

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
CENTRAL REGION
1234 EAST SHAW AVENUE
FRESNO, CALIFORNIA 93710

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HABITAT CONSERVATION
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AMENDMENT NO. 19
(A Major Amendment)
California Endangered Species Act
Incidental Take Permit No. 2081-2015-024-04
California High-Speed Train Project Fresno to Bakersfield Section Permitting Phase 1

INTRODUCTION

On June 15, 2015, the California Department of Fish and Wildlife (CDFW) issued Incidental Take Permit No. 2081-2015-024-04 (ITP) to the California High-Speed Rail Authority (Permittee) authorizing take of California tiger salamander (*Ambystoma californiense*), Swainson's hawk (*Buteo swainsoni*), Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), and San Joaquin kit fox (*Vulpes macrotis mutica*) (collectively, the Covered Species) associated with and incidental to the Permitting Phase 1 of the Fresno to Bakersfield Section of the High-Speed Train (HST) Project (Project). The Project as described in the ITP originally issued by CDFW includes HST alignment beginning on the south side of the G Street and San Benito Street intersection, north of Highway 41, in the City of Fresno, Fresno County, California. From this intersection, the Fresno to Bakersfield HST alignment extends south either along or adjacent to the Burlington Northern Santa Fe Railway (BNSF) for approximately 99 miles before reaching the section endpoint, at the intersection of 7th Standard Road, and Santa Fe Way, within the city limits of Shafter, in Kern County, California.

The total length of the Project is 99 miles. The Project is the second of the nine California HST sections to be constructed; each section will function independently, but once joined together will create a statewide HST system. The HST will be an electrically powered with steel-wheel-on-steel-rail technology and state-of-the-art safety, signaling, and automated train-control systems. The trains will be capable of operating at speeds of up to 220 miles per hour (mph) over a fully graded, separated, dedicated track alignment. The Project will be built using a design/build (D/B) approach, a method of construction by which one D/B contractor works under a single contract with the Permittee to provide design and construction services. The Project as originally permitted in the ITP included construction and installation of all Project components, including disturbance of up to 5,868.00 acres (hereafter, Construction Footprint). Construction may occur at any point along the Construction Footprint, and construction may occur at multiple locations simultaneously. The Project also includes operations,

maintenance, inspection activities within the Construction Footprint (O&M), and Mitigation Activities.

In an email dated June 24, 2016, the Permittee requested a revision of the ITP Project Description to include an increase in the Construction Footprint by 102.58 acres to 5,970.58 acres to accommodate eight additional Roadway Modifications, and in a subsequent email dated July 25, 2016, the Permittee requested the addition of a third designation of approvable project biologists to carry out small mammal habitat assessment and trapping activities. On March 7, 2017, CDFW issued **Major Amendment No. 1** to the ITP incorporating these requested revisions along with corrections to the acreage for the impacts, changes to the required Habitat Management lands acreage, and clarifications to the reporting requirement language.

On July 5, 2018 and September 19, 2018, CDFW initiated, issued, and re-issued respectively, **Major Amendment No. 2** to the ITP incorporating a Baseline Map Book as Exhibit 6 and added references to the map book throughout the ITP; further revising the Tracking Suitable Habitat Feature Disturbances, Map Updating, and Reporting requirements; added a specific Covered Activity (pile driving) and a species-specific Take Avoidance Measure for that Covered Activity; adding the third category of Biological Monitor, Designated Small Mammal Trapper, to Condition of Approval 6.2; clarified the Construction Monitoring Notebook requirement; added Condition of Approval 7.13 requiring survey and reporting requirements in advance of initiating Covered Activities; revising Conditions of Approval 8.13.2, 8.14.1, 8.15.1, 8.16.1, 8.16.2, 8.16.3, 8.17.2; and adding Condition of Approval 8.15.6. There was no change to the Construction Footprint acreage.

In a letter dated June 25, 2018, the Permittee requested a revision of the ITP to change the Mitigation Site Construction Elements from the Fagundes Compensatory Mitigation Site to a new location, now recognized as Cottonwood Creek. Because the Permittee would no longer be conducting riparian and wetland restoration at the Fagundes Compensatory Mitigation Site, all references to riparian and wetland restoration at the Fagundes site was removed and replaced with the Cottonwood Creek mitigation site. Due to the varying conditions at the Cottonwood Creek site, some Construction Elements also changed with the changes in mitigation site location. Further, on September 25, 2018, the Permittee requested a 7-day extension provision be added for San Joaquin antelope squirrel relocation. There was no change to the Construction Footprint acreage. On October 2, 2018, CDFW issued **Major Amendment No. 3** to the ITP incorporating these changes.

In an email dated October 4, 2018, the Permittee requested a revision of the ITP to extend the dry season work window beyond October 31st for ground-disturbing activities

at the Mitigation Site. There was no change to the Construction Footprint acreage. On November 15, 2018, CDFW originally issued **Minor Amendment No. 4** to the ITP incorporating these changes.

In an email dated November 27, 2018, the Permittee requested a revision to the ITP to allow for San Joaquin antelope squirrel (SJAS) relocation to occur prior to April 1 and to allow SJAS relocation to occur after November 15 on a case-by-case basis. There was no change to the Construction Footprint acreage. On November 29, 2018, CDFW issued **Major Amendment No. 5** to the ITP incorporating these changes.

In a letter dated September 10, 2018, the Permittee requested to revise the Project Description to allow for an increase in the Construction Footprint of 6.92 acres for a total of 5,977.50 acres to accommodate new Work Areas for the water pipeline irrigation casing installation and level 3 fiber optic line relocation. Additionally, CDFW initiated amending the Project Description to include installation of water pipeline irrigation casings, dry jack and bore, and horizontal directional drilling as Covered Activities as well as adding Condition of Approval 7.12. On January 17, 2019, CDFW issued **Major Amendment No. 6** to the ITP incorporating these changes.

In a letter dated October 19, 2018, the Permittee requested to revise the Project Description to increase the Construction Footprint by 2.01 acres to a total of 5,979.51 acres for road improvements to Wasco Avenue to function as an access road for agricultural operations north of Kimberlina Road in Kern County. Additionally, the Permittee requested a design change to the HST/Kimberlina Road location that will be contained within the current ITP Construction Footprint at that location. On February 1, 2019, CDFW issued **Major Amendment No. 7** to the ITP incorporating these changes.

In a letter dated August 22, 2018, the Permittee requested to revise the Project Description to accommodate advanced design changes requiring roadway modifications, utility relocations, access road alterations, and canal realignments along and adjacent to the HST alignment at South Avenue; two new locations in Fresno County at Conejo Avenue, and Peach Avenue; as well as changes for existing locations at Flint Avenue and Kent Avenue in Kings County; and Avenue 88 in Tulare County resulting in a net decrease of 1.96 acres changing the Construction Footprint to 5,977.55 acres. In a subsequent email dated January 25, 2019, the Permittee requested an additional further revision of the ITP, as amended, to include the use of jack and bore and horizontal directional drilling as Covered Activities throughout the entire Construction Footprint. The Permittee also requested Condition of Approval 7.12, the notification and submission of a Horizontal Directional Drilling and Dry Jack and Bore Level 3 Fiber Optic Line Relocation Plan, be revised to serve as a notification and plan for

all horizontal directional drilling and jack and bore activities occurring within the entire Construction Footprint. On February 13, 2019, CDFW issued **Major Amendment No. 8** to the ITP incorporating these changes.

In a letter dated December 6, 2018, the Permittee requested to revise the Project Description to add construction of an intrusion protection barrier (IPB) within specific limits of the HST alignment to mitigate the risk of potential derailed trains from the adjacent BNSF rail line entering the path of the HST and increase the Construction Footprint by 0.75 acre which brought the total acres to 5,978.30. The IPB construction specific limits occurred in various locations along the California HST route from the vicinity of State Route 43 and Whisler Road to the vicinity of Madera and Poplar Avenues near the City of Shafter in Kern County. IPB construction in this vicinity required re-siting of two wildlife crossing structures. In an email dated January 23, 2019, Permittee further requested modifying the approval process for siting and constructing wildlife crossings. On February 20, 2019, CDFW issued **Major Amendment No. 9** to the ITP incorporating these changes

In a letter dated January 2, 2019, and a subsequent letter dated February 4, 2019, Permittee requested further revision to the ITP, as amended, to cover a 31.79-acre increase to the approved Project Construction Footprint and associated impacts to Covered Species to accommodate the "alternative technical concepts" (ATC) 11 and 13b (design variations). The changes were to employ "reverse stacking" over Garces Highway, Pond Road, and Peterson Road in Kern County; which means to place the railway over the surface roads instead of vice-versa; and a slight alignment revision to avoid a major agricultural water pumping facility known as the Semitropic Pump Station. In a letter dated February 12, 2019, Permittee requested amending the ITP to cover an 86.14-acre increase to the Project Construction Footprint to accommodate design variations including utility relocations, roadway modifications, temporary construction easements, and access roads at 23 locations. Altogether, this brought the Construction Footprint acreage total to 6,096.24. On March 28, 2019, CDFW issued **Major Amendment No. 10** to the ITP incorporating these changes.

In a letter dated March 11, 2019, the Permittee requested further revision of the ITP as amended to cover a 141.60-acre increase to the approved Project Construction Footprint and associated impacts to Covered Species to accommodate four segments of IPB between State Route 41 and approximately 1000 feet south of East American Avenue in Fresno County, and additional areas for construction access, fence and gate construction, utility relocations, and street and sidewalk modifications. In a letter dated March 12, 2019, the Permittee requested further revision of the ITP as amended to cover a 105.12-acre increase to the approved Project Construction Footprint and associated impacts to Covered Species to accommodate design variations at

20 locations, in Fresno County. The design variations include utility relocation and protection, roadway modifications, temporary construction easement for staging equipment and materials, building demolition, additional earthwork, access roads, and/or waterway crossing structures. Altogether, this brought the Construction Footprint acreage total to 6,342.96. On April 25, 2019, CDFW issued **Major Amendment No. 11** to the ITP incorporating these changes.

