row are battered. To protect the pile caps from potential erosion of the canal banks, permeant steel sheet piles were installed in front of the pile caps at both abutments.

SCOUR EVALUATION

Based on survey data provided by District Design, the existing channel at the location of bridge widening is approximately 15 feet deep, with the channel banks sloping at approximately 2.2~2.4H:1V angle. No apparent scour was observed at both abutments of the existing bridge. We were informed by District Design that, since the waterflow in the canal is regulated, they do not expect any scour issue.

CORROSION EVALUATION

Soil samples collected from 2019 subsurface investigations will be tested for corrosivity. Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 1,500 ppm, or the pH is 5.5 or less.

A summary of corrosion test results for select soil samples are included in Table 1. The soils at the bridge site are considered non-corrosive.

<table>
<thead>
<tr>
<th>Boring</th>
<th>Depth (ft)</th>
<th>Minimum Resistivity (ohm-cm)</th>
<th>pH</th>
<th>Chloride Content (ppm)</th>
<th>Sulfide Content (ppm)</th>
<th>Corrosive?</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC-19-001</td>
<td>25 – 35</td>
<td>1356</td>
<td>7.68</td>
<td>21</td>
<td>105</td>
<td>No</td>
</tr>
<tr>
<td>RC-19-002</td>
<td>5 – 15</td>
<td>2603</td>
<td>7.94</td>
<td>-</td>
<td>-</td>
<td>No</td>
</tr>
</tbody>
</table>

The existing steel sheet piles in front of both abutments have shown signs of corrosion.

SEISMIC DESIGN INFORMATION AND RECOMMENDATIONS

The project will be subjected to ground shaking due to the proximity of active faults including Imperial fault, Cerro Prieto fault, and Laguna Salada fault.

The Caltrans Acceleration Response Spectrum (ARS) Online web tool Version 2.3.09 was used to determine Peak Ground Acceleration (PGA) and spectral acceleration at the site. The ARS curves were evaluated at Latitude 32.673400 and Longitude -115.387639. Based on the SPT blow counts conducted at the bridge site, the average shear wave velocity for the upper 100 feet is estimated to be $V_{S30} = 787$ feet-per-second (240 m/s). Due to its liquefaction potential, the site is considered “Poor”.

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The governing ARS curve for the site is the probabilistic spectrum for a 975-year return period. This curve has an anticipated PGA of 0.87 g. The seismic design data sheet with results of the ARS evaluation and recommended ARS curve is presented in the Appendix. The magnitude (M=6.78) and distance (1.91 miles) to the fault in the probabilistic method were estimated based on the USGS Deaggregation Website.

**Seismic Hazards**

**Surface Fault Rupture Potential**
The proposed site is not within an Alquist-Priolo Earthquake Fault Zone (AP EFZ) or within 1,000 feet of any unzoned faults that has been active within Holocene time (the past 10,000 years to 15,000 years). Surface rupture potential at the bridge site is none.

**Seismic Slope Stability**
The terrain around the bridge site is flat. There is no potential for seismically induced slope failure.

**Liquefaction / Lateral Spreading Potential**
At both abutments, there are 10 to 27 feet of very loose to medium dense sandy layers, which are highly liquefiable (Table 2). During a strong seismic event, the ground may settle up to 1.2 feet.

<table>
<thead>
<tr>
<th>Support</th>
<th>Liquefaction depth (ft)</th>
<th>Estimated seismic-induced settlement (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abut 1 / Abut 2</td>
<td>5 to 32</td>
<td>14.6</td>
</tr>
</tbody>
</table>

The ground adjacent to the Canal is susceptible to seismically induced lateral spreading. More detailed analysis of the extent of lateral spreading and its effect on the bridge foundations should be addressed in the final foundation report.

**PRELIMINARY FOUNDATION RECOMMENDATIONS**

We recommend Class 200 Alternative “W” driven steel pipe pile with close end as the foundation type. The closed end can be achieved by welding either a flat plate or a conical point to the base of the pile. Preliminary foundation design data and pile loads were provided by Structure Design, as presented in Tables 3 and 4 below. For foundation analyses, the groundwater table is assumed to be 5 feet below ground surface.

<table>
<thead>
<tr>
<th>Support No.</th>
<th>Pile Type</th>
<th>Finished Grade Elevation (ft)</th>
<th>Cut-Off Elevation (ft)</th>
<th>Pile Cap Size (ft)</th>
<th>Permissible Settlement under Service Load (in)</th>
<th>Number of Piles per Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abut 1</td>
<td>Class 200 Alt. “W”</td>
<td>39.5</td>
<td>36.75</td>
<td>6</td>
<td>62</td>
<td>27 (13 V &amp; 14-4:1 batter)</td>
</tr>
<tr>
<td>Abut 2</td>
<td>modified with close end</td>
<td>39.5</td>
<td>36.75</td>
<td>6</td>
<td>62</td>
<td>27 (13 V &amp; 14-4:1 batter)</td>
</tr>
</tbody>
</table>

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Table 4. Preliminary Foundation Factored Design Loads

<table>
<thead>
<tr>
<th>Support No.</th>
<th>Total Loads</th>
<th>Service Limit State (kips)</th>
<th>Strength Limit State (Controlling Group, kips)</th>
<th>Extreme Event Limit State (Controlling Group, kips)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Permanent Loads</td>
<td>Compression</td>
<td>Tension</td>
</tr>
<tr>
<td>Abut 1</td>
<td>2778</td>
<td>171</td>
<td>1870</td>
<td>1400</td>
</tr>
<tr>
<td>Abut 2</td>
<td>2778</td>
<td>171</td>
<td>1870</td>
<td>1400</td>
</tr>
</tbody>
</table>

The foundation design analysis was performed in general using the methods outlined in AASHTO LRFD Bridge Design Specifications (2012) with Caltrans amendments. The computer program APILE (Version 2014.6.2) was used to calculate nominal vertical bearing capacity for the driven piles. In this program, the FHWA method was selected to calculate soil resistance. Both skin friction and end bearing capacity were considered in pile resistance calculations. The pile group efficiency factor is 1.0. Though design loads for seismic event limit state were not provided, it is noted that liquefaction induced downdrag force on the piles is negligible (since the liquefiable layer is close to the surface).

