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BO049-31

As previously described, the construction of the Corcoran Elevated Alternative would require the relocated of Santa Fe Avenue to the east. The relocation will require additional right-of-way, currently used as internal parking at the ranch office.

The elevated structure proposed at this location may help reduce impacts to parking and circulation at this property. However, the shifting of Santa Fe Avenue may still affect the site's internal operations.

If the project results in the acquisition or direct interference with the existing operations at this property, additional refinement during project design may allow avoidance or further minimization of adverse effects. Unavoidable impacts may be subject to treatment or compensation. These would be determined during final design and right-of-way phases of the project.

BO049-32

Refer to Standard Response FB-Response-N&V-03.

As previously described, industrial land uses are not considered to be noise-sensitive areas as activities are generally compatible with higher noise levels (FTA 2006).

BO049-33

If the project results in the acquisition or direct interference with the existing operations at this property, additional refinement during project design may allow avoidance or further minimization of adverse effects. Access to properties will be maintained or the affected property (or portion thereof) may be compensated as determined during final design and right-of-way phases of the project.

BO049-34

Refer to Standard Response FB-Response-PU&E-03.

There are many utilities within or crossing the study area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. Underground wet utilities, such as sewers,

BO049-34

are conveyed inside a pipeline material with a service life typically of 50 years or more. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing underground sewer pipelines cross the HST alignment, the utilities would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Please refer to Section 3.6.5.

Based on the current level of design, the sewer service line serving Boswell facilities and any affected pumping station would, upon agreement between the Authority and the public service provider, be replaced and rerouted at the expense of the Authority. The Authority's construction contractor will coordinate schedules for its relocation to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-35

The North entrance to the J.G. Boswell west processing site appears to be off Sherman Avenue. The HST Alignment will cross over Sherman Avenue, Whitley Avenue, and Brokaw Avenue on an aerial structure. Refer to Appendix A, Road Crossings, of the Final EIR/EIS for more details. During right-of-way review, the option of relocating the entrance to a different location on Sherman Avenue will be considered in consultation with the property owner. Access to properties will be maintained or the affected property (or portion thereof) may be compensated as determined during final design and right-of-way phases of the project.

BO049-36

Refer to Standard Response FB-Response-GENERAL-01, FB-Response-GENERAL-21, FB-Response-SO-01, FB-Response-SO-03.

Please see the EIR/EIS, Volume I, Section 3.12, Impact SO #10 for information about the impacts on commercial and industrial businesses in communities, and also Impact SO #11 and SO #15 for effects on agricultural businesses. For information on the property acquisition and compensation process, see Volume II, Appendix 3.12-A.

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At this stage of project design, identifying the individual circumstances surrounding the acquisition of land on each parcel is not possible. Instead of specific individual impacts, the EIR/EIS provides an overall analysis of commercial, industrial, and residential displacements and the economic effects of such displacements to the communities affected by the project. This provides the general public and decision makers with an understanding of the nature and magnitude of the impacts. The final full and partial parcel acquisition decisions will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures.

At the location of the J.G. Boswell facility the Corcoran Elevated alternative would travel through the site along the existing BNSF railway corridor and require shifting Santa Fe Avenue eastward. Some property may be required to accommodate this shift; however, it would not result in the displacement of any silos or structures immediately adjacent to the road. Some modifications to the BNSF railway spurs may be required, but access to and from the J.G. Boswell facility will be maintained. Any direct loss of land or diminution in value to a property owner's parcel will be estimated by an appraiser through the property acquisition process and the owner will be fairly compensated.

BO049-37

Refer to Standard Response FB-Response-GENERAL-04, FB-Response-HWR-02, FB-Response-SO-01.

The permanent right-of-way for the Corcoran Elevated or BNSF Alternative would include a portion of the J.G. Boswell property adjacent to the existing freight track and/or Santa Fe Avenue. Any of J.G. Boswell's surface drainage infrastructure located within the project right-of-way would need to be relocated. The Authority will fairly compensate land owners during the right-of-way acquisition process for relocation of existing drainage infrastructure. If relocated drainage systems would need to be re-permitted, compensation would also include regulatory costs. A setting pond may be affected on the southern portion of the site by the BNSF Alternative. If this pond is affected than the grading may need to be redesigned in this portion of the site.

BO049-37

Please also note that further refinement has been made to the alignment alternatives since issuance of the DEIR/DEIS, as described in the Revised Draft EIR/Supplemental Draft EIS. The BNSF and Corcoran Elevated alternatives would be on an aerial structure in southeast Corcoran in the vicinity of the Sherman Avenue crossing. Drainage systems within portions of elevated track would collect and drain stormwater to the ground through downspouts at the columns located every 100 to 120 feet along the alignment. Drainage from the downspouts would typically infiltrate within the HST rights-of-way or be conveyed parallel to the overhead track to a nearby stormwater collection system. Runoff from the project would not be discharged directly to private property. Santa Fe Avenue would be realigned under the Corcoran Elevated Alternative and the existing freight rail tracks for the Boswell Spur would be realigned under the BNSF Alternative. Drainage management for Santa Fe Avenue or the freight rail rights-of-way would meet or exceed current practices. Detailed grading and drainage plans will be prepared by the design-build contractor based on the design standards described in Standard Response FB-Response-HWR-02. In addition, engineers participating in the right-of-way acquisition process will ensure that site-specific drainage impacts to neighboring properties are not created.

BO049-38

Refer to Standard Response FB-Response-GENERAL-01, FB-Response-GENERAL-21, FB-Response-SO-01, FB-Response-SO-03.

For information about the impacts on commercial and industrial businesses in communities, see the EIR/EIS, Volume I, Section 3.12, Impact SO #10, and also Impact SO #11 and SO #15 for effects on agricultural businesses. For information on the property acquisition and compensation process, see Volume II, Appendix 3.12-A.