In a letter dated January 8, 2019, Permittee requested that CDFW further amend the ITP, as amended, to cover increases in the Project Construction Footprint by 98.06 acres, for a total of 6,441.03 acres, to accommodate additional temporary access routes, staging areas, and utility relocation at several locations in Kern County referred to as "Wasco Utilities" and "North-South Utilities." Permittee provided supplemental information related to the requested activities dated January 29 and April 30, 2019. In a letter dated March 6, 2019, Permittee requested that CDFW further amend the ITP, as amended, to remove the required CDFW written approval of pre-construction survey reports. On May 20, 2019, CDFW issued **Major Amendment No. 12** to the ITP incorporating these changes.

In a letter dated April 5, 2019, Permittee requested amending the ITP to increase the Construction Footprint by 19.36 acres to accommodate design changes and refinements in the vicinity of State Route (SR) 46, including utility relocations, removal and construction of a Caltrans retention pond, construction of a retention pond for the Authority, building demolition, and other Covered Activities related to relocation of utilities within Kern County. In a letter dated June 21, 2019, Permittee requested amending the ITP to increase in the Construction Footprint by 150.46 acres to accommodate design variations including utility relocations, roadway modifications, temporary construction easements, access roads, and other Covered Activities at 19 locations within Fresno, Kings and Tulare counties. Together these design variations required an increase in the Construction Footprint of 169.82 acres, for a total of 6,610.85 acres. On August 8, 2019, CDFW issued **Major Amendment No. 13** to the ITP incorporating these changes.

In a letter dated May 3, 2019 Permittee requested a 50.89-acre expansion of the approved ITP Construction Footprint to address 68 utility conflicts involving PG&E overhead powerlines, AT&T telecommunication lines, SoCal Edison optical fiber, Semitropic irrigation lines, and North Kern Water Storage District relocation of Canal 9-22 and Canal P1030. Work to resolve the utility conflicts included bypass, civil work, protect in place, removal, relocation, and other Covered Activities within Kern County. This request also included three roadway modifications in Kern County one of which was a new location which brought the Construction Footprint to 6,661.74 acres.

On September 3, 2019, CDFW issued **Major Amendment No. 14** to the ITP incorporating these changes.

In a letter dated May 9, 2019, Permittee requested amending the ITP to increase the Construction Footprint by 146.77 acres to accommodate design variations to the Tule elevated structure as well as utility relocations, roadway modifications, access roads, and other covered activities at 11 locations. The request also proposed eliminating two Temporary Construction Easements (TCEs) and two overcrossings, resulting in a 368.58-acre reduction to the Construction Footprint, for a net decrease of 221.81 acres, which brought the total Construction Footprint to 6,439.93 acres. On September 19, 2019, CDFW issued **Major Amendment No. 15** to the ITP incorporating these changes.

In a letter dated August 27, 2019, Permittee requested increasing the Project Construction Footprint by 7.94 acres at Gromer Avenue in Wasco to cover utility relocation, TCEs, and permanent access road construction. In a letter dated September 5, 2019, Permittee requested increasing the Project Construction Footprint by 15.08 acres to accommodate design variations including utilities and an access road within Semitropic Water Storage District (Semitropic WSD) that would need to be relocated at two locations. In a letter dated September 20, 2019, Permittee requested the correction of Table 1 to include the reduction of 8.93 urban acres already accounted for in Amendment 15 as well as removal of the remaining 12.13 acres of orchard in Table 1 which eliminates both TCE impacts from Amendment 15. Together these brought the new construction footprint to 6,462.95 acres. In an e-mail sent on October 10, 2019, CDFW informed Permittee that there would be two additional changes: 1) Table 9 updated to show the current number of nests taken of the maximum five covered by the ITP and 2) Measures 7.1, 8.16.2 and 8.17.2 were further updated to include Designated Small Mammal Trapper(s), 8.16.2 and 8.17.2 were updated to clarify reporting, and 8.17.2 added conditional concurrence of daily trapping forms for the early resumption and/or extension relocation period for non-business days. On October 11, 2019, CDFW issued **Major Amendment No. 16** to the ITP incorporating these changes.

In a letter dated May 2, 2019, Permittee requested increasing the Project Construction Footprint by 57.32 acres to accommodate a variation in the profile design of the HST alignment construction from elevated viaduct to embankment at the sections of the HSR mainline that are outside of streams and other waterways; changes to the bridge structures at Cole Slough, Dutch John Cut, and the Kings River channel; and a change from a bridge to two box culverts at Riverside Ditch. Design changes are also included for utility relocations, roadway modifications, TCEs, staging areas, site preparation, demolition, earthwork, and access roads, and other Covered Activities at seven locations as well as shifting the location of a switching station and addition of 20 new wildlife crossings. The request also proposed the reduction of two TCEs resulting in a

33.87-acre reduction to the Construction Footprint, for a net increase of 23.45 acres, bringing the new total Construction Footprint to 6,486.40 acres. On October 31, 2019, CDFW issued **Major Amendment No. 17** to the ITP incorporating these changes.

In a letter dated January 8, 2019, and Supplemental information dated January 29, 2019, Permittee requested the "ATC 2 Variation" which included a design change in the City of Wasco from viaduct to an at-grade design. Permittee had originally submitted the ATC 2 Variation together with "Wasco Utilities" and "North-South Utilities" (Amendment 12) however, per discussion and request from CDFW, separate amendment requests were submitted. The Permittee provided additional supplemental information dated April 30, 2019 and September 20, 2019 for the ATC 2 Variation (Wasco at-grade). Permittee requested increasing the Project Construction Footprint by 12.58 acres, for a total of 6,498.98 acres to accommodate design change construction of Wasco at-grade and the addition of TCEs needed for access, staging, equipment storage, and other Covered Activities related to road modifications and building demolition. The request also proposed the addition of 13 dedicated wildlife crossings south of Wasco at-grade, San Joaquin kit fox escape refugia, and a minimum of 300 acres of additional habitat conservation lands to mitigate the reduction in wildlife permeability resulting from the Wasco viaduct design change. On November 22, 2019, CDFW issued **Major Amendment No. 18** to the ITP incorporating these changes.

In issuing the ITP, Major Amendment No. 1, Major Amendment No. 2, Major Amendment No. 3, Minor Amendment No. 4, Major Amendment No. 5, Major Amendment No. 6, Major Amendment No. 7, Major Amendment No. 8, Major Amendment No. 9, Major Amendment No. 10, Major Amendment No. 11, Major Amendment No. 12, Major Amendment No. 13, Major Amendment No. 14, Major Amendment No. 15, Major Amendment No. 16, Major Amendment No. 17, and Major Amendment No. 18 (collectively the ITP, as amended), CDFW found, among other things, that Permittee's compliance with the Conditions of Approval would fully mitigate impacts to the Covered Species and would not jeopardize the continued existence of the Covered Species.

In a letter dated May 14, 2019, Permittee requested design changes and refinements to accommodate several IPBs from just south of East American Ave (approximately 6.40 miles south of the City of Fresno), to just north of Ave 76, (approximately 4.95 miles north of Allensworth). The IPB Variations will not expand the ITP Construction Footprint or alter the general alignment described in the ITP. In a letter dated October 11, 2019, Permittee requested increasing the Project Construction Footprint by 12.15 acres, for a total of 6,511.13 acres, to accommodate design variations including utility relocations, roadway modifications, temporary construction

easements, access roads, and other Covered Activities at McCombs Avenue and Merced Avenue.

This Amendment No. 19 (Amendment), a Major Amendment, makes the following changes to the ITP, as amended:

First, this Amendment increases the size of the entire Project Construction Footprint by 12.15 acres to a total of 6,511.13 acres of cumulative disturbance. The increase in the Construction Footprint acres is necessary to accommodate design variations including utility relocations, roadway modifications, temporary construction easements, access roads, and other Covered Activities at McCombs Avenue and Merced Avenue.

Second, this Amendment updates the section entitled "Roadway Modifications" and Table 8 for two existing locations in Kern County.

Third, this Amendment updates the Project Description for IPB, moves it from the prior location between the subsections titled "Poso Creek" and "Constructed or Modified Watercourses (Canals and Ditches)" to after Table 8, creates a new Table 8A summarizing the total lengths of each type of IPB for each Construction Package (CP) area and creates a new Table 8B showing each IPB segment location and type including 20 IPB segments added in Amendment No. 9 for Kern County and four segments added by Amendment No. 11 for Fresno County as well as the 10 segments added by this Amendment in Fresno and Tulare counties.

Fourth, this Amendment updates Table 9 and the text regarding increases in the Covered Species habitat impacts for San Joaquin antelope squirrel, Tipton kangaroo rat, and San Joaquin kit fox as a result of the change to the Project Construction Footprint.

Fifth, this Amendment updates Table 11 and the required permanent protection of additional compensatory HM lands and increases the accompanying estimates of management costs required to mitigate for Covered Species impacts resulting from the increased Project Construction Footprint in Covered Species habitat.

Sixth, this Amendment increases the Performance Security amount required for Permittee to proceed with Covered Activities.

Seventh, this Amendment modifies Exhibit 6, the "Baseline Map Book," by replacing Map Book Pages 3-9, 29-30, 32-33, 45, and 48 to reflect the increased Project Construction Footprint and to show the locations of the IPBs previously added by Amendments 9 and 11 as well as the new additions by this Amendment.