Table 5 summarizes idealized soil profile and parameters used in the foundation analyses. Table 6 summarizes our preliminary foundation design recommendations. Table 7 is the pile data table.

The channel banks are susceptible to seismically induced lateral spreading and settlement, which will greatly increase lateral soil pressure, and reduce the lateral and vertical resistances of the piles. These effects need to be considered in final foundation design. Furthermore, liquefaction will likely cause the box culverts and approach embankments at both ends of the bridge to settle significantly more than the bridge itself during strong seismic events.

Table 5. Soil Profiles and Parameters Used for Foundation Analyses

<table>
<thead>
<tr>
<th>Depth below pile cutoff (ft)</th>
<th>Soil</th>
<th>Unit weight (pcf)</th>
<th>Friction angle (degree)</th>
<th>Cohesion (ksf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 2’</td>
<td>sand</td>
<td>120</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>2’ – 29’</td>
<td>sand</td>
<td>125</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>29’ – 37’</td>
<td>clay</td>
<td>115</td>
<td>0</td>
<td>4.0</td>
</tr>
<tr>
<td>37’ – 47’</td>
<td>clay</td>
<td>115</td>
<td>0</td>
<td>4.5</td>
</tr>
<tr>
<td>47’ – 55.5’</td>
<td>sand</td>
<td>125</td>
<td>34</td>
<td>0</td>
</tr>
<tr>
<td>55.5’ – 62’</td>
<td>clay</td>
<td>115</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>62’ – 72’</td>
<td>sand</td>
<td>125</td>
<td>35</td>
<td>0</td>
</tr>
</tbody>
</table>
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Table 6. Preliminary Foundation Design Recommendations

<table>
<thead>
<tr>
<th>Support Location</th>
<th>Pile Type</th>
<th>Cut-off Elevation (ft)</th>
<th>Service Limit per Support (kips)</th>
<th>Total Permissible Support Settlement (in)</th>
<th>Nominal Resistance (kips)</th>
<th>Design Tip Elevation (ft)</th>
<th>Specified Tip Elevation (ft)</th>
<th>Nominal Driving Resistance Required (kips)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abut 1</td>
<td>Class 200 Alt. “W” modified with close end</td>
<td>36.75</td>
<td>2780 (180 / pile)</td>
<td>2</td>
<td>370</td>
<td>20</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Abut 2</td>
<td>36.75</td>
<td>2780 (180 / pile)</td>
<td>2</td>
<td>370</td>
<td>20</td>
<td>N/A</td>
<td>N/A</td>
<td>-27.5 (a-l) 8.5 (b) -4.5 (c)</td>
</tr>
</tbody>
</table>

Notes: 1. Design tip elevations are controlled by: (a-l) Compression (Strength Limit), (b) Tension (Strength Limit), and (c) Settlement. 2. Design pile tip for lateral load will be provided by Structure Design. 3. The specified tip elevation shall not be raised above the design tip elevation for Lateral Load and Settlement.

Table 7. Pile Data Table

<table>
<thead>
<tr>
<th>Support No.</th>
<th>Pile Type</th>
<th>Nominal Resistance (kips)</th>
<th>Cutoff Elevation (ft)</th>
<th>Design Pile Tip Elevations (ft)</th>
<th>Specified Pile Tip Elevation (ft)</th>
<th>Nominal Driving Resistance (kips)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abut 1</td>
<td>Class 200 Alt. “W” modified with close end</td>
<td>370</td>
<td>20</td>
<td>36.75</td>
<td>-27.5 (a) 8.5 (b) -4.5 (c)</td>
<td>-27.5</td>
</tr>
<tr>
<td>Abut 2</td>
<td>370</td>
<td>20</td>
<td>36.75</td>
<td>-27.5 (a) 8.5 (b) -4.5 (c)</td>
<td>-27.5</td>
<td>370</td>
</tr>
</tbody>
</table>

Notes: 1. Design tip elevations are controlled by: (a) Compression, (b) Tension, and (c) Settlement. 2. Design pile tip for lateral load will be provided by Structure Design. 3. The specified tip elevation shall not be raised above the design tip elevation for Lateral Load and Settlement.

Additional notes for structure design considerations:

- Design pile tip for lateral load will be provided by Structure Design.
- The culvert extensions at the abutments may be designed and constructed similar to the existing culverts.
- Similar to the existing bridge, permanent sheet piles may be needed for protection of pile caps from erosion of canal banks. The pile embedment length is recommended to be twice the exposed height.

Additional comments for construction considerations:

- The contractor should submit a driving system submittal for driven piles.
- Hard pile driving is anticipated at both abutments due to the presence of hard clay and very dense sand.
• If the nominal resistance is not achieved at a specified tip elevation, a minimum “setup” waiting period of 24 hours is required for restrike. Notify OGDS to evaluate possible pile tip elevation adjustments. A cold hammer is not allowed to be used in the restrike.