Identifying the individual circumstances surrounding the acquisition of land on each parcel is not possible at this stage of project design. Instead of specific individual impacts, the EIR/EIS provides an overall analysis of commercial, industrial, and residential displacements and the economic effects of such displacements to the communities affected by the project. This provides the general public and decision makers with an understanding of the nature and magnitude of the impacts. The final full and partial parcel acquisition decisions will ultimately be determined on a case-by-case

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basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures.

At the location of the J.G. Boswell facility the Corcoran Elevated alternative would travel through the site along the existing BNSF railway corridor and require shifting Santa Fe Avenue eastward. Some property may be required to accommodate this shift; however, it would not result in the displacement of any silos or structures immediately adjacent to the road or limit the operating capacity of the cotton gin. Any direct loss of land or diminution in value to a property owner's parcel will be estimated by an appraiser through the property acquisition process and the owner will be fairly compensated.

BO049-39

Refer to Standard Response FB-Response-PU&E-03.

There are many utilities within or crossing the study area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where communication cables cross the HST alignment, the Authority and the utility owner may determine that it is best to place the line underground. In this case, the communication cables would be placed in a conduit so that future maintenance of the line could be accomplished outside the HST right-of-way. Where existing fiber optic lines cross the HST alignment, the utilities would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Refer to Section 3.6.5.

Based on the current level of design, the fiber optic communication cable potentially affected by the Corcoran Elevated Alternative will, upon agreement between the Authority and the public service provider, be replaced and rerouted in a conduit at the expense of the Authority. The Authority's construction contractor will coordinate schedules for utility relocation with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-40

Refer to Standard Response FB-Response-N&V-03.

Noise impacts were not assessed at the Boswell facility because according to FRA methodology, industrial land uses are not considered noise-sensitive areas. In general, activities within these buildings are compatible with higher noise levels (FTA 2006).

BO049-41

The Draft EIR/EIS incorrectly stated that HST facilities on the Corcoran Bypass would result in a significant safety impact on the Salyer Farms Airport. Based on the comment received from J.G. Boswell on the draft document, a more thorough airspace safety analysis was conducted for the Corcoran Bypass. That analysis is provided in Appendix 3.11-B of the Revised DEIR/Supplemental DEIS. The analysis provides evidence that HST facilities would not affect the safety of people working or residing in the vicinity of the Salyer Farms Airport if the HST were to operate using the Corcoran Bypass alignment. The Revised DEIR/Supplemental DEIS was modified to provide the results of this analysis.

BO049-42

Refer to Standard Response FB-Response-AG-01, FB-Response-AG-03, FB-Response-AG-04, FB-Response-GENERAL-01, FB-Response-GENERAL-07, FB-Response-SO-03.

Canals may be bridged or placed in pipelines beneath the HST right-of-way. The proposed project would not result in prolonged disruption of services because of the need for relocation of or improvements to irrigation systems. Therefore, changes to existing water flow and canal capacity are not anticipated. Refer to Section 3.6, Impact PU&E#11.

The Authority has committed to help businesses overcome the regulatory disruptions caused by the project. As a part of the HST project, the Authority will assign a representative to act as a point of contact to assist each business owner during the process of obtaining new or amended permits or other regulatory compliance necessary to the continued operation. The Authority will consider and may provide compensation

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when acquisition of a site would either require relocation of the facility or amendment of its existing regulatory permits.

The Authority will fairly compensate landowners for loss or disruptions to their operations during the right-of-way acquisition process. This will be done on a case-by-case basis, with the actual amount of compensation dependent upon the characteristics of the operation involved and the necessary permits.

BO049-43

Specific impacts on the City of Corcoran are discussed in Impact TR #15 - Impacts on the City of Corcoran Local Roadway Network due to Road Closures, and mitigation measures are discussed in Section 3.2.7 of the Final EIR/EIS.

BO049-44

Appendix 2-A, Road Crossings, of the Revised DEIR/Supplemental DEIS provides the updated analysis of potential impacts to Santa Fe Avenue and clearly states that the to avoid the proposed HST aerial structure. The intersection of Pickerill and Santa Fe would be reconstructed. The HST Alignment will cross over Sherman Avenue, Whitley Avenue, and Brokaw Avenue on an aerial structure. As the comment states, Section 3.2 did not discuss the closure of Santa Fe Avenue (because the avenue was not proposed to be closed). The hypothetical impacts stated in the comment are not possible and would not result from the HST.

BO049-45

Refer to Standard Response FB-Response-TR-02, FB-Response-AQ-04.

The traffic analysis evaluated intersections in the city of Corcoran. The Final EIR/EIS has been modified to include a carbon monoxide hot-spot analysis for intersections identified in Corcoran to have an LOS F as a result of the project.

BO049-46

Refer to Standard Response FB-Response-TR-02, FB-Response-AQ-04.

BO049-46

The traffic analysis evaluated intersections in the city of Corcoran. The Final EIR/EIS has been modified to include a carbon monoxide hot-spot analysis for intersections identified in Corcoran to have an LOS F as a result of the project.

BO049-47

Refer to Standard Response FB-Response-AQ-04.

The Final EIR/EIS includes a carbon monoxide hot-spot analysis for intersections identified by the traffic analysis to have an LOS F. This analysis indicated that there was no significant impact with respect to the carbon monoxide emissions.

BO049-48

Refer to Standard Response FB-Response-AQ-01, FB-Response-GENERAL-13.