AMENDMENT

The ITP, as amended, is further amended as follows (amended language in ***bold italics***; deleted language in ~~strikethrough~~):

1. The section entitled "Project Description" on page 3 of the ITP, as amended, paragraph one shall be further amended to read as follows:

The Project is approximately 99 miles in length and includes construction and installation of all Project components (Exhibits 1 and 2). Construction and installation of all Project components will disturb up to ~~6,498.98~~ ***6,511.13*** acres (hereafter, Construction Footprint). Construction may occur at any point along the Construction Footprint, and construction may occur at multiple locations simultaneously.

2. The section entitled "Roadway Modifications" beginning on page 36 of the ITP is amended to read as follows:

- Roadway Modifications: Changes to existing roads along or crossing the HST ROW will be needed because the HST requires a fully dedicated grade-separated track alignment for public safety and to achieve the desired speeds. The Project will require 132 roadway modifications; 45 in Fresno County, 39 in Kings County, 32 in Tulare County, and 16 in Kern County. Roadway modifications will occupy ~~2,109.83~~ ***2,121.98*** total acres of the Construction Footprint (Table 8). At some locations, there will be an option to perform the modification as either an undercrossing or an overcrossing of the HST ROW. In these instances, the more conservative impact in terms of acreage (e.g., higher acreage) has been included and evaluated in this ITP. Handrails, fences, and walkways will be provided for the safety of pedestrians and bicyclists during roadway modification.

3. A portion of Table 8 (not including Fresno, Tulare, or Kings Counties) starting on page 37 of the ITP is amended to read as follows:

Table 8. Location and Size of Project Roadway Modifications

Street Modification	County	Activity	Latitude	Longitude	Acres
Garces Hwy	Kern	East-west Garces Hwy will cross over the HST along the same alignment as Garces Hwy. A local access road to the east of the HST will be improved for access to parcels.	35.7631491	-119.3954439	35.77
Pond Rd	Kern	East-west Pond Rd will cross over HST north of t Pond Rd to reduce the skew of bridge.	35.71823726	-119.360358	47.83
Peterson Rd	Kern	East-west Peterson Rd will cross over HST along the same alignment as Peterson Rd. A local access road to the east of the HST alignment will be added for access to parcels.	35.70315535	-119.3495544	24.25
Blankenship Ave	Kern	Closed road. Added work on a cul-de-sac.	35.66684441	-119.3343725	0.43
Taussig Ave	Kern	Closed road	35.6523207	-119.3319455	0.59
McCombs Ave	Kern	McCombs Ave will shift north and pass over HST, BNSF, and SR 43 and the overcrossing will connect with existing street east of SR 43. The existing intersection between SR 43 and McCombs Ave will be maintained. The BNSF RR crossing will be removed. Addition of a dedicated left-turn lane and associated utility relocations.	35.61731018	-119.3319996	38.87 40.21
Wasco Ave	Kern	closed between Jackson Ave and Prospect Ave. Maintained as access road between Prospect Ave and Kimberlina Rd., graveled when complete.	35.56341585	-119.3311265	5.91
Kimberlina Rd	Kern	Kimberlina Rd will pass under HST and BNSF RR east of the intersection with SR 43. Existing BNSF RR at-grade crossing will be removed. Vertical profile over Kimberlina Rd increased up to 21 ft, grade separation at Kimberlina Rd and BNSF Railroad modified, and relocation of 15,900 linear ft for BNSF RR between Jackson and Merced Ave eliminated.	35.55812401	-119.3289357	11.89

Street Modification	County	Activity	Latitude	Longitude	Acres
Merced Ave	Kern	Merced Ave will shift north and pass over HST, BNSF, and SR 43. The overcrossing will connect with existing street east of SR 43. The existing intersection between SR 43 and Merced Ave will be maintained. Additional road modifications. <i>Extension of a dedicated left-turn lane and associated utility relocations.</i>	35.53043822	-119.3063389	30.02 40.84
Madera Ave	Kern	Closed road.	35.52160677	-119.2950167	0.28
Poplar Ave	Kern	Poplar Ave will pass over HST, BNSF, and SR 43. A new connector will connect Poplar Ave and SR 43 west of HST. The existing BNSF RR will be removed.	35.52117843	-119.2956056	24.42
Mettler Ave	Kern	Closed road.	35.51577463	-119.284764	2.29
Fresno Ave	Kern	Fresno Ave will shift south and pass over HST, BNSF, and SR 43 and the overcrossing will connect with existing street east of SR 43. The existing intersection between SR 43 and Fresno Ave will be maintained.	35.51376281	-119.2873627	29.03
Burbank St	Kern	Burbank St will pass over HST on a new alignment.	35.47011401	-119.2347302	26.95
Santa Fe Way	Kern	Santa Fe Way will be realigned west of HST.	35.46941808	-119.2343772	81.47
7th Standard Rd	Kern	7th Standard overcrossing will be raised to provide HST vertical clearance.	35.44127715	-119.2007916	14.71

4. The section entitled "Intrusion Protection Barrier" previously added to the ITP, as amended, in the "Project Description" section between the subsections titled "Poso Creek" and "Constructed or Modified Watercourses (Canals and Ditches)" in Amendment Nos. 9 and 11 is moved to after Table 8 in the "Project Description" and updated with the following changes for clarity:

Intrusion Protection Barriers

An Intrusion Protection Barrier (IPB) will be constructed to mitigate the risk of any potential derailed trains ***when lateral separation between the closest high-speed rail track centerline (TCL) and conventional railroad right of way***

*is less than 102 feet from the adjacent BNSF rail line from entering the path of the HST. The IPB will be constructed between the HST rail line and the adjacent, privately-owned rail lines. The IPB will consist of an earthen berm, a concrete **an isolated** wall, or a concrete retaining wall, depending on topography and grade separation between rail lines (Table 8A). The locations of each of the types is shown in Table 8B at the end of this section.*

Table 8A. Impact Protection Barrier Types and Linear Miles

Intrusion Protection Barrier	CP 1C Linear Miles	CP 2-3 Linear Miles	CP 4 Linear Miles	Total Linear Miles
Stand-alone Earth Berm	0.00	3.24	0.42	3.66
Modified Earth Berm	0.00	0.00	4.64	4.64
Earth Berm (all)	0.00	3.24	5.06	8.30
Isolated Wall	0.00	11.52	0.53	12.05
Retaining Wall	2.36	1.42	0.86	4.64
Total	2.36	16.18	6.45	24.99

When HST crosses a river, stream, or open channel, intrusion protection measures will be stopped at the same limit of the front face of the HST bridge abutment wall. Skewed crossings may be required on a case-by-case basis. A minimum of 5 feet separation (unless otherwise approved by the railroad) between intrusion protection and the HST ROW or property line will be provided to allow maintenance of intrusion protection.

IPB will be constructed in these locations:

1. In Fresno County starting at State Route 41, along the railway alignment south to East Jensen Avenue along the Union Pacific Railroad (UPRR) railway. A single break in the wall will occur at East Church Avenue. After the railway alignment turns south, an IPB will be required along BNSF railway from approximately 900 feet north of East Malaga Avenue to approximately 1000 feet south of East American Avenue. A single break in the IPB will occur at East American Avenue.
2. In Kern County at multiple locations from approximately 1/3 mile north of the Whisler Road and State Route 43 intersection to approximately 0.7 mile

north of Kimberlina Road, and from just south of the Jack Avenue and State Route 43 intersection to just north of the Poplar Avenue and State Route 43 intersection.

Earthen Berm: *Earthen berms will be either Stand-alone or Modified. The top of both types of earthen berms would be at least 18 inches above the HST top of rail, which would define the height of the adjacent earthen berm. Earthen berms in floodplains will be designed for scour protection. Earthen berms will be designed per the California Department of Transportation (Caltrans) Embankment Standard Specifications within 80 to 85 percent relative compaction and will not contain materials larger than 8 inches in greatest dimension. A 10-foot-wide opening would be provided at intervals between 2,000 and 2,500 feet to allow maintenance access.*

- ***Stand-alone Earthen Berm:*** A 12-foot-high stand-alone earthen berm, measured from the adjacent finished grade at the railroad ROW, when the HST guideway is at-grade, may be used as intrusion protection. The earthen berm would be composed of a mound ***of compacted earth*** or sand in a mounted service. Earthen berms can extend to a maximum of 12 feet tall measured from the adjacent finished grade at the railroad ROW. A 15-foot-wide HST maintenance access between the toe of berm and the HST trackway may be reduced on one side of the HST guideway if ROW is insufficient.
- ***Modified Earthen Berm:*** When there is insufficient space to construct a stand-alone earthen berm, a modified earthen berm may be constructed directly adjacent to or in contact with the HST embankment. This condition is applicable only when the HST alignment is on a tangent to the berm. The side slope of the modified earthen berm on the railroad side will be 1.5 (H):1 (V) or flatter with slope stabilization as required and will have a minimum 2-foot top bench width. The side slope of the modified earthen berm on the HST side will be 1 (H):1 (V) or flatter. In areas of constrained ROW, where the 1 (H):1 (V) side slope of the modified earthen berm does not intersect the HST trackway embankment side slope, and would intrude into the cable trough area, the modified earthen berm will be retained by a cast-in-place reinforced concrete retaining wall. Side slopes of the HST embankment, in contact with the modified earthen berm, will be 2 (H):1 (V) or flatter and will be evaluated for slope stability. A 10-foot-wide opening would be provided at intervals between 2,000 and 2,500 feet to allow maintenance access.

The top of both types of earthen berms would be at least 18 inches above the HST top of rail, which would define the height of the adjacent earthen berm. Earthen berms in floodplains will be designed for scour protection. Earthen berms will be designed per the California Department of Transportation (Caltrans) Embankment Standard Specifications within 80 to 85 percent relative compaction and will not contain materials larger than 8 inches in greatest dimension.