• Pile driving and pile cap construction will be adjacent to the canal. Temporary or permanent shoring is likely required.

• Foundation construction will likely encounter ground water; dewatering may be required.

Appendix: Seismic Design Data Sheet

Cc: Richard Rusnak  Branch Chief, OGDS Branch-B
    Nicola Bernard  District 11 Project Manager
    Jose Robles  District 11 Design Senior
    Jorge Perez Valdes  District 11 Project Engineer
    Al Ochoa  District 11 Materials Engineer
    GeoDOG  Geotechnical Archive

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Appendix: Seismic Design Data Sheet

Seismic Design Data for Calexico East POE Widen

<table>
<thead>
<tr>
<th>Period (s)</th>
<th>Spectral Acceleration, Sa(g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.010</td>
<td>0.087</td>
</tr>
<tr>
<td>0.050</td>
<td>1.206</td>
</tr>
<tr>
<td>0.100</td>
<td>1.361</td>
</tr>
<tr>
<td>0.150</td>
<td>1.635</td>
</tr>
<tr>
<td>0.200</td>
<td>1.833</td>
</tr>
<tr>
<td>0.250</td>
<td>1.861</td>
</tr>
<tr>
<td>0.300</td>
<td>1.921</td>
</tr>
<tr>
<td>0.400</td>
<td>1.907</td>
</tr>
<tr>
<td>0.500</td>
<td>1.806</td>
</tr>
<tr>
<td>0.600</td>
<td>1.634</td>
</tr>
<tr>
<td>0.700</td>
<td>1.029</td>
</tr>
<tr>
<td>0.850</td>
<td>1.764</td>
</tr>
<tr>
<td>1.000</td>
<td>1.702</td>
</tr>
<tr>
<td>1.200</td>
<td>1.486</td>
</tr>
<tr>
<td>1.500</td>
<td>1.258</td>
</tr>
<tr>
<td>2.000</td>
<td>1.015</td>
</tr>
<tr>
<td>3.000</td>
<td>0.628</td>
</tr>
<tr>
<td>4.000</td>
<td>0.440</td>
</tr>
<tr>
<td>5.000</td>
<td>0.342</td>
</tr>
</tbody>
</table>

The Design Response Spectrum is the upper envelope of the deterministic and probabilistic response spectrum, but not less than the Minimum Deterministic Spectrum for California. The deterministic spectrum is obtained by using the average using the 2008 Campbell-Bozorgnia and the 2008 Chiou-Youngs ground motion prediction equations. Probabilistic response spectrum is obtained for 5 percent probability of exceedance in 50 years from the 2008 USGS Interactive Deaggregation web tool.

Seismic Loading Table (per MTD 1-47)

Soil Profile (VS30): 787 ft/s (240 m/s)
Magnitude: M = 6.78
PGA: 0.87 g
DONATION ACCEPTANCE AGREEMENT
BY AND BETWEEN
THE UNITED STATES OF AMERICA,
ACTING BY AND THROUGH
THE U.S. GENERAL SERVICES ADMINISTRATION,
PUBLIC BUILDING SERVICE
AND
THE IMPERIAL COUNTY TRANSPORTATION COMMISSION

1. PARTIES

The United States of America, acting by and through the Administrator of the General Services Administration (“GSA”), is entering into this Donation Acceptance Agreement with the Imperial County Transportation Commission (“Donor” or ICTC) to facilitate the proposed donation of 4 additional lanes (described in Appendix A), and if Donor’s funding permits, the optional work described in Appendix A-1, to the existing GSA bridge crossing the All American Canal at the Calexico East Land Port of Entry (“Calexico East LPOE”) in Calexico, California. GSA and Donor are collectively referred to herein as the “Parties” and each individually as a “Party.”

2. PURPOSE

The purpose of this Agreement is to memorialize the mutual understanding of the Parties regarding the proposed donation to the United States of America (the “United States”) and the terms and conditions of that donation.

As described in the Donor’s July __, 2020 donation letter and the Donor’s Request for Qualifications (“RFQ”), a copy of both which are attached hereto as Exhibits A and A-1, Donor seeks to donate through an unconditional gift 4 additional lanes and re-align the pedestrian path to the existing GSA bridge traversing the All American Canal (including construction of permanent fencing and entrance gate as necessary to replace temporary fencing) at the Calexico East LPOE, and should funds be available to Donor, Donor seeks to donate an 8-ft shoulder, rehabilitation of existing structures, and a bridge canopy, The work is described as base and optional work in Exhibits A and A-1, respectively. As part of the pedestrian path re-alignment and related improvements, the Donor will construct permanent fencing and entrance gate as necessary to replace temporary fencing.