The Final EIR/EIS section 3.3.6.3 has been revised to include additional analysis of impacts associated with localized air emissions associated with construction of the HST as well as activities around the stations, HMF, and MOWF. Fugitive dust emissions as a result of HST operations were estimated as detailed in Appendix D of the Fresno to Bakersfield Air Quality Technical Report. Since there is no data that exactly matches the scenario of fugitive dust generation for the HST operation in California, several different approaches were taken to make reasonable scientific estimates based on similar and related surrogate data as well as engineering and scientific principles. Based on literature and studies from similar trains as well as theoretical models for dust generation and settling of particles out of the air, the amount of fugitive dust at specific distances from the HST was estimated. Since two independent methods produced similar order of magnitudes of the results, the estimates seemed reasonable given the information available at this time. Furthermore in recognition of the lack of specific data regarding dust generation from the HST part of the project design features discussed in section 3.14.6, during the HST testing phase, the Authority will fund a program to undertake original research on the wind effects of the HST operations. The Authority will engage qualified researchers to monitor the wind effects at representative points along the test track. The research period will include the testing phase and extend 2 years after commencement of revenue service. The research will include at a minimum the generated wind speed, duration, and area of influence from HST trainsets at typical

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operational speeds, effects of HST-generated wind on the effectiveness of honey bee pollination, dust production as a result of typical HST operations, including entrainment and dispersal patterns of dust in the HST slipstream. The HST operation is required by SJVUAPCD Rule 8011 to reduce ambient concentrations of fine particulate matter (PM10) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions. If the results of the research activities indicate that fugitive dust from HST operations is substantial, the Authority will have to demonstrate its compliance with Rule 8011.

For a description of the HST operation using EMU trains refer to section 2.2.6 of the Final EIR/EIS. Analysis of any non-electric trains is covered in FB-Reponse-GENERAL-13.

BO049-49

The Revised DEIR/Supplemental DEIS chose to specifically show three representative monitoring stations in the San Joaquin Valley Air Basin. These were selected to be near the stations as these will have the highest amount of operational emissions due to localized changes in traffic near the stations. The air monitoring station in Corcoran has been included in the analysis in the Final EIR/EIS. This supplements the information provided regarding baseline air conditions. The values reported for the Corcoran monitoring station are similar in scope to the values reported by the representative monitoring stations. The air pollutants that show exceedances of the Ambient Air Quality Standards occur in the representative stations as well as the Corcoran Station. All of the stations in the ambient air monitoring network are utilized in determining the attainment designations for the San Joaquin Valley Air Basin. The analyses already took into consideration if the area had exceedances of the air quality standards and the information from the Corcoran air monitoring station does not change the pollutants for which exceedances were assumed for the background conditions. The analysis properly considered if the emissions would cause an exceedance (if exceedances weren't already occurring) or contribute to further exceedances (if exceedances were already occurring).

BO049-50

Refer to Standard Response FB-Response-AQ-01.

The Revised DEIR/Supplemental DEIS chose to specifically show three representative monitoring stations in the San Joaquin Valley Air Basin. These were selected to be near the stations as these will have the highest amount of operational emissions due to localized changes in traffic near the stations. The air monitoring station in Corcoran has been included in the analysis in the Final EIR/EIS. This supplements the information provided regarding baseline air conditions. The values reported for the Corcoran monitoring station are similar in scope to the values reported by the representative monitoring stations. The air pollutants that show exceedances of the Ambient Air Quality Standards occur in the representative stations as well as the Corcoran Station. All of the stations in the ambient air monitoring network are utilized in determining the attainment designations for the San Joaquin Valley Air Basin. The analyses already took into consideration if the area had exceedances of the air quality standards and the information from the Corcoran air monitoring station does not change the pollutants for which exceedances were assumed for the background conditions. The analysis properly considered if the emissions would cause an exceedance (if exceedances weren't already occurring) or contribute to further exceedances (if exceedances were already occurring).

The Final EIR/EIS section 3.3.6.3 has been revised to include additional analysis of impacts associated with localized air emissions associated with construction of the HST as well as activities around the stations, HMF, and MOWF. Fugitive dust emissions as a result of HST operations were estimated as detailed in Appendix D of the Fresno to Bakersfield Air Quality Technical Report. Since there is no data that exactly matches the scenario of fugitive dust generation for the HST operation in California, several different approaches were taken to make reasonable scientific estimates based on similar and related surrogate data as well as engineering and scientific principles. Based on literature and studies from similar trains as well as theoretical models for dust generation and settling of particles out of the air, the amount of fugitive dust at specific distances from the HST was estimated. Since two independent methods produced similar order of magnitudes of the results, the estimates seemed reasonable given the information available at this time. Furthermore in recognition of the lack of specific data regarding dust generation from the HST part of the project design features discussed in section

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3.14.6, during the HST testing phase, the Authority will fund a program to undertake original research on the wind effects of the HST operations. The Authority will engage qualified researchers to monitor the wind effects at representative points along the test track. The research period will include the testing phase and extend 2 years after commencement of revenue service. The research will include at a minimum the generated wind speed, duration, and area of influence from HST trainsets at typical operational speeds, Effects of HST-generated wind on the effectiveness of honey bee pollination, dust production as a result of typical HST operations, including entrainment and dispersal patterns of dust in the HST slipstream. The HST operation is required by SJVUAPCD Rule 8011 to reduce ambient concentrations of fine particulate matter (PM10) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions. If the results of the research activities indicate that fugitive dust from HST operations is substantial, the Authority will have to demonstrate its compliance with Rule 8011.

BO049-51

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

The Final EIR/EIS section 3.3.6.3 has been revised to include additional analysis of impacts associated with localized air emissions associated with construction of the HST as well as activities around the stations, HMF, and MOWF. The Final EIR/EIS section 3.3.6.3 also specifically analyzed the carbon monoxide hot-spots associated with a single intersection in Corcoran that had an LOS worse than the screening criteria. This intersection degradation is the result of impacts on estimated road closures in Corcoran.