Isolated Wall: ~~An isolated wall is a standalone cast-in-place reinforced concrete barrier wall, which~~ A minimum 10-foot-high reinforced concrete barrier wall will be used as an intrusion protection measure when (1) the HST guideway is below grade and/or (2) when the closest HST track centerline is less than 102 feet from the railroad ROW. The height of the reinforced concrete barrier wall will be measured from the finished grade at the railroad side of the ROW or 7.5 feet from the railroad top of rail (TOR), provided that the TOR is 2.5 feet or less from the ground below the ballast.

An isolated concrete wall is a standalone wall between BNSF railway and HST track that is ***will be*** at least 10 feet high, 3 feet wide, and 30 feet deep embedded in piles (below an approximately 6-foot-wide by 8-foot-deep trench for the wall footing/foundation, for a total of 38 feet below grade excavated to support the wall). ***A gap of 25 feet is acceptable to avoid conflicts between foundation piles and underground high-risk utilities. For low-risk utilities, 2.5 feet of minimum horizontal separation from foundation piles will be maintained. Utilities will be centered in the gap between foundation piles.***

The height of the isolated wall will be measured from the finished grade at the railroad side of the ROW or 7.5 feet from the railroad top of rail (TOR), provided that the TOR is 2.5 feet or less from the ground below the ballast. The minimum length of contiguous reinforced concrete barrier wall will not be less than 100 feet. A 5-foot separation will be placed between the BNSF AR fence and the isolated concrete barrier.

A ***Openings*** 3.5-foot-wide by 7-foot-high opening will be provided in the reinforced concrete barrier at ***isolated*** wall ***at*** intervals of no greater than 2,500 feet but no less than 2,000 feet to allow for maintenance access behind the wall. The difference between the adjacent grades will not be greater than 1 foot. Exceptions will be subject to review and approval by the Authority and the applicable local jurisdiction on a case-by-case basis.

A gap of 25 feet in the reinforced concrete barrier wall limits is acceptable to avoid conflicts between pile foundations and underground high-risk utilities. For low-risk utilities, 2.5 feet of minimum horizontal separation from reinforced concrete barrier wall pile foundations will be maintained. Utilities will be centered in the gap or pile foundations. The minimum length of contiguous reinforced concrete barrier wall will not be less than 100 feet.

When HST crosses a river, stream, or open channel, intrusion protection measures will be stopped at the same limit of the front face of the HST bridge abutment wall. Skewed crossings will be subject to review and approval on a case-by-case basis.

A minimum of 5 feet separation (unless otherwise approved by the railroad) between intrusion protection and the HST ROW or property line will be provided to allow maintenance of intrusion protection.

Retaining Wall: *In areas of constrained ROW, where the 1 (H):1 (V) side slope of the modified earthen berm does not intersect the HST trackway embankment side slope, and would intrude into the cable trough area, the earthen berm will be retained by a cast-in-place reinforced concrete retaining wall.*

When the HST guideway, on retained fill, is supported by retaining walls within lateral separation of 102 feet between the closest HST track centerline (TCL) to conventional railroad ROW, the retaining walls will be designed for train collision loads on IPB. Otherwise, a reinforced concrete barrier wall as intrusion protection, equivalent to HST at-grade requirements, is required to protect HST retaining walls.

Retaining concrete masonry walls supporting the HST guideway acting as IPBs will be designed per the collision loads specified by the California High Speed Rail Authority. IPB will be designed to resist train equivalent static collision forces of 900 kips parallel and 650 kips perpendicular to the adjacent track centerline, for loads applied individually to a strip 6 feet in width at a height 6 feet above adjacent grade.

Protection of Elevated Guideway Supports: Unprotected HST elevated guideway structures supporting HST tracks within a lateral separation of 102 feet between the closest HST TCL to conventional railroad ROW will be designed for train collision loads on unprotected Primary Type I structures such as piers, columns, abutments, and wing walls.

When intrusion protection is required for elevated guideway supports, there will be a minimum of 5 feet of separation between the pier protection wall or unprotected HST structure supports and the HST ROW or property line for inspection/maintenance of the pier or the pier protection walls, unless otherwise approved by the railroad.

Protection of Overhead Grade Separations: Protection of grade separation structures (i.e., piers, columns, abutments, wing walls, etc.), where the lateral separation from the closest conventional rail TCL, or future TCL, to the face of structure is less than 25 feet, will meet the requirements of UPRR/BNSF Guidelines for Grade Separations and the American Railway Engineering and Maintenance-of-Way Association (AREMA) requirements for Pier Protection.

No less than 5 feet of separation will be provided between the pier protection wall or the pier with heavy construction and the HST ROW or property line for inspection/maintenance of the pier or pier protection wall. If the pier does not require protection, the adjacent IPB will be extended to approximately 5 feet from the edge of the grade separation foundation.

~~Adjacent to BNSF tracks only, unprotected Primary Type I structures will be designed to resist train equivalent static collision forces (CL) of 2,262 kips acting in any horizontal direction. Retaining walls supporting the HST guideway acting as IPB will be designed per the collision loads specified by the High-Speed Rail Authority.~~

Access Restriction Fencing: *Access restriction (AR) fencing will be installed along the existing BNSF ROW in association with IPB within the IPB Variation. A 5-foot separation will be maintained between the BNSF AR fence and the IPB, either the toe of the berm or the wall.*

5. Table 8B is added showing the locations and types of each IPB including the 20 added to CP 4 in Amendment No. 9 and the four added to CP 1C in Amendment No. 11 as well as the 10 added to CP 2-3 in this Amendment.

Table 8B. Impact Protection Barrier Types and Locations

Location	County	Start Coordinates	End Coordinates	Length (feet)	Length (mile)	Typology
State Route 41 to E Church Ave	Fresno	36.724291, -119.785003	36.714267, -119.774042	4805.67	0.91	Retaining Wall

Location	County	Start Coordinates	End Coordinates	Length (feet)	Length (mile)	Typology
E Church Ave to E Jensen Ave	Fresno	36.714037, -119.773790	36.707479, -119.766552	3192.94	0.604	Retaining Wall
N of E Malaga Ave to E American Ave	Fresno	36.673080, -119.750370	36.663495, -119.750409	3485.06	0.66	Retaining Wall
E American Ave to End of CP1C	Fresno	36.663375, -119.750411	36.660694, -119.75.393	975.97	0.185	Retaining Wall
E American Ave to E Sumner Ave	Fresno	36.660444°, -119.750611°	36.627728°, -119.750709°	11943	2.26	Earth Berm
E Sumner Ave to E Floral Ave	Fresno	36.627728°, -119.750709°	36.578854°, -119.745516°	17899	3.39	Isolated Wall
E Floral Ave to E Nebraska Ave	Fresno	36.578854°, -119.745516°	36.564973°, -119.742110°	5151	0.98	Earth Berm
E Nebraska Ave to Conejo Ave	Fresno	36.564973°, -119.742110°	36.526655°, -119.727289°	14617	2.77	Isolated Wall
Conejo Ave	Fresno	36.526655°, -119.727289°	36.519381°, -119.724014°	2821	0.53	Retaining Wall
Peach Ave	Fresno	36.513831°, -119.720982°	36.512544°, -119.720187°	520	0.1	Retaining Wall
Tule River to Ave 136	Tulare	36.042041°, -119.516091°	36.036340°, -119.512016°	2405	0.46	Retaining Wall
Ave 136	Tulare	36.036223°, -119.511933°	36.032162°, -119.508956°	1736	0.33	Retaining Wall
Ave 136 to Ave 120	Tulare	36.032162°, -119.508956°	36.005994°, -119.489851°	11075	2.1	Isolated Wall
Ave 104 to Ave 76	Tulare	35.968789°, -119.462686°	35.928034°, -119.433073°	17232	3.26	Isolated Wall
Tausig Ave to N of Whister Rd	Kern	35.649267°, -119.331410°	35.648371°, -119.331427°	331.04	0.06	Earth Berm
Whister Rd	Kern	35.648291°, -119.331424°	35.641957°, -119.331482°	2307.21	0.44	Isolated Wall
S of Whister Rd	Kern	35.641880°, -119.331508°	35.638472°, -119.331552°	1256.1	0.24	Earth Berm
S of Whister Rd to N of McCombs Ave	Kern	35.638472°, -119.331552°	35.617309°, -119.331738°	7691.97	1.46	Earth Berm

Major Amendment No. 19
Incidental Take Permit 2081-2015-024-04
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
CALIFORNIA HIGH-SPEED TRAIN PROJECT
Fresno to Bakersfield Section Permitting Phase 1

Location	County	Start Coordinates	End Coordinates	Length (feet)	Length (mile)	Typology
N of McCombs Ave to McCombs Ave	Kern	35.617309°, -119.331738°	35.615924°, -119.331862°	502.03	0.09	Retaining Wall
McCombs Ave to N of Hwy 46	Kern	35.615924°, -119.331862°	35.603053°, -119.331884°	4687.39	0.89	Earth Berm
N of Hwy 46	Kern	35.603053°, -119.331884°	35.602504°, -119.331953°	202.02	0.04	Isolated Wall
N of Hwy 46 to Hwy 46	Kern	35.602504°, -119.331953°	35.601619°, -119.331929°	321.25	0.06	Earth Berm
S of Hwy 46 to 5th St	Kern	35.601278°, -119.331921°	35.596926°, -119.331934°	1586.56	0.3	Earth Berm
5th St to 7th St	Kern	35.596926°, -119.331934°	35.594415°, -119.331959°	913.39	0.17	Retaining Wall
7th St to S of 7th St	Kern	35.594415°, -119.331959°	35.593689°, -119.331969°	265.53	0.05	Isolated Wall
7th St to 8th St	Kern	35.593689°, -119.331969°	35.592634°, -119.331975°	384.51	0.07	Retaining Wall
8th St to Poso Ave	Kern	35.592634°, -119.331975°	35.587063°, -119.332028°	2029.13	0.38	Earth Berm
S of Poso Ave to N of 16th St	Kern	35.586854°, -119.332036°	35.584010°, -119.332070°	1035.07	0.2	Earth Berm
16th St to 19th St	Kern	35.584010°, -119.332070°	35.580479°, -119.332094°	1282.68	0.24	Earth Berm
19th st to N of Jackson Ave	Kern	35.580479°, -119.332094°	35.574355°, -119.332194°	2241.49	0.42	Retaining Wall
N of Jackson to N of Prospect Ave	Kern	35.568991°, -119.331801°	35.568028°, -119.331663°	357.05	0.07	Retaining Wall
N of Prospect Ave	Kern	35.568989°, -119.331804°	35.567658°, -119.331604°	138.02	0.03	Retaining Wall
S of Jack Ave to N of Merced Ave	Kern	35.534723°, -119.312302°	35.531112°, -119.307852°	1875.91	0.36	Earth Berm
N of Merced Ave to Madera Ave	Kern	35.531108°, -119.307688°	35.522147°, -119.296726°	4631.58	0.88	Earth Berm