Donor has submitted the following documentation to GSA to facilitate acceptance and approval of the project:

- Request for Qualifications which explains all base work to be performed, including potential optional work consisting of an 8-ft shoulder for commercial vehicles, rehabilitation work on the existing structures & tunnels, and a bridge canopy along the northbound pedestrian walkway.
- Base contract design-build work of 4 northbound lanes is estimated to be $18,444,000. Optional work is estimated to be $7,500,000, as stated in the RFQ issued by ICTC dated May 20, 2020.
- Estimated construction schedule includes,
  o Notice of Award on February 3, 2021
  o Notice to Proceed on February 10, 2021
  o Project Completion in October of 2022
- July 7, 2020 letter stating that the proposed donation is an unconditional gift to the United States of America through GSA

This Agreement outlines the principles, terms and conditions that will govern the proposed donation to GSA of the base and optional work described in the July 7, 2020 donation letter, the RFQ and Exhibits A and A-1 attached hereto, and defines and establishes the joint project management framework, membership, roles, and responsibilities of the GSA and Donor project teams. Upon completion of the work described in Exhibits A, and potentially A-1, by Donor, and acceptance by Donor and the United States in accordance with the procedures set forth in Donor’s RFQ, Caltrans’ Standard Specifications, GSA’s Facilities Standards for the Public Buildings Service P100 (Current Version), Customs and Border Protection (CBP) Land Port of Entry Design Guide, all attached hereto as Exhibit B and incorporated herein by reference, the entirety of the donation, including any improvements constructed on federal property, will become the property of the United States and will be maintained by GSA.

3. AUTHORITY


4. CONSIDERATION AND MUTUALITY OF OBLIGATIONS

It is the agreement of the Parties and the intention and wish of Donor that the donation under this Agreement will constitute Donor’s binding obligation and will be enforceable at law and equity, including against Donor and Donor’s successors and assigns. Donor acknowledges that GSA is relying, and will continue to rely, on Donor’s donation subject to the terms and conditions set forth in this Agreement. In consideration for the donation, GSA will enter into a site access or other similar agreement with Donor authorizing Donor to enter onto the Calexico East LPOE property to carry out its responsibilities under this Agreement. The United States further agrees to accept the carry out the responsibilities under this Agreement. The United States further agrees to accept the donation upon completion, provided it is constructed in accordance with the terms and conditions of this Agreement.

5. SCOPE OF WORK

The agreed-upon scope of the project is described in the attached Exhibit A, and optional work if Donor has sufficient funds are described in Exhibit A-1. Donor agrees
not to deviate from the work described in Exhibits A and A-1 without prior notice to the GSA primary point of contact identified in this Agreement, which notice may be delivered either orally or in writing. If the notice is delivered orally, it must be followed up in writing, which writing may be in an e-mail. Any change to the work described in Exhibits A and A-1 that does not meet or that exceeds industry established acceptable tolerances, variances and standards of workmanship for road and bridge construction on federal or State of California projects, whichever is more strict, and any change that requires funding from GSA will require express written consent from GSA. GSA will communicate to Donor its approval or disapproval of the proposed change as soon as possible, taking into consideration the magnitude and complexity of the change. Before commencing to implement any of the proposed changes that require prior approval, Donor must obtain the written approval of GSA. GSA will only accept the donation once all terms and conditions of this Agreement are satisfied and they have verified that the property and the improvements constructed thereon meet all the terms and conditions set forth in Exhibits A and A-1.

6. ROLES AND RESPONSIBILITIES

GSA and Donor will each appoint a primary point of contact within one week after full execution of this Agreement. These points of contact will be responsible for delivery, receiving, and reviewing as applicable, verbal or written notification of any change to the work described in Exhibits A and A-1, and coordinating and facilitating the written approval of any changes, if necessary.

7. PROJECT FUNDING

Donor will be responsible for all costs and expenses to acquire, design, construct, and deliver the completed project, and all other costs and expenses associated with the project, including repair or replacement of any federal property damaged during the course of project delivery and construction and the correction of any defective or noncompliant work, until acceptance of the final project by the United States. The estimated and anticipated costs of acquiring, designing and constructing the donated property, for both base and optional work, are set forth in Exhibit C.

8. PROJECT EXECUTION

All work must be performed in a manner that either avoids or minimizes, to the extent reasonably possible, operational disruptions to the Calexico East LPOE and in a manner that will safeguard the public and Federal Government personnel and property. Donor agrees to coordinate project activities with the GSA primary points of contact to ensure that operational disruptions, if any, are mitigated and managed appropriately. GSA acknowledges that Donor intends to award a Design Build construction contract for the work described in Exhibit A and potentially Exhibit A-1 to the firm that offers the best value proposal. To ensure quality workmanship and the proper execution and timely completion of the work, Donor will require that its Design Build contractor or contractors and each of their subcontractors only employ qualified personnel to perform the work.
The Project is complete only when Donor has corrected all punch list items and noted deficiencies and has complied with all conditions in this Agreement.

Upon project completion and final acceptance by the United States, Donor agrees to provide GSA with final as-built drawings and plans of the work described in Exhibits A and, if done, A-1, and all documents necessary to effect the transfer of ownership (such as a bill of sale, American Land Title Association (“ALTA”) survey and final total and itemized costs for the project), as well as a minimum of a one-year warranty of construction to be proved to GSA in the form prescribed in 48 C.F.R. § 52.246-21, and any other reasonable request for documentation related to the project.

9. SATISFACTORY TITLE AND TITLE EVIDENCE

TBD Donor shall provide to GSA prior to acceptance of the donation an ALTA U.S. Policy 9-28-91 (Revised 12-3-12) evidencing no mechanic's or materialmen’s liens or any other interest in the proposed donation that have not been specifically approved by GSA. Any interests approved by GSA are found at Exhibit D to this Agreement. The title policy shall be supplemented by Donor's declaration attesting that there are no mechanic’s or materialmen’s liens or any other interests in the proposed donation that have not been specifically been approved by GSA.

10. BILL OF SALE AND WARRANTY DEED

Donor shall provide to GSA a Bill of Sale for the proposed donation in the form attached at Exhibit E to this Agreement.