Indirect effects to permitted air sources along the HST alignment are too speculative to estimate quantitatively. However, all permitted air sources that would be a replacement must be incompliance with existing air quality regulations such as New Source Review, New Source Performance Standards, and Maximum Achievable Control Standards, as well as numerous other local regulations covering a wide area of sources. Qualitatively, due to the existing regulations, it is unlikely that altered permitted sources as a result of the HST construction would result in increases in air pollution beyond what they are emitting currently. In addition, the Authority has set up a permit bureau to assist affected facilities with working with regulators to obtain new permits as required. As part

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of the property appraisal process, any diminution in value to a property owner's remaining parcel(s) will be estimated by the appraiser through the appraisal process. This involves appraising the remainder as it contributes to the whole property value before acquisition, then appraising the remainder in the after condition as a separate parcel as though the project was constructed (i.e., as bisected by the HST), and including any estimated "cost to cure" damages to the remainder such as the design and permitting costs of new facilities required to continue operation of an existing business. Such cost of cure damages will be analyzed in the appraisal process with consultation from experts in the appropriate fields and compensation will be estimated accordingly. The difference between these "before" and "after" values is termed as severance damages and will reflect any loss in value to the remainder due to the construction of the proposed project.

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Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Indirect effects to permitted air sources along the HST alignment are too speculative to estimate quantitatively. However, all permitted air sources that would be a replacement must be incompliance with existing air quality regulations such as New Source Review, New Source Performance Standards, and Maximum Achievable Control Standards, as well as numerous other local regulations covering a wide area of sources. Qualitatively, due to the existing regulations, it is unlikely that altered permitted sources as a result of the HST construction would result in increases in air pollution beyond what they are emitting currently. In addition, the Authority has committed to maintain a “permit bureau” to help businesses overcome the regulatory disruptions caused by the project. This bureau will provide technical expertise and liaison with permitting agencies to assist businesses in re-permitting facilities. As part of the property appraisal process, any diminution in value to a property owner's remaining parcel(s) will be estimated by the appraiser through the appraisal process. This involves appraising the remainder as it contributes to the whole property value before acquisition, then appraising the remainder in the after condition as a separate parcel as though the project was constructed (i.e., as bisected by the HST), and including any estimated "cost to cure" damages to the remainder such as the design and permitting costs of new facilities required to continue operation of an existing business. Such cost of cure damages will be analyzed in the

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appraisal process with consultation from experts in the appropriate fields and compensation will be estimated accordingly. The difference between these "before" and "after" values is termed as severance damages and will reflect any loss in value to the remainder due to the construction of the proposed project.

Compliance with the existing air quality regulations at the federal, state, and regional level will ensure that emissions from affected facility changes will result in acceptable impacts to local areas from an air quality perspective. Specific quantitative analyses would be too speculative to estimate as part of this project as this would involve detailed information not readily available due to confidential business information.

The Final EIR/EIS section 3.3.6.3 has been revised to include additional analysis of impacts associated with localized air emissions associated with construction of the HST as well as activities around the stations, HMF, and MOWF. The Final EIR/EIS section 3.3.6.3 also specifically analyzed the carbon monoxide hot-spots associated with a single intersection in Corcoran that had an LOS worse than the screening criteria. This intersection degradation is the result of impacts on estimated road closures in Corcoran.

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Refer to Standard Response FB-Response-AQ-04, FB-Response-SO-03.

The Authority has committed to maintain a “permit bureau” to help businesses overcome the regulatory disruptions caused by the project. This bureau will provide technical expertise and liaison with permitting agencies to assist businesses in re-permitting facilities. The Authority understands that the vegetable oil refinery operations at J.G. Boswell pose a particularly challenging permitting effort if this facility would require relocation. As part of the property appraisal process, any diminution in value to a property owner's remaining parcel(s) will be estimated by the appraiser through the appraisal process. This involves appraising the remainder as it contributes to the whole property value before acquisition, then appraising the remainder in the after condition as a separate parcel as though the project was constructed (i.e., as bisected by the HST), and including any estimated "cost to cure" damages to the remainder such as the design and permitting costs of new facilities required to continue operation of an existing business. Such cost of cure damages will be analyzed in the appraisal process with

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consultation from experts in the appropriate fields and compensation will be estimated accordingly. The difference between these "before" and "after" values is termed as severance damages and will reflect any loss in value to the remainder due to the construction of the proposed project.

Compliance with the existing air quality regulations at the federal, state, and regional level will ensure that emissions from affected facility changes will result in acceptable impacts to local areas from an air quality perspective. Specific quantitative analyses would be too speculative to estimate as part of this project as this would involve detailed information not readily available due to confidential business information.

Section 3.3.6.3 of the Final EIR/EIS has been revised to include additional analysis of impacts associated with localized air emissions associated with construction of the HST as well as activities around the stations, HMF, and MOWF. The Final EIR/EIS section 3.3.6.3 also specifically analyzed the carbon monoxide hot-spots associated with a single intersection in Corcoran that had an LOS worse than the screening criteria. This intersection degradation is the result of impacts on estimated road closures in Corcoran.

BO049-54

The comment notes general support for Mitigation Measure AQ-4.

BO049-55

Refer to Standard Response FB-Response-N&V-03.

As previously described, industrial land uses are not considered noise-sensitive areas as activities are generally compatible with higher noise levels (FTA 2006).

BO049-56

Refer to Standard Response FB-Response-N&V-03.

According to FRA methodology, industrial land uses are not considered noise-sensitive areas.

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Refer to Standard Response FB-Response-GENERAL-07, FB-Response-N&V-03.

According to FRA methodology, industrial land uses are not considered noise-sensitive areas, because in general, activities within these buildings are compatible with higher noise levels (FTA 2006).

BO049-58

Refer to Standard Response FB-Response-GENERAL-01, FB-Response-GENERAL-21.

BO049-59

Refer to Standard Response FB-Response-SO-01, FB-Response-HWR-02.

The Authority will fairly compensate landowners for loss or disruptions to their operations during the right-of-way acquisition process, including the relocation of surface water collection systems and the regulatory costs of re-permitting these systems.