6. The section entitled "Impacts of the Taking on Covered Species" on page 59, of the ITP, as amended, shall be further amended to read as follows:

This ITP covers all Project related activities that cumulatively disturb no more than ~~6,498.4098~~ **6,511.13** acres within the Construction Footprint (as depicted in the Baseline Map Book, Exhibit 6, Baseline Maps 1 through 53 and generated from the metadata provided by the Permittee) and no more than 17.32 acres at the Mitigation Site (collectively, the Project Area). Project activities are more fully described in the Project Description of this ITP and include subsurface geotechnical drilling and boring; habitat grubbing, vegetation removal, clearing, demolition, construction of a geotechnical test embankment and associated borrow site excavation and mass grading followed by the mobilization of equipment and materials; earthwork including construction of temporary and permanent excavation support structures; pile driving, excavation of open cut slope and fill, at grade profile excavation and leveling, and retained fill cut, rail bed foundation soil compaction, and elevated profiles and elevated profile structure components including construction and installation of straddle bents, foundations, pile caps, substructures, and superstructures; trench digging and other subsurface utility installation, relocation, and protection; pad preparation and construction of a batch plant, materials storage, fabrication, casting areas, access roads, and staging areas; rotary drilled reinforced concrete cast in place pile and drive pile installation; excavation of drainage swales and fabrication and installation of underground drainage culverts and pipes; 132 roadway modifications including realignment and resurfacing, construction of new access roads, overcrossing, and undercrossing; construction of waterway crossing structures over the Kings River Complex, Cross Creek, Tule River, Deer Creek, Poso Creek, and other watercourse crossings, partial dewatering and diversion of water; construction and assembly of tie and ballast and slab track railway systems, and shoofly track; erecting mast poles; construction of electrical systems facilities including the OCS, nine TPSS, up to nine switching stations, and up to 27 paralleling stations; construction of signal huts and bungalows including installation of cabling to the field hardware and track stations; traction electrification; excavation and construction of wildlife crossings, construction of the Kings/Tulare Regional Station; construction of a maintenance-of-infrastructure facility; installation of AD and AR fence; construction of temporary job site trailers and field offices including the development of building pads and preparation of parking areas; application of dust suppressants; operation and maintenance activities such as track, power, structure, signaling, train control, communications, intruder, and right-of way inspection and repair; equipment staging, mowing, inoculum collection, land grading, and excavation of wetlands at the Mitigation Site; and hand tool or auger planting of trees and shrubs, and other activities within the Construction Footprint and Mitigation Site described in the

Project Description section of this ITP. All these Project activities are collectively referred to as the Covered Activities.

7. Table 9 on page 61 of the ITP, as amended, shall be further amended to read as follows:

Table 9. Covered Species Habitat Impacts

Covered Species	Habitat Type	Impact Type	Impact Acres
California tiger salamander	Upland refugia (annual grassland, pasture, barren, fallow field, inactive agriculture, and ruderal)	Permanent	9.06
	Aquatic breeding (vernal pool, open water, seasonal wetland)	Permanent	9.64
		<u>Total</u>	<u>18.70</u>
	Upland refugia (annual grassland at Mitigation Site)	Temporary	16.56
	Aquatic breeding habitat (vernal pools at Mitigation Site)	Temporary	0.76
		<u>Total</u>	<u>17.32</u>
Tipton kangaroo rat	Annual grassland, Alkali desert scrub, barren, pasture, fallow field, inactive agriculture, and ruderal	Permanent	626.23 636.17
San Joaquin antelope squirrel	Annual grassland, Alkali desert scrub, barren, pasture, fallow field, inactive agriculture, and ruderal	Permanent	626.23 636.17
Swainson's hawk	Foraging (California annual grassland, pasture, barren, fallow field, inactive agriculture, ruderal, field crops, row crops, and irrigated hay crops)	Permanent	2,367.26
	Foraging (annual grassland at Mitigation Site)	Temporary	17.32
	Nesting (riparian and eucalyptus woodland and individual trees)	Permanent	3 of the maximum 5 nest trees

Covered Species	Habitat Type	Impact Type	Impact Acres
San Joaquin kit fox	Alkali desert scrub, annual grassland, barren, pasture, fallow field, inactive agriculture, ruderal, field crops, row crops, and irrigated hay crops	Permanent	3,808.22 3,818.96
	Foraging and denning (annual grassland at Mitigation Site)	Temporary	17.32

8. The first paragraph of the section titled "Tipton Kangaroo Rat," on page 62 of the ITP, as amended, shall be further amended to read as follows:

The extent of the impacts of the taking of Tipton kangaroo rat (TKR) is based on the amount of vegetation cover types that could function as TKR foraging, burrowing, and breeding habitat within the Construction Footprint, the assumption that all potentially suitable habitat in the Construction Footprint would be permanently destroyed, and an evaluation of Project indirect impacts. The Covered Activities are expected to result in the permanent loss of up to ~~626.23~~ **636.17** acres of potential habitat (Table 9).

9. The first paragraph of the section titled "San Joaquin Antelope Squirrel," on page 62 of the ITP, as amended, shall be further amended to read as follows:

The extent of the impacts of the taking of San Joaquin antelope squirrel (SJAS) is based on the amount of vegetation cover types that could function as SJAS foraging, burrowing, and breeding habitat within the Construction Footprint, the assumption that all potentially suitable habitat in the Construction Footprint would be permanently destroyed, and an evaluation of Project indirect impacts. The Covered Activities are expected to result in the permanent loss of up to ~~626.23~~ **636.17** acres of potential habitat (Table 9).

10. The first paragraph of the section titled "San Joaquin Kit Fox," on page 64 of the ITP, as amended, shall be further amended to read as follows:

The extent of the impacts of the taking of San Joaquin kit fox (SJKF) is based on the amount of vegetation cover types that could function as SJKF foraging, denning, and breeding habitat within the Construction Footprint, the assumption that all potentially suitable habitat in the Construction Footprint would be permanently destroyed, and an evaluation of Project indirect impacts. The

Covered Activities are expected to result in the permanent loss of up to 3,808.22 **3,818.96** acres of potential habitat (Table 9). Grading and excavation at the Mitigation Site would also result in up to 17.32 acres of temporary impacts to SJKF habitat.

11. Table 11 on page 105 of the ITP, as amended, shall be further amended to read as follows:

Table 11. Required Mitigation for Project-Related Impacts to Covered Species

Covered Species Name Common Name (Scientific Name)	Habitat Type	Project Impacts	Required Mitigation Acreage
California tiger salamander (<i>Ambystoma californiense</i>)	Upland	9.06	27.18
	Aquatic	9.64	0.96
Tipton kangaroo rat (<i>Dipodomys nitratoide nitratoide</i>)	Natural	626.23 626.17	1,878.69 1,908.51
San Joaquin antelope squirrel (<i>Ammospermophilus nelsoni</i>)	Natural	626.23 626.17	1,878.69 1,908.51
Swainson's hawk (<i>Buteo swainsoni</i>) (active trees within 0.5 mile of the project footprint)	Foraging habitat 0-1 miles	533.26	533.26
	Foraging habitat 1-5 miles	1,176.55	882.41
	Foraging habitat 5-10 miles	657.45	328.73
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	Natural and agriculture	3,808.22 3,818.96	2,280.55 2,301.17
Total Compensatory Mitigation			7,810.46 7,890.72

12. Condition of Approval 9.1 (Cost Estimates) on pages 106 and 107 of the ITP, as amended, shall be further amended to read as follows:

9.1. Cost Estimates. CDFW has estimated the cost of acquisition, protection, and perpetual management of the HM lands as follows:

9.1.1. Land acquisition costs for HM lands identified in Condition of Approval 9.2 below, estimated at an average of \$11,413.90/acre for up to ~~7,810.46~~**7,890.72** acres: ~~\$89,148,265.95~~**\$90,063,889.01**.

Land acquisition costs are estimated using local fair market current value for lands with habitat values meeting mitigation requirements;

- 9.1.2. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition of Approval 9.2.5 below, estimated at ~~\$4,152,385.42~~ **\$4,195,033.70**;
 - 9.1.3. Interim management period funding as described in Condition of Approval 9.2.6 below, estimated at ~~\$1,826,991.64~~ **\$1,834,830.87**;
 - 9.1.4. Long-term management funding as described in Condition of Approval 9.3 below, estimated at \$3,570.26/acre for up to ~~7,810.46~~ **7,890.72** acres: ~~\$27,885,515.73~~ **\$28,171,921.99**. Long-term management funding is estimated initially for the purpose of providing Security to ensure implementation of HM lands management.
 - 9.1.5. Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW as described in Condition of Approval 9.4, estimated at \$12,000.
13. Condition of Approval 10.1 (Performance Security) on page 112 of the ITP, is amended to read as follows:
- 10.1. Security Amount. The Security shall be in the amount of ~~\$123,032,997.97~~ **\$124,296,520.72**. This amount is based on the cost estimates identified in Condition of Approval 9.1 above.
14. Exhibit 6 ("Baseline Map Book") in the list of attachments on page 115 of the ITP, as amended, is amended to include the replacement of Map Book Pages 3-9, 29-30, 32-33, 45, and 48 with the corresponding page included in Attachment 1 of this Amendment, to reflect the increased Project Footprint and to show the locations of the IPBs previously added by Amendments 9 and 11 as well as the new additions by this Amendment.