11. MEETINGS

GSA shall have the right, but not the obligation to attend all pre-design, design and construction meetings for this project. GSA’s, or its agents’ or representatives’, attendance at such meetings is for the sole benefit of the United States and do not relieve Donor of responsibility for providing adequate quality control measures and do not constitute or imply acceptance of any part of the work.

12. INSPECTION OF CONSTRUCTION

With regard to the entirety of the property to be donated, Donor must maintain an adequate inspection system and perform such inspections as will ensure that the work performed under this Agreement conforms to the requirements set forth herein. Donor must maintain complete inspection records and make them available to GSA upon request.

GSA reserves the right, but not the obligation, to review, test or inspect the development of the design and the prosecution of Donor’s work to verify compliance with the terms of
the Agreement. Donor must allow GSA and its agents and representatives access to the construction site and Donor’s work for such reviews, provided such access and reviews do no unreasonably interfere with or unreasonably delay the performance of Donor’s work. GSA’s reviews, inspections and tests are for the sole benefit of the United States and do not relieve Donor of responsibility for providing adequate quality control measures and do not constitute or imply acceptance of any part of the work.

Donor must, without charge to the United States, replace or convert work found by GSA not to conform to contract requirements. If Donor does not promptly replace or correct rejected work, the United States may terminate this Agreement without liability to the United States and seek any other remedies permitted by this Agreement or by law.

13. SPECIFICATION AND DRAWINGS FOR CONSTRUCTION

Donor must allow GSA and its agents and representatives access to the construction documents, plans, drawings, specifications, reports and any other document during all phases of pre-design, design development and construction. Because Donor contemplates construction using the Design Build method, GSA shall have the right, but not the obligation to review the design documents at various stages of design submittals, including 30%, 60%, 90% and 100%.

Donor must keep on the work site a copy of the drawings and specifications and must at all times give GGSA access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, must be of like effect as if shown or mentioned in both. In case of differences between plans, drawings and specifications, the specifications will identify which construction document governs.

Donor must, without charge to the United States, correct design found by GSA not to conform to contract requirements. If Donor does not promptly correct the rejected design, the United States may terminate this Agreement without liability to the United States and seek any other remedies permitted by this Agreement or by law.

14. CONTRACTORS AND SUBCONTRACTORS

Nothing contained in this Agreement will be construed as creating any contractual relationship between any third party (e.g., contractor, subcontractor or supplier) and the United States. Donor will be responsible to the United States for the acts and omissions of its own employees and, to the maximum extent provided by law, those of its contractors, subcontractors, suppliers, and their employees. The United States reserves the right to exclude or remove from the site or any buildings at the site any person who violates rules and regulations concerning conduct on federal property or whose continued presence on site is otherwise determined by the Government to be contrary to the public interest.
15. ENVIRONMENTAL REPRESENTATIONS

Donor represents that it has completed all required environmental analysis and determined that a categorical exclusion applied.

16. ENVIRONMENTAL RESPONSIBILITIES AND OBLIGATIONS

A. Responsibilities and Obligations of Donor: Donor will comply with all rules, laws, regulations, ordinances and licensing or permit requirements and guidance applicable and will take all response actions necessary to protect human health and the environment. Donor provides assurances that, in accordance with and to the extent required at the location of the project by applicable federal, state and local laws, Donor will timely:

- Assess, inspect, investigate, study and remove or remediate, as appropriate, the release or threatened release of a Hazardous Substance, released due to its project work from environmental media, such as soil, subsurface soil, air, groundwater, surface water, or subsurface geological formations at levels above background; and
- Settle or defend any claim, demand or order made by federal, state or local regulators or third parties against Donor in connection with any release or threatened release of a Hazardous Substance due to its activities.

B. Responsibilities and Obligations of the United States: The United States will comply with all rules, laws, regulations, ordinances, and licensing or permit requirements and guidance applicable to the United States.

17. LIABILITY AND INDEMNITY

Donor is responsible for all damages to persons or property that occur as a result of its activities and the activities of its agents, representatives, contractors and subcontractors under this Agreement or otherwise in completing the work that is the subject of this Agreement, whether caused by intentional conduct, recklessness, fault, negligence or otherwise.

Donor agrees to indemnify and save harmless the United States, its agents and employees, to the maximum extent provided by law, against any and all loss, damage, claim or liability whatsoever, due to personal injury or death, or damage to property of others, directly or indirectly, arising out of or related to the privileges granted under this Agreement to Donor, including failure to comply with the obligations of this Agreement.

18. INSURANCE AND BONDS

Donor shall cause and ensure that all of its contractors obtain an endorsement naming the United States as an additional insured on all insurance required for the work that is
the subject of this Agreement. Donor shall provide to GSA a copy of the policy certificate which shows the policy coverage amount(s) and the endorsement page that documents and confirms that the United States of America has been added as an additional insured on the aforementioned policies. The insurance carrier is required to waive all subrogation rights against any of the named insured.

Additionally, Donor shall cause and ensure that all of its contractors name the United States as a co-obligee on all bonds (e.g. performance bond, payment bond) each equal to 100% of the total project cost. Donor shall provide to GSA a copy of the bonds evidencing such.

19. SITE CONDITIONS

Neither GSA nor any other agency or instrumentality of the United States shall be responsible for any unknown or unexpected site conditions encountered on its site. Also, any costs caused by any changed conditions shall be the responsibility of Donor and neither GSA nor the United States will be liable or responsible for any costs or claims for costs due to any changed conditions. If Donor elects not to modify this Agreement and bear such increased costs, this Agreement may be terminated subject to the termination and restoration provisions set out herein.