BO049-60

Refer to Standard Response FB-Response-HWR-02, FB-Response-SO-01.

J.G. Boswell personnel created a scaled rendition of the BNSF Alternative consistent with the information attached in their comment letter (i.e., Figure 1 in Enclosure 2). Although the attached figure includes the project footprint, it does not include information regarding HST drainage design. Moreover, site-specific detailed grading and drainage plans will be prepared by the design-build contractor and are not yet available. Therefore, it is unclear if the model included any of the best management practices or drainage features that will be implemented within the HST right-of-way.

The intent is that stormwater runoff from the elevated section of track would not enter Boswell's stormwater drainage system. The BNSF and Corcoran Elevated alternatives would be on an aerial structure in southeast Corcoran in the vicinity of the Sherman Avenue crossing. Drainage systems within portions of elevated track would collect and drain stormwater to the ground through downspouts at the columns located every 100 to 120 feet along the alignment. Drainage from the downspouts would typically infiltrate

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within the HST rights-of-way or be conveyed parallel to the overhead track to a nearby stormwater collection system. Runoff from the project would not be discharged directly to private property. Santa Fe Avenue would be realigned under the Corcoran Elevated Alternative and the existing freight rail tracks for the Boswell Spur would be realigned under the BNSF Alternative. Drainage management for Santa Fe Avenue or the freight rail rights-of-way would meet or exceed current practices. Detailed grading and drainage plans will be prepared by the design-build contractor based on the design standards described in Standard Response FB-Response-HWR-02. In addition, engineers participating in the right-of-way acquisition process will ensure that site-specific drainage impacts to neighboring properties are not created.

There are no overcrossing facilities planned adjacent to Boswell's property. Runoff from the aerial structure will not discharge onto Boswell property or into Boswell drainage facilities. Therefore, the project should not result in any increase in flow to Boswell drainage facilities or any increase in velocity.

BO049-61

Refer to Standard Response FB-Response-GENERAL-07, FB-Response-TR-02, FB-Response-TR-01.

Utility conflicts for canals are discussed in Section 3.6, Public Utilities and Energy, under Impact PU&E#11 – Potential Conflicts with Water Facilities. The Authority would work with irrigation districts to protect canal systems, with the intent that service disruptions would be minimized to the extent possible in both the flood and irrigation seasons.

Where irrigation supply canals are crossed by the HST, culverts would be installed to allow irrigation water to continue to pass through the embankment. If the capacity of the canal or ditch is small, a pipeline would be installed through the embankment instead of a culvert. A straight pipeline is preferred rather than a U-shaped siphon to allow for easier flushing. All areas within the permanent HST right-of-way would be maintained by the Authority, including canals and pipelines located within the HST embankment.

Design of specific canal features will be carried out during later stages of design and will be coordinated through ongoing discussions and design reviews with the canal owners

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to ensure that the delivery of existing irrigation flows are maintained.

BO049-62

Refer to Standard Response FB-Response-SO-01.

Because of the size of the HST project, it is not possible to provide specific information about impacts on individual properties that would be displaced by alternative project features. Such an approach would make the environmental document longer and more difficult to understand. Instead of specific individual impacts, the EIR/EIS provides an overall analysis of commercial, industrial, and residential displacements and the economic effects of such displacements to the communities affected by the project. This provides the general public and decision-makers with an understanding of the nature and magnitude of the impacts.

BO049-63

Refer to Standard Response FB-Response-SO-05.

See Section 5.4.4 of the Community Impact Assessment Technical Report for specific details on the property and sales tax effects on counties and cities.

The analysis of potential job loss due to residential and business displacement and relocation was performed by alternative and the results are presented in the EIR/EIS, Volume I, Section 3.12 (Impacts SO #9, SO #10, and SO #11). It is unforeseeable where each individual displaced business owner would relocate. However, a gap analysis of available properties was performed for the displaced residents and relocated businesses, and the results showed that there are suitable replacement locations in the surrounding areas. See the Draft Relocation Impacts Report for the complete analysis.

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Refer to Standard Response FB-Response-GENERAL-05, FB-Response-SO-04, FB-Response-SO-01.

For information about the impact on the community of Corcoran, see the EIR/EIS,

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Volume I, Section 3.12, Impacts SO #6 and SO #9, and Mitigation Measure SO-1. For information about the impacts on communities and on the potential for physical deterioration, see Volume I, Section 3.12, Impact SO #16. Also see Volume I, Section 3.12, Mitigation Measure SO-5.

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Refer to Standard Response FB-Response-GENERAL-07, FB-Response-SO-03.

EIR/EIS Sections 3.12.6 and 3.12.7, Affected Environment present a summary of county and community demographics, housing, economic conditions, community characteristics, and environmental justice populations in the four-county region to provide context for the Project impacts. The source data from the California Department of Finance and U.S. Census Bureau include the institutionalized population in the total population numbers, and the potential for this to skew the data is discussed in the text each time the data is presented. The institutionalized population is not included in the data for the total household population count. This is appropriate because the community impacts detailed in Section 3.12.8, Environmental Consequences, occur as a result of residential, business and community facility displacement along the HST right-of-way, and do not impact the inmate population. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.12.13, 3.12.14 and 3.12.15 are not deficient because of the absence of identifying the J.G. Boswell Company's facility. This is because while some property at the J.G. Boswell facility may be required to accommodate the construction of the HST, it would not result in the displacement of the entire facility or limit the operating capacity of the site. Therefore, the EIR/EIS is not deficient; it provides an overall analysis of commercial, industrial, and residential displacements and the economic effects of such displacements to the communities affected by the project. This provides the general public and decision makers with an understanding of the nature and magnitude of the impacts.