The corresponding measures in the Mitigation Monitoring and Reporting Program (MMRP) (Attachment 1 of the ITP, as amended) shall be further amended to read the same as above. All terms and conditions of the ITP, as amended, and the MMRP that

are not expressly amended herein remain in effect and must be implemented and adhered to by the Permittee.

FINDINGS

Issuance of this Amendment will increase the amount of take for some of the Covered Species compared to the Project as originally approved; however, because the HM lands protection and management funding requirements will be commensurately increased, it is not expected that this Amendment will increase Project impacts on these species (i.e., "impacts of taking" as used in Fish and Game Code Section 2081, subd. (b)(2)).

Discussion: This Amendment makes seven specific changes to the ITP, as amended. First, this Amendment increases the size of the entire Project Construction Footprint by 12.15 acres to a total of 6,511.13 acres of cumulative disturbance. The increase in the Construction Footprint acres is necessary to accommodate design variations including utility relocations, roadway modifications, temporary construction easements, access roads, and other Covered Activities at McCombs Avenue and Merced Avenue.

Second, this Amendment updates the section entitled "Roadway Modifications" and Table 8 for two existing locations in Kern County.

Third, this Amendment updates the Project Description for IPB, moves it from the prior location between the subsections titled "Poso Creek" and "Constructed or Modified Watercourses (Canals and Ditches)" to after Table 8, creates a new Table 8A summarizing the total lengths of each type of IPB for each CP area and creates a new Table 8B showing each IPB segment location and type including 20 IPB segments added in Amendment No. 9 for Kern County and four segments added by Amendment No. 11 for Fresno County as well as the 10 segments added by this Amendment in Fresno and Tulare Counties.

Fourth, this Amendment updates Table 9 and the text regarding increases in the Covered Species habitat impacts for San Joaquin antelope squirrel, Tipton kangaroo rat, and San Joaquin kit fox as a result of the change to the Project Construction Footprint.

Fifth, this Amendment updates Table 11 and the required permanent protection of additional compensatory HM lands and increases the accompanying estimates of management costs required to mitigate for Covered Species impacts resulting from the increased Project Construction Footprint in covered species habitat.

Sixth, this Amendment increases the Performance Security amount required for Permittee to proceed with Covered Activities.

Seventh, this Amendment modifies Exhibit 6, the "Baseline Map Book," by replacing Map Book Pages 3-9, 29-30, 32-33, 45, and 48 to reflect the increased Project Construction Footprint and to show the locations of the IPBs previously added by Amendments 9 and 11 as well as the new additions by this Amendment.

CDFW has determined that although this Amendment may result in an increase in take of the Covered Species, and increased Covered Species Habitat impacts, the additional impacts of the taking will be minimized and fully mitigated through implementation of the Conditions of Approval. Because the impacts will be minimized and fully mitigated, there will be no increase in Project impacts to the Covered Species with this Amendment.

Issuance of this Amendment does not affect CDFW's previous determination that issuance of the ITP, as amended meets and is otherwise consistent with the permitting criteria set forth in Fish and Game Code section 2081, subdivisions (b) and (c).

Discussion: CDFW determined in June 2015 that the Project as approved, met the standards for issuance of an ITP under CESA. CDFW determined in March 2017, in September 2018, in October 2018, twice in November 2018, in January 2019, three times in February 2019, in March 2019, in April 2019, in May 2019, in August 2019, twice in September 2019, twice in October 2019, and in November 2019 that Amendments No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, No. 7, No. 8, No. 9, No. 10, No. 11, No. 12, No. 13, No. 14, No. 15, No. 16, No. 17, and No. 18, respectively, to the ITP met the standards for issuance of an ITP under CESA. This determination included findings that, among other things, the impacts of the taking would be minimized and fully mitigated and that the Project would not jeopardize the continued existence of the Covered Species. Those findings are unchanged with respect to this Amendment because the Project and ITP, as amended: (1) will increase the habitat compensation in proportion to the increase in impacts so that the fully mitigate standard is still met; (2) does not alter the Permittee's continued adherence to and implementation of the avoidance and minimization measures set forth in the Conditions of Approval in the ITP, as amended, and MMRP which will minimize and fully mitigate impacts of the taking on the Covered Species.

None of the factors that would trigger the need for subsequent or supplemental environmental analysis of the Project under Public Resources Code section 21166 or California Code of Regulations, title 14, sections 15162 and 15163, exist as a result of this Amendment.

Discussion: CDFW issued the original ITP in June 2015, Major Amendment No. 1 to the ITP in March 2017, Major Amendment No. 2 in September 2018, Major Amendment No. 3 in October 2018, Minor Amendment No. 4 and Major Amendment No. 5 in November 2018, Major Amendment No. 6 in January 2019, Major Amendments 7, 8, and 9 in February 2019, Major Amendment No. 10 in March 2019, Major Amendment No. 11 in April 2019, Major Amendment No. 12 in May 2019, Major Amendment No. 13 in August 2019, Major Amendments No. 14 and 15 in September 2019, Major Amendment No. 16 and 17 in October 2019, and Major Amendment No. 18 in November 2019 as a responsible agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) after, among other things, considering the California High-Speed Train: Fresno to Bakersfield Section Final Project Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (SCH No. 2009091126) certified by the lead agency, California High-Speed Rail Authority, on May 7, 2014. As explained in the findings below, CDFW finds for purposes of CESA that this Amendment represents a major change to the ITP, as amended. However, for the reasons explained above, CDFW concludes that approval of this Amendment will not result in and does not have the potential to create any new significant or substantially more severe environmental effects than previously analyzed and disclosed by California High Speed Rail Authority during its lead agency review of the Project, particularly with respect to the impacts authorized by CDFW pursuant to the ITP, as amended. As a result, CDFW finds that no subsequent or supplemental environmental review is required by CEQA as part of CDFW's approval of this Amendment.

CDFW finds that this Amendment is a Major Amendment, as defined in California Code of Regulations, title 14, section 783.6, subdivision (c)(5).

Discussion: This Amendment increases the size of the entire Project Construction Footprint by 12.15 acres to a total of 6,511.13 acres of cumulative disturbance. The increase in the Construction Footprint acres is necessary to accommodate design variations including utility relocations, roadway modifications, temporary construction easements, access roads, and other Covered Activities at McCombs Avenue and Merced Avenue; updates the section entitled "Roadway Modifications" and Table 8 for two existing locations in Kern County; updates the Project Description for IPB, moves it from the prior location between the subsections titled "Poso Creek" and "Constructed or Modified Watercourses (Canals and Ditches)" to after Table 8, creates a new Table 8A summarizing the total lengths of each type of IPB for each CP area and creates a new Table 8B showing each IPB segment location and type including 20 IPB segments added in Amendment No. 9 for Kern County and four segments added by Amendment No. 11 for Fresno County as well as the 10 segments added by this Amendment in Fresno and Tulare Counties; updates Table 9 and the text regarding increases in the

Covered Species habitat impacts for San Joaquin antelope squirrel, Tipton kangaroo rat, and San Joaquin kit fox as a result of the change to the Project Construction Footprint; updates Table 11 and the required permanent protection of additional compensatory HM lands and increases the accompanying estimates of management costs required to mitigate for Covered Species impacts resulting from the increased Project Construction Footprint in covered species habitat; increases the Performance Security amount required for Permittee to proceed with Covered Activities; and modifies Exhibit 6, the "Baseline Map Book," by replacing Map Book Pages 3-9, 29-30, 32-33, 45, and 48 to reflect the increased Project Construction Footprint and to show the locations of the IPBs previously added by Amendments 9 and 11 as well as the new additions by this Amendment.

As described above, these changes to the ITP, as amended, will increase the Project Construction Footprint, add locations of Covered Activities, and modify the Permittee's mitigation obligations. Therefore, this Amendment will substantially increase the scope or nature of the permitted Project or activity, or significantly modify the minimization, mitigation, or monitoring measures in the ITP, as amended. CDFW has determined that the changes to the ITP, as amended, constitutes a Major Amendment as defined in California Code of Regulations, title 14, section 783.6; subdivision (c)(5).

The authorization provided by this Amendment is not valid until Permittee signs and dates the acknowledgement below, and returns one of the duplicate originals of this Amendment by registered first class mail to CDFW at:

California Department of Fish and Wildlife
Habitat Conservation Planning Branch
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, California 94244-2090

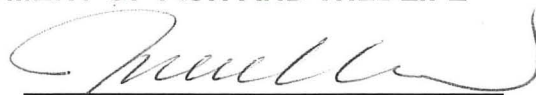
Attachment:

ATTACHMENT 1 EXHIBIT 6 Baseline Map Book Pages 3-9, 29-30, 32-33, 45,
and 48

APPROVED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on

12/12/19

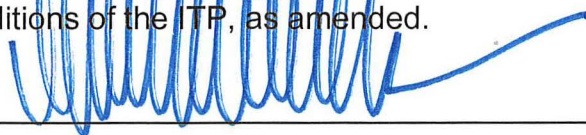


Julie A. Vance, Regional Manager
Central Region

ACKNOWLEDGMENT

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of the Permittee, (2) acknowledges receipt of the original ITP and this Amendment, and (3) agrees on behalf of the Permittee to comply with all terms and conditions of the ITP, as amended.