20. ACCESS TO CONTROLLED UNCLASSIFIED INFORMATION

Donor acknowledges that as a part of its project planning and execution activities, GSA may need to provide Donor with confidential sensitive information. Donor agrees to maintain the confidentiality of information designated by the Federal Government as Controlled Unclassified Information (CUI) and will sign a Non-Disclosure Agreement (NDA) (as attached in Exhibit F) to that effect, and cause its agents, representatives, contractors, subcontractors and suppliers to do so, as well.

This Agreement must be executed by all the Parties and the NDA must be executed by any individual requesting access to CUI.

The provisions in this Agreement relating to CUI will survive the termination or expiration of this Agreement.

A. Responding to Requests for CUI. If Donor receives a request for documents related to this Agreement from a party who is not a signatory to this Agreement, Donor will assert any and all applicable defenses, privileges, exceptions and exemptions from disclosure under the California Public Records Act or any other law and to maintain the confidentiality of the information to the maximum extent permissible under law. Donor will immediately notify GSA of any such request and will draft a response, in consultation with GSA.
B. Donor Generated Documents. Donor generated documents, including those of Donor’s agents, representatives, contractors, subcontractors, and suppliers that contain controlled unclassified information must be marked as CUI on the original documents and all copies before any dissemination.

C. Legitimate Need to Know. CUI must be protected with access strictly controlled and limited to those individuals having a legitimate business need to know such information. Any contractors or subcontractors having a legitimate business need to know such information must be registered as “active” in the System for Award Management (SAM) database at www.sam.gov. If they are not registered, they must provide to Donor their DUNS number or tax ID number and a copy of its business license and Donor shall keep this information for the duration of the contract.

D. Public Safety Entities. Public safety entities such as fire and utility departments may require access to CUI on a need to know basis. This clause does not prevent or encumber the dissemination of CUI to public safety entities.

E. Electronic submission of CUI: Electronic submission of CUI outside of the GSA network must use session encryption (or alternatively, fire encryption). Encryption must be via an approved NIST algorithm with a valid certification, such as Advanced Encryption Standard (AES) or Triple Data Encryption Standard (3DES). In accordance with Federal Information Processing standards Publication (FIPS PUB) 140-2, Security Requirements for Cryptographic Modules per GSA policy.

F. Non-electronic form (including paper documents among other formats) or on portable electronic data storage devices (including, but not limited to, CDs, DVDs and USB drives):

A. By mail, Donor must utilize only methods of shipping that provide services for monitoring receipt such as track and confirm proof of delivery, signature confirmation or return receipt.
B. In person, Donor must provide SBU building information only to authorized recipients with a need to know such information.

G. List of CUI Recipients. Donor must maintain a list of all entities to CUI disseminated. This list must include at a minimum: (1) name of entity, utility, firm; (2) name of the individual at the entity or firm who is responsible for protecting the CUI, with access strictly controlled and limited to those individuals having a legitimate business need to know such information; (3) contact information for the named individual; and (4) a description of the CUI provided. Once “as built” drawings are submitted, Donor must collect all lists maintained in accordance with this clause, including those maintained by any contractors/suppliers and submit them to the GSA Project Manager.
H. Limitation on Physical Location of CUI. Donor and its agents, representatives, and contractors may not take CUI outside of GSA or their own facilities or network, except as necessary for the performance of that contract.

I. Disposal. When no longer needed all CUI must be returned to the GSA Project Manager with along with a signed statement stating that all CUI has been returned.

J. Improper Disclosures. All improper disclosures of CUI must be immediately reported to the GSA Project Manager and Donor will provide a corrective action plan explaining how it will rectify any noncompliance and comply with the clause in the future.

K. Flow Down Requirement. Donor must insert the substance of the SBU clause in all of its contracts and require it be included in all sub and supplier contracts.

21. SECURITY CONSIDERATIONS

Each employee, worker and supplier will be subject to a background investigation prior to being authorized to commence work on any aspect of the Project at the discretion of GSA.

The project will incorporate and comply with all applicable changes and updates to security regulations and requirements as promulgated by the U.S. Department of Homeland Security.

Donor must comply with the following requirements pertaining to security clearances:

A. All personnel performing work under the Contract on the Project site must obtain an Enter on Duty (EOD) determination before they will be granted access to the site.

B. To obtain an EDO determination, donor shall submit for all such personnel fingerprints on Form SF87 and a competed Information Worksheet (CIW). Detailed information is available at [http://www/gsa/gov/portal/category/107203](http://www/gsa/gov/portal/category/107203). USAccess Credentialing Centers can be located at [http://www/fedidcard.gov/ceterlist.aspx](http://www/fedidcard.gov/ceterlist.aspx).

C. In addition, all such personnel who will be on site 6 months or longer must apply for and receive clearance in accordance with Homeland Security Presidential Directive 12 (HSPD-12).

22. ACCESS GOVERNMENT PROPERTY

Donor shall account for all forms of Government provided identification issued to Donor employees, agents, representatives, contractors, subcontractors and suppliers in connection with the work that is the subject of this Agreement. Donor shall return such identification to the issuing agency at the earliest of any of the following, unless otherwise determined by the Government:

A. When no longer needed for project performance.
B. Upon completion of an employee’s employment.
C. Upon contract completion or termination.