BO049-66

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

The Authority has committed to compensating landowners at a fair market value for any permanent takings of their land as well as any temporary or permanent losses of income

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they may experience. Federal and state laws require that the Authority pay fair market value for the land that is acquired. Fair market value takes into account the value of the land, the improvements on the land, as well as the future income the land and improvements can generate. The land acquisition process begins before construction. It is during this phase that the Authority's right-of-way agent will work with individual landowners so that fair compensation for impacts to their property can be made and to mitigate impacts from both construction and operation of the HST. During this phase, agricultural and business-related infrastructure can be modified to minimize impacts from the construction and operation of the HST.

BO049-67

Refer to Standard Response FB-Response-PU&E-03.

Again, some property at the J.G. Boswell facility may be required to accommodate the construction of the HST, but would not result in the displacement of the entire facility or limit the operating capacity of the site. For this reason, the EIR/EIS does not consider the J.G. Boswell facility and the employees to be fully displaced. The EIR/EIS is not inaccurate; it provides an overall analysis of commercial, industrial, and residential displacements and the economic effects of such displacements to the communities affected by the project. This provides the general public and decision makers with an understanding of the nature and magnitude of the impacts.

There are many utilities within or crossing the Study Area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing underground pipelines cross the HST alignment, the utilities would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Refer to Section 3.6.5.

Based on the current level of design, access to the 6-inch diameter high-pressure

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natural gas line along the east side of BNSF operation will, upon agreement between the Authority and the Pacific Gas and Electric Company, be relocated or redesigned at the expense of the Authority. The Authority's construction contractor will coordinate schedules for utility relocations or re-design with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-68

Refer to Standard Response FB-Response-PU&E-03.

There are many utilities within or crossing the Study Area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing underground pipelines cross the HST alignment, the utilities would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Please refer to Section 3.6.5.

Based on the current level of design, the natural gas pressure reducing station at the northeast corner of the Boswell property and its associated delivery lines will, upon agreement between the Authority and the Pacific Gas and Electric Company, be relocated or redesigned at the expense of the Authority. The Authority's construction contractor will coordinate schedules for utility relocations or re-design with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

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Refer to Standard Response FB-Response-PU&E-03.

Again, there are many utilities within or crossing the Study Area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially

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affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing underground pipelines cross the HST alignment, the utilities would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Please refer to Section 3.6.5.

Based on the current level of design, the medium-pressure natural gas line beneath Sherman Avenue will, upon agreement between the Authority and the Pacific Gas and Electric Company, be relocated or protected in-place at the expense of the Authority. The Authority's construction contractor will coordinate schedules for utility relocations or re-design with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-70

Refer to Standard Response FB-Response-PU&E-03.

There are many utilities within or crossing the Study Area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing underground pipelines cross the HST alignment, the utilities would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Again, please refer to Section 3.6.5.

Based on the current level of design, the 3-inch diameter medium-pressure natural gas line into the Boswell West Processing will, upon agreement between the Authority and the Pacific Gas and Electric Company, be relocated or protected in-place at the expense of the Authority. The Authority's construction contractor will coordinate schedules for

BO049-70

utility relocations or re-design with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-71

Refer to Standard Response FB-Response-PU&E-03.

There are many utilities within or crossing the Study Area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing fiber optic cables cross the HST alignment, the cables would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Refer to Section 3.6.5.

Based on the current level of design, the fiber optic communication cable potentially affected by the Corcoran Elevated Alternative will, upon agreement between the Authority and the public service provider, be replaced and rerouted in a conduit at the expense of the Authority. The Authority's construction contractor will coordinate schedules for utility relocation with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-72

Refer to Standard Response FB-Response-PU&E-03.

There are many utilities within or crossing the Study Area for the proposed HST and associated facilities. The proposed project would avoid, protect or reroute potentially affected existing public utility infrastructure. The Authority would work with utility owners during final engineering design and construction of the project to relocate utilities or protect them in place. Where existing fiber optic cables cross the HST alignment, the cables would be placed in a protective casing so that future maintenance could be accomplished outside of the HST right-of-way. The project construction contractor would

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coordinate schedules for utility relocations and protection-in-place with the utility owner to ensure the project would not result in prolonged disruption of services. Refer to Section 3.6.5.

Based on the current level of design, the fiber optic communication cable potentially affected between the Boswell East and West agricultural processing sites will, upon agreement between the Authority and the public service provider, be replaced and rerouted in a conduit at the expense of the Authority. The Authority's construction contractor will coordinate schedules for utility relocation with the service provider to ensure the project will either minimize or eliminate the potential for disruption of service to affected users.

BO049-73

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Some property at the J.G. Boswell facility may be required to accommodate the construction of the HST, but would not result in the displacement of the entire facility or limit the operating capacity of the site. However, the final acquisition details for each of the structures at the J.G. Boswell facility will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures. The Authority will consult with the respective parties before land acquisition to assess potential opportunities to reconfigure land use or buildings, and relocate facilities, as necessary, to minimize the disruption of facility activities and services.

The Authority has committed to compensating landowners at a fair market value for any permanent takings of their land as well as any temporary or permanent losses of income they may experience. Federal and state laws require that the Authority pay fair market value for the land that is acquired. Fair market value takes into account the value of the land, the improvements on the land, as well as the future income the land and improvements can generate. The land acquisition process begins before construction. It is during this phase that the Authority's right-of-way agent will work with individual landowners so that fair compensation for impacts on their property can be made and to mitigate impacts from both construction and operation of the HST. During this phase,

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agricultural and business-related infrastructure can be modified to minimize impacts from the construction and operation of the HST.

BO049-74

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Some property at the J.G. Boswell facility may be required to accommodate the construction of the HST, but would not result in the displacement of the entire facility or limit the operating capacity of the site. However, the final acquisition details for each of the structures at the J.G. Boswell facility will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures. The Authority will consult with the respective parties before land acquisition to assess potential opportunities to reconfigure land use or buildings, and relocate facilities, as necessary, to minimize the disruption of facility activities and services.