By:



Date:

December 17, 2019

Printed Name:

Mark A. McLoughlin

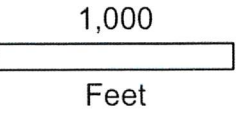
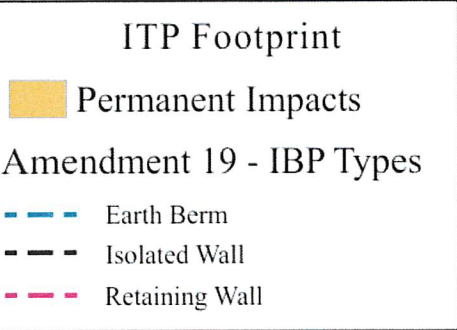
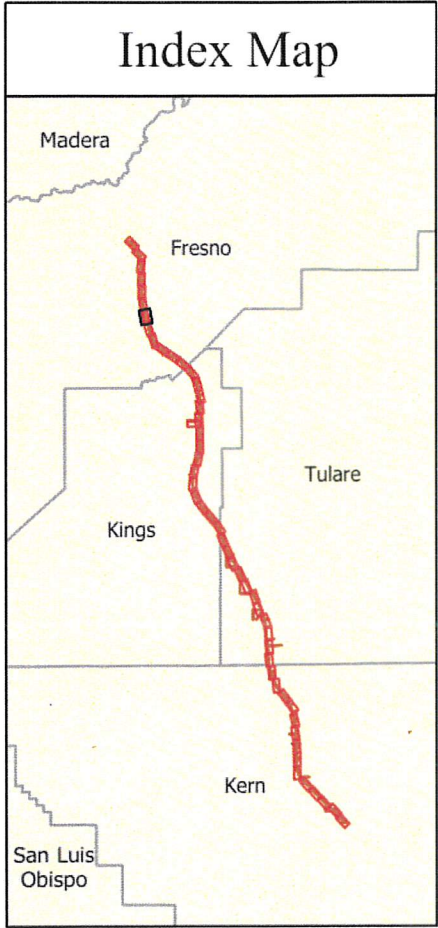
Title:

Director of Environmental Services

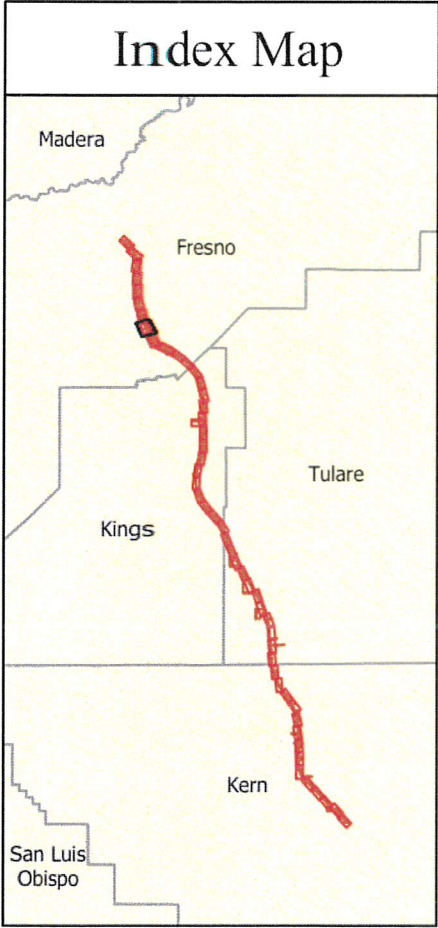
ATTACHMENT 1

Exhibit 6. Baseline Map Book pages 3-9, 29-30, 32-33, 45, and 48

High-Speed Train
Fresno to Bakersfield
Construction Footprint
CP 2-3



High-Speed Train
Fresno to Bakersfield
Construction Footprint
CP 2-3

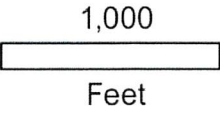


ITP Footprint

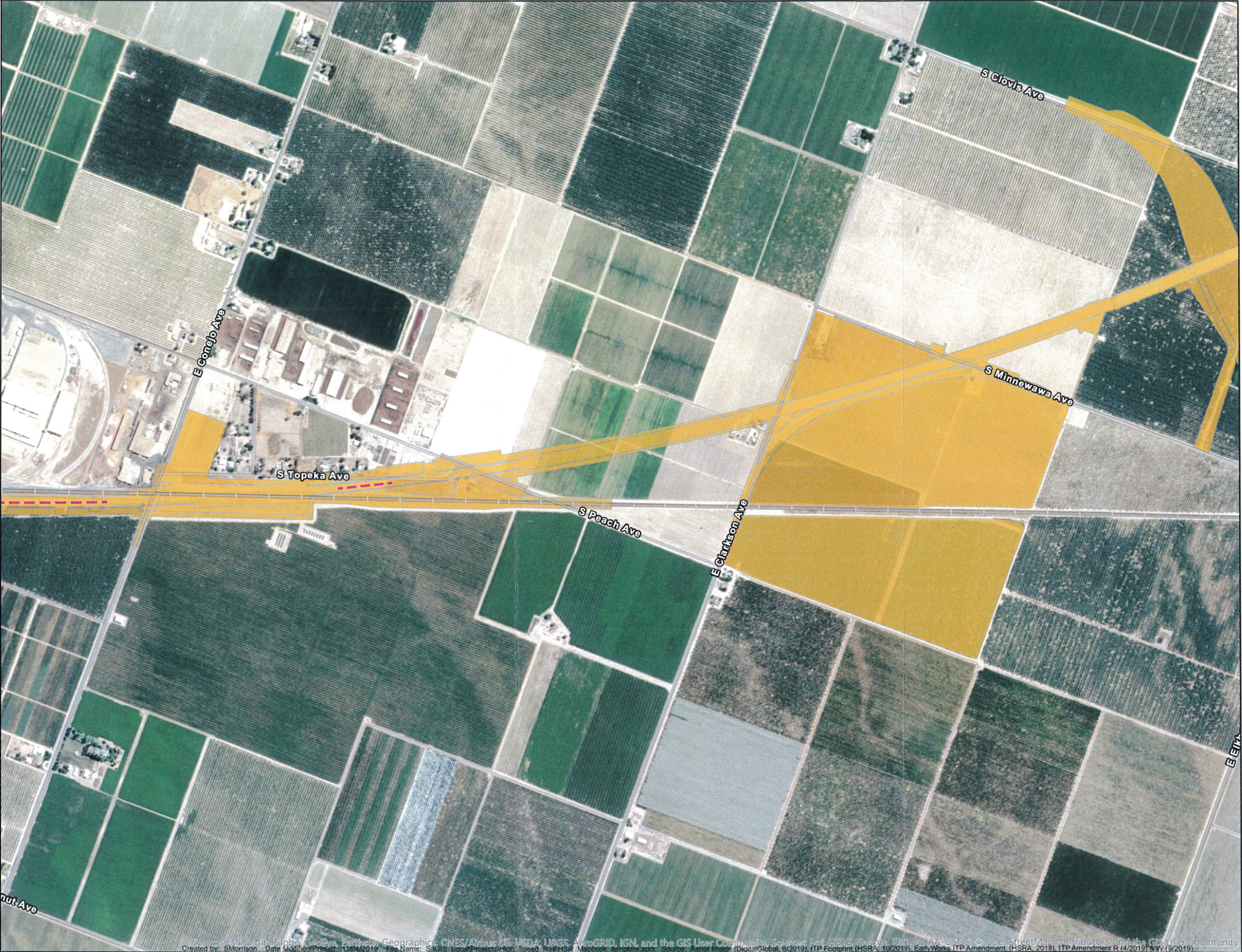
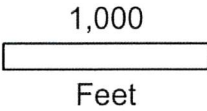
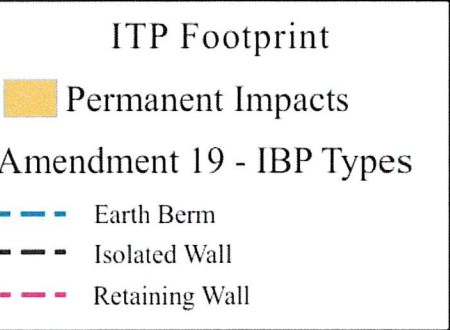
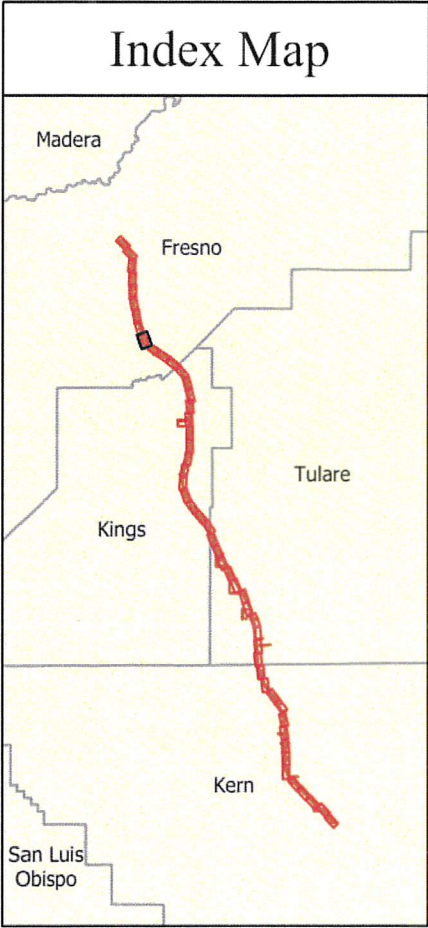
Permanent Impacts