23. SAFEGUARDING SENSITIVE DATA AND INFORMATION TECHNOLOGY RESOURCES

This section applies to all users of sensitive data and information technology (IT) resources, including Donor, its agents, representatives, contractors, subcontractors, suppliers and manufacturers. The following GSA policies must be followed. They can be found at https://www.gsa.gov/directives-library:

- CIO 1878.3 Developing and Maintaining Privacy Threshold Assessments, Privacy Impact Assessments, Privacy Act Notices, and System of Records Notices
- CIO 2100.1 GSA Information Technology (IT) Security Policy
- CIO 2100.3C Mandatory Information Technology (IT) Security Training Requirements for Agency and Contractor employees with significant security responsibilities
- CIO 2104.1B GSA Information Technology IT General Rules of Behavior
- CIO 2180.2 GSA Rules of Behavior for Handling Personally Identifiable Information (PII)
- CIO 2182.2 Mandatory Use of Personal Identity Verification (PIV) Credentials
- CIO 2231.1 GSA Data Release Policy
- CIO 9297.2C CHGE 1 GSA Information Breach Notification Policy
- ADM P 9732.1 D Suitability and Personnel Security
- OSC 2106.2 GSA Social Media Policy

24. LIMITATIONS

Nothing in this Agreement is intended to conflict with current law, regulation, directives, or policy of the United States or GSA. If any provision of this Agreement is inconsistent with any such authority, then that provision is deemed to be invalid and subject to modification upon concurrence of the Parties, and the remaining terms and conditions of this Agreement will continue in full force and effect.
The Parties acknowledge that this Agreement is not a commitment to future funding, staffing or other resources. Nothing in this Agreement may be construed or interpreted to obligate the United States to any current or future expenditure of funds in advance of, or in excess of, the availability of appropriations, nor does this Agreement obligate the United States to spend available funds for any particular purpose.

Nothing in this Agreement constitutes or can be construed as a waiver of the sovereign immunity of the United States.

25. NOTICES

All notices and other communications arising under this Agreement must be in writing and must be furnished by (i) hand delivery; (ii) United States certified mail, postage prepaid, return receipt required; or (iii) nationally available overnight next business day courier, charges prepaid, signature or recipient require, in each instance if to GA, to the GSA Project Team Manager, and if to Donor, to the Donor Project Manager, at the addresses set forth immediately below. Any Party may change the notice address set forth for the below by serving five (5) days prior written notice upon the other Parties. Any such notice will be duly given upon the date it is delivered to the address (or, if delivery is refused, the date when delivery was first attempted) shown below.

GSA:
Anthony Kleppe
U.S. General Services Administration
Public Building Service (9)
50 United Nations Plaza
Mailbox 9
San Francisco, CA 94102

with a copy to:

Margaret Haggerty, Regional Counsel
U.S. General Services Administration
Office of Regional Counsel (LD9)
50 United Nations Plaza
XXXXXX
San Francisco, CA 94102

Donor:
Mark Baza, Executive Director
Imperial County Transportation Commission
1503 N. Imperial Ave., Suite 104
El Centro, CA 92243

26. EXAMINATION OF RECORDS
Donor agrees that GSA or its duly authorized representative will, until the expiration of three (3) years after the date of acceptance of the donation by the United States, have access to and the right to examine any books, documents, papers, and records of Donor involving transactions related to this Agreement or compliance with any clause thereunder.

27. UNITED STATES RIGHTS TO DATA

The United States will have unlimited rights in all the Project Documents. Donor, for a period of three (3) years after the date the United States accepts the donation, agrees to furnish the original or copies of all such Project Documents on the requests of GSA.

28. MODIFICATION

This Agreement may be modified or amended only by written, mutual agreement of the parties. Any Party can imitate the amendment process by providing written notice describing the proposed amendment to the other Parties. During the ensuing 30-day period, the Parties will actively coordinate to try to reach a consensus on the proposed amendment.

29. DISPUTE RESOLUTION

All disputes arising under or relating to this Agreement will be resolved following the procedures set for the in this section 21 and the Contract Disputes Act, 41 U.S.C. §§ 7101-7109. The Parties agrees to make good faith efforts to resolve informally disputes that may arise out of or relate to this Agreement, or the breach thereof, that affects the Parties’ obligations and responsibilities under this Agreement. In the event that such a dispute arises between Donor and the United States, Donor may file a claim (a “Donor Claim”) with GSA or the United States may file a claim (a “United States Claim”) against Donor. A “Claim” is a United States Claim or a Donor Claim. If the disputes cannot be settled through negotiation, the parties will first try in good faith to settle the dispute by mediation, before resorting to litigation. The United States agrees that GSA will not issue any final determination regarding any Claim by either party until and unless such mediation has been concluded or either Party advises the other that a resolution of the disputes by mediation does not appear likely within a reasonable time.

30. NONCOMPLAINTCE AND DEFAULT

In the event Donor, after receiving written notice from the GSA primary point of contact of non-compliance with any requirement of this Agreement, fails to imitate promptly such action as may be appropriate to comply with the specified requirement within a reasonable period of time, GSA will have the right to not accept the donation until Donor has complied or has initiated such action as may be appropriate to comply within a reasonable period of time.
If Donor refuses or fails to prosecute the work or any severable part with the diligence that will ensure its completion within the time specified in this Agreement including any extension, fails to complete the work within this time, fails to compete the work in the manner or to the specifications required by this Agreement, or fails to make required payment to contractors and subcontractors (which includes laborers and suppliers), GSA will, by written notice, provide Donor a reasonable time to cure performance, which will not be less than 30 days. If Donor does not cure within the reasonable time, Donor will be in default under this Agreement.