The Authority has committed to compensating landowners at a fair market value for any permanent takings of their land as well as any temporary or permanent losses of income they may experience. Federal and state laws require that the Authority pay fair market value for the land that is acquired. Fair market value takes into account the value of the land, the improvements on the land, as well as the future income the land and improvements can generate. The land acquisition process begins before construction. It is during this phase that the Authority's right-of-way agent will work with individual landowners so that fair compensation for impacts on their property can be made and to mitigate impacts from both construction and operation of the HST. During this phase, agricultural and business-related infrastructure can be modified to minimize impacts from the construction and operation of the HST.

BO049-75

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Some property at the J.G. Boswell facility may be required to accommodate the construction of the HST, but would not result in the displacement of the entire facility or limit the operating capacity of the site. However, the final acquisition details for each of

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the structures at the J.G. Boswell facility will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures. The Authority will consult with the respective parties before land acquisition to assess potential opportunities to reconfigure land use or buildings, and relocate facilities, as necessary, to minimize the disruption of facility activities and services.

The Authority has committed to compensating landowners at a fair market value for any permanent takings of their land as well as any temporary or permanent losses of income they may experience. Federal and state laws require that the Authority pay fair market value for the land that is acquired. Fair market value takes into account the value of the land, the improvements on the land, as well as the future income the land and improvements can generate. The land acquisition process begins before construction. It is during this phase that the Authority's right-of-way agent will work with individual landowners so that fair compensation for impacts on their property can be made and to mitigate impacts from both construction and operation of the HST. During this phase, agricultural and business-related infrastructure can be modified to minimize impacts from the construction and operation of the HST.

BO049-76

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Potential property acquisition at the J.G. Boswell facility would not result in the displacement of the entire facility or limit the operating capacity of the site. The final acquisition details for each of the structures at the J.G. Boswell facility will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures. The Authority will consult with the respective parties before land acquisition to assess potential opportunities to reconfigure land use or buildings, and relocate facilities, as necessary, to minimize the disruption of facility activities and services.

The Authority has committed to compensating landowners at a fair market value for any permanent takings of their land as well as any temporary or permanent losses of income they may experience. Federal and state laws require that the Authority pay fair market

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value for the land that is acquired. Fair market value takes into account the value of the land, the improvements on the land, as well as the future income the land and improvements can generate. The land acquisition process begins before construction. It is during this phase that the Authority's right-of-way agent will work with individual landowners so that fair compensation for impacts on their property can be made and to mitigate impacts from both construction and operation of the HST. During this phase, agricultural and business-related infrastructure can be modified to minimize impacts from the construction and operation of the HST.

BO049-77

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

The Authority will ensure the maintenance of property access from roadways and rail spurs. Refer to Mitigation Measure TR MM#1- Access Maintenance for Property Owners, which states that during construction, access will be maintained for owners to their property to a level that maintains pre-project viability of the property for its pre-project use. If a proposed road closure restricts current access to a property, alternative access via connections to existing roadways will be provided. If adjacent road access is not available, new road connections will be prepared, if feasible. If alternative road access is not feasible, the property will be considered for acquisition.

For information on the property acquisition and compensation process, see Volume II, Technical Appendix 3.12-A.

BO049-78

Refer to Standard Response FB-Response-HWR-02, FB-Response-SO-01.

The permanent right-of-way for the Corcoran Elevated or BNSF Alternative would include a portion of the J.G. Boswell property adjacent to the existing freight track and/or Santa Fe Avenue. Any of Boswell's surface drainage infrastructure located within the project footprint would need to be relocated. The Authority will fairly compensate land owners during the right-of-way acquisition process for relocation of existing drainage infrastructure, including sumps, pump stations, and associated ditches. If relocated drainage systems would need to be re-permitted, compensation would also include

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regulatory costs.

BO049-79

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

At this stage of project design, identifying the individual circumstances surrounding the acquisition of land on each parcel is not possible. Instead of specific individual impacts, the EIR/EIS provides an overall analysis of commercial, industrial, and residential displacements and the economic effects of such displacements to the communities affected by the project. This provides the general public and decision makers with an understanding of the nature and magnitude of the impacts. The final full and partial parcel acquisition decisions will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures.

Some property at the J.G. Boswell facility may be required to accommodate the construction of the HST. However, it is not anticipated that the equipment storage yard immediately adjacent to the HST would be displaced. The final parcel acquisition decisions will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures. Any direct loss of land or diminution in value to a property owner's parcel will be estimated by an appraiser through the property acquisition process and the owner will be fairly compensated.

BO049-80

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

The Authority will ensure maintenance of existing, provide replacement of, or compensate for "finished oil" rail car load out facility access. Refer to Mitigation Measure TR MM#1- Access Maintenance for Property Owners, which states that during construction, access will be maintained for owners to their property to a level that maintains pre-project viability of the property for its pre-project use. If a proposed road closure restricts current access to a property, alternative access via connections to existing roadways will be provided. If adjacent road access is not available, new road

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connections will be prepared, if feasible. If alternative road access is not feasible, the property will be considered for acquisition.

BO049-81

Refer to Standard Response FB-Response-GENERAL-04, FB-Response-HWR-01, FB-Response-SO-01.

The permanent right-of-way for the Corcoran Elevated or BNSF Alternative would include a portion of the Boswell property adjacent to the existing freight track and/or Santa Fe Avenue. Any irrigation wells located within the project footprint would need to be relocated. The Authority will fairly compensate land owners during the right-of-way acquisition process for destruction and replacement of agricultural wells. The Authority will work with individuals on a case-by-case basis to provide equal utility for the replacement wells. The design of the resulting replacement infrastructure will be addressed during the appraisal process with consultation from experts in the hydraulic engineering and agriculture management fields. Factors that will be taken into consideration include well location, depth and screen elevation. The timing of any restorative work or reconfigurations will be addressed at the acquisition stage and documented in the right-of-way contract.