Amendment 19 - IBP Types

- Earth Berm
- Isolated Wall
- Retaining Wall



High-Speed Train
Fresno to Bakersfield
Construction Footprint
CP 2-3



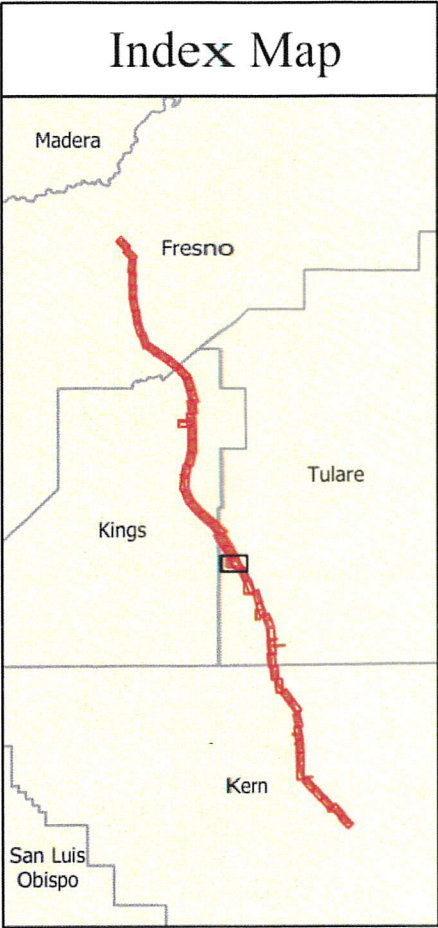
Permanent Impacts

Amendment 19 - IBP Types

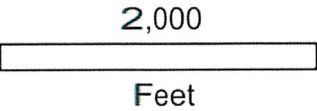
- Earth Berm
- Isolated Wall
- Retaining Wall



High-Speed Train
Fresno to Bakersfield
Construction Footprint
CP 2-3

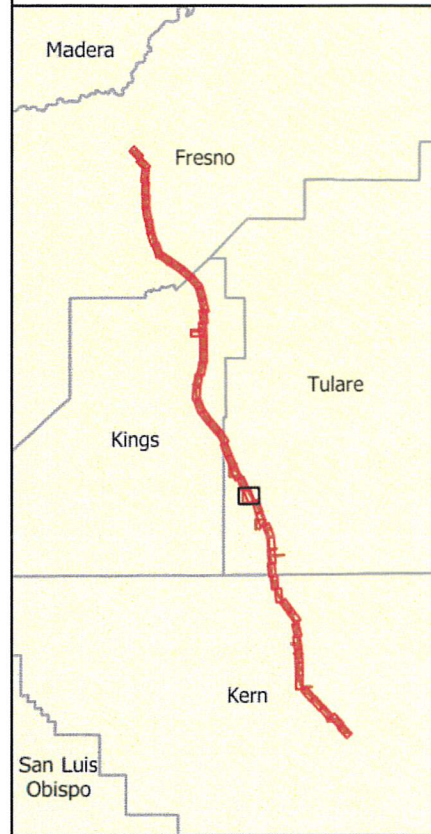


- ITP Footprint
- Permanent Impacts
- Amendment 19 - IBP Types
- Earth Berm
 - Isolated Wall
 - Retaining Wall



High-Speed Train Fresno to Bakersfield Construction Footprint CP 2-3

Index Map



ITP Footprint

- Permanent Impacts
- Amendment 19 - IBP Types
- Earth Berm
- Isolated Wall
- Retaining Wall

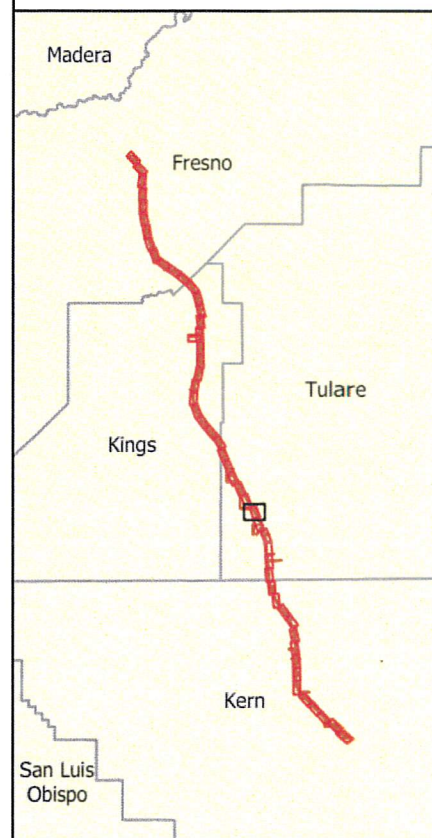
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Feet



High-Speed Train Fresno to Bakersfield Construction Footprint CP 2-3

Index Map



ITP Footprint

- Permanent Impacts
- Amendment 19 - IBP Types**
- Earth Berm
- Isolated Wall
- Retaining Wall

2,000

Feet

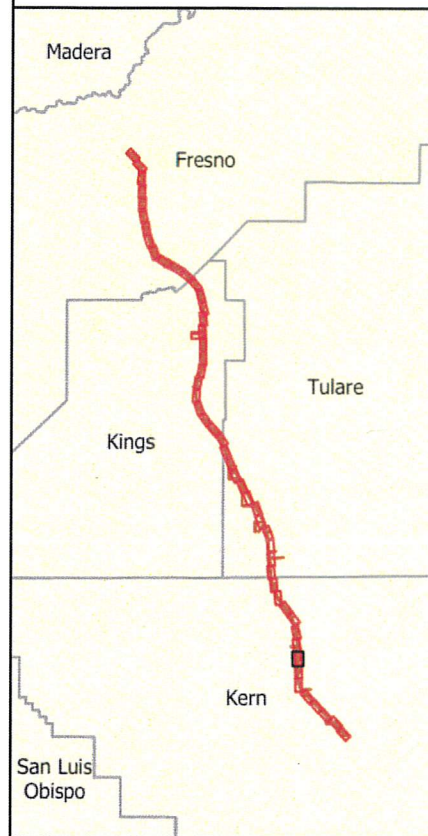


N



High-Speed Train Fresno to Bakersfield Construction Footprint CP 4

Index Map

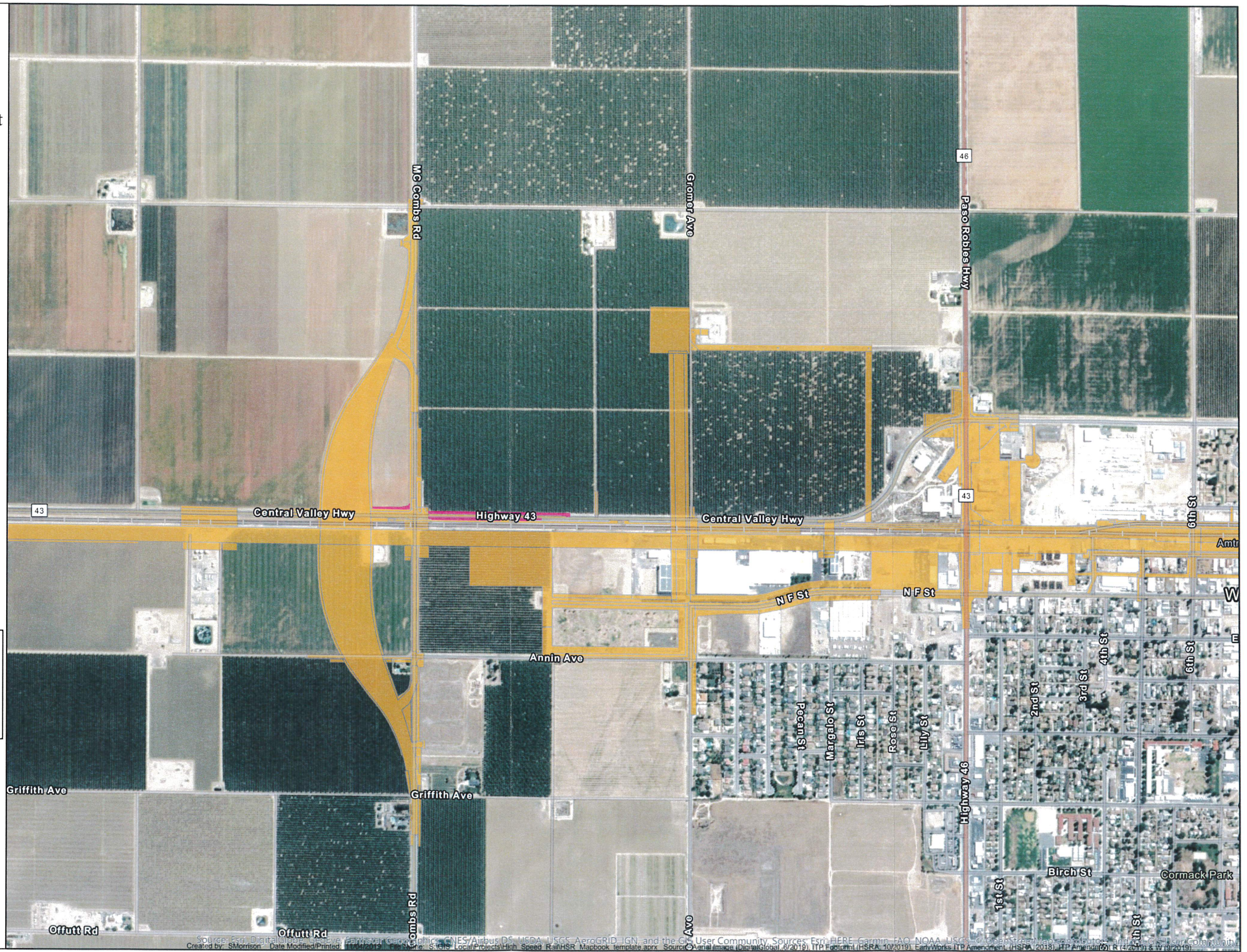


ITP Footprint

- Permanent Impacts
- Amendment 19

1,000

Feet



High-Speed Train
Fresno to Bakersfield
Construction Footprint
CP 4