In the event of a default by Donor, the United States may pursue any available remedy, including on or a combination of the following: not accepting the donation, seeking reimbursement for costs and expenses the United States incurred to the date of the termination or incurs for completing the work or requiring donor to restore any altered federal property to its pre-construction conditions. Upon default, the United States may take possession of and use any tools, materials, equipment or appliances on the work site necessary for completing the work. Donor and its sureties will be liable for any damage sustained by the United States resulting from Donor’s default under this Agreement, whether or not Donor’s right to proceed with the work is terminated.

31. TERMINATION

Any Party may terminate its participation in this Agreement by providing written notice to the other Parties at least 30 days prior to commencement of construction activities, in which case the United States will be under no obligation to accept the donation and the Parties will thereafter have no further rights, obligations or liabilities under this Agreement other than those that expressly survive termination or expiration of this Agreement. In the event Donor has altered federal property prior to termination of this Agreement. Donor agrees, subject to the discretion of the United States, to restore the property to its prior condition. In the event Donor has received any sensitive or confidential information from GSA pertaining to the proposed donation and the donation is not consummated for any reason, Donor must promptly return all such materials. This provision survives the expiration or earlier termination of the Agreement.

32. SIGNATORIES

The GSA Commissioner of Public Buildings, or another agency official with the appropriate delegated authority, must execute this Agreement to be effective. Donor’s signatory to this Agreement must have full authority to bind Donor with regard to all matters relating to this Agreement.

33. COUNTERPARTS

This Agreement may be executed in counterparts, each of which will be deemed to be a duplicate original, and which together will constitute one and the same instrument.

34. INTEGRATION AND MERGER
This Agreement sets out all of the terms, conditions and agreements of the Parties and supersedes any previous understandings or agreement regarding the donation, whether oral or written. No modification or amendment of this Agreement will be effective unless in writing and signed by all Parties.

35.  VALIDITY OF PARTS

If any provision of this Agreement is declared to be invalid by a court of competent jurisdiction, the remaining provisions will continue in full force.

36.  NO PUBLIC OFFICIALS TO PARTICPATE OR BENEFIT

No member or delegate to the United States Congress, or offerors of employees of the United States or the Government of the State of California, may be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom; provided, however, that this provision will not be construed as extending to any person who may be a shareholder, or other beneficial owner of any publicly held corporation or other entity, if this Agreement is for the general benefit of such corporation or other entity.

37.  NO PRECEDENT

The terms of this Agreement will not establish any precedent, nor will this Agreement be used as a basis to seek or justify similar terms in any subsequent situation involving the Parties.

38.  EFFECTIVE DATE

This Agreement will become effective when all the Parties have signed it. The date this Agreement is signed by the last Party to sign it (as indicated by the date stated opposite that Party’s signature) will be deemed to be the effective date of this Agreement. This Agreement will remain in effect until it is terminated as provided in sections 23 and 24, or the property is accepted by the United States.
Exhibit A

Base Scope of Work
Exhibit A-1

Optional Scope of Work Subject to Funding Availability
Exhibit B

Construction Standards
Exhibit C

Costs for Base and Optional Work
Exhibit D

Property Interests Approved by GSA

NONE
Exhibit E

Bill of Sale

BILL OF SALE

The Imperial County Transportation Commission, a ________________, whose address is __________________________________, and its successors and assigns ("Donor"), pursuant to a Donation Acceptance Agreement dated _________ ("Agreement") will transfer 4 additional lanes (described in Exhibit A to the Bill of Sale), and if Donor’s funding permits, the optional work described in Exhibit A-1 to the Bill of Sale, to the existing GSA bridge crossing the All American Canal at the Calexico East Land Port of Entry ("Calexico East LPOE") in Calexico, California to the United States of America, acting by and through the General Services Administration, whose address is 50 Unite States Plaza, ________________, San Francisco, CA 93102 ("GSA").

In consideration of the covenants contained in this Bill of Sale and in the Agreement AND IN CONSIDERATION of the sum of One Dollar and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Donor hereby transfers, conveys, and delivers to the GSA the property described as follows:

Four additional lanes and re-alignment of the pedestrian path to the existing GSA bridge traversing the All American Canal (including construction of permanent fencing and entrance gate as necessary to replace temporary fencing) at the Calexico East LPOE, and should funds be available to Donor, an 8-ft shoulder, rehabilitation of existing structures, and a bridge canopy, all of which are described as base and optional work in Exhibits A and A-1, respectively. As part of the pedestrian path re-alignment and related improvements, the Donor will construct permanent fencing and entrance gate as necessary to replace temporary fencing.

The property described above and in Exhibits A and A-1 are transferred with all applicable warranties and representations, including a minimum of a one-year warranty of construction to be proved to GSA in the form prescribed in 48 C.F.R. § 52.246-21.

This Bill of Sale shall be governed by and construed in accordance with the laws of the United States.

This Bill of Sale shall become effective between Donor and GSA on the date executed by both parties below.

This Bill of Sale shall bind and insure to the benefit of Donor and GSA and their respective successors and assigns.
IN WITNESS WHEREOF, this Bill of Sale is signed by its duly authorized [insert title], this ____ day of ____ 2020.

Imperial County Transportation Commission

By:________________________________
Printed Name and Title

Acknowledgement

State of California County of _____________________________) On
____________________ ____ before me, ____________________________________________ (insert name and title of the officer)
personally appeared ____________________________________________________________, who
proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature ______________________________ (Seal).

United States of America,
Acting by and through the Administrator
Of the General Services Administration

By:____________________________
Name and Title

Calexico East LPOE Donation Acceptance Agreement Page 21