BO049-82

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Some property at the J.G. Boswell facility may be required to accommodate the construction of the HST, but would not result in the displacement of the entire facility or limit the operating capacity of the site. However, the final acquisition details for each of the structures at the J.G. Boswell facility will ultimately be determined on a case-by-case basis during the land acquisition phase of the project, see Appendix 3.12-A for more information on the property acquisition and compensation procedures. The Authority will consult with the respective parties before land acquisition to assess potential opportunities to reconfigure land use or buildings, and relocate facilities, as necessary, to minimize the disruption of facility activities and services.

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The Authority has committed to compensating landowners at a fair market value for any permanent takings of their land as well as any temporary or permanent losses of income they may experience. Federal and state laws require that the Authority pay fair market value for the land that is acquired. Fair market value takes into account the value of the land, the improvements on the land, as well as the future income the land and improvements can generate. The land acquisition process begins before construction. It is during this phase that the Authority's right-of-way agent will work with individual landowners so that fair compensation for impacts on their property can be made and to mitigate impacts from both construction and operation of the HST. During this phase, agricultural and business-related infrastructure can be modified to minimize impacts from the construction and operation of the HST.

BO049-83

There is no planned closure of Santa Fe Avenue in Corcoran. The C1 alignment option provides realignment of Santa Fe Avenue from Pickerell Avenue to just south of Oregon Avenue, and both C2 and C3 alignment options leave Santa Fe Avenue in place.

The C1 option also realigns the connection of SR 43 to Orange Avene for southbound traffic, and connection to SR 43 from Orange Avenue northbound can be made via 5-1/2 Avenue. Therefore a change in traffic circulation for this area is not expected. Santa Fe Avenue is not proposed to be closed. The hypothetical impacts stated in the comment are not possible and would not result from the HST.

BO049-84

Refer to Standard Response FB-Response-N&V-03.

Noise impacts were not assessed at the Boswell facility because according to FRA methodology, industrial land uses are not considered noise-sensitive areas. In general, activities within these buildings are compatible with higher noise levels (FTA 2006).

BO049-85

The noise from the Corcoran Elevated Alternative will be mitigated throughout the City of Corcoran by a noise barrier adjacent to many of the commercial and industrial land uses

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in the City. Over 90% of the severely impacted sensitive receivers will be benefitted by the proposed noise barrier. The remaining sensitive receivers that would not benefit from the noise barrier would receive mitigation in the form of acoustic insulation at their individual residences. Along the elevated portions of the alignment, vibration levels from the HST project are expected to be at least 10 to 15 decibels (dB) below the vibration levels currently generated by the existing BNSF Railway freight operations. Structures not currently impacted by vibration from existing BNSF Railway freight operations would not be impacted by vibration from HST operations.

BO049-86

Refer to Standard Response FB-Response-N&V-03.

Again, FRA methodology does not consider industrial land uses as noise-sensitive areas as associated activities are generally compatible with higher noise levels (FTA 2006).

BO049-87

Refer to Standard Response FB-Response-PU&E-03.

The project team has and will continue to actively coordinate with utility providers during all the design phases of the project to identify, describe, and evaluate the high-speed train's (HST) potential impact on solar farms. As appropriate and commensurate to the early stage of engineering design, modifications have been made to the Revised Draft EIR/Supplemental Draft EIS to reflect the comments provided (see Section 3.6.2 Laws, Regulations, and Orders).

The cumulative projects list includes several solar projects (see Appendix 3.19-A, Planned and Potential Projects and Plans). These projects were identified during interviews with local and regional planning agencies and from existing applications for project entitlements or construction, or were analyzed in recent environmental documents. The analyses of potential cumulative impacts from these and other cumulative projects combined with the HST project alternatives are provided in Section 3.19.4.2, High-Speed Train Alternatives Contributions, of the Revised Draft EIR/Supplemental Draft EIS. The Authority will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, to compensate property

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owners affected by a federally sponsored project.

The Fresno to Bakersfield Section of the HST is estimated to require 78 megawatts (MW) of peak demand, which is within existing reserves. The HST project would not require the construction of a separate power source and would not impact power reliability.

The Authority's policy sets a goal to use 100% clean, renewable electricity for the operation of the HST. This goal can be achieved through purchase agreements with power suppliers and development of renewable energy on Authority facilities where feasible, and through the design facilities to meet strict energy efficiency criteria. The Authority has entered into a Memorandum of Understanding (MOU) with the FRA, EPA, and the U.S. Department of Energy to support common sustainability goals. These include minimizing air and water pollution, energy usage, and other environmental impacts. This MOU is located on the Authority's website.

BO049-88

Refer to Standard Response FB-Response-GENERAL-01.

As previously discussed, the project team has and will continue to actively coordinate with utility providers during all the design phases of the project to identify, describe, and evaluate the high-speed train's (HST) potential impact on solar farms. As appropriate and commensurate to the early stage of engineering design, modifications have been made to the Revised Draft EIR/Supplemental Draft EIS to reflect the comments provided (see Section 3.6.2 Laws, Regulations, and Orders).

The cumulative projects list includes several solar projects (see Appendix 3.19-A, Planned and Potential Projects and Plans). These projects were identified during interviews with local and regional planning agencies and from existing applications for project entitlements or construction, or were analyzed in recent environmental documents. The analyses of potential cumulative impacts from these and other cumulative projects combined with the HST project alternatives are provided in Section 3.19.4.2, High-Speed Train Alternatives Contributions, of the Revised Draft EIR/Supplemental Draft EIS. The Authority will comply with the Uniform Relocation

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Assistance and Real Property Acquisition Policies Act of 1970, to compensate property owners affected by a federally sponsored project.

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ENCLOSURE 1

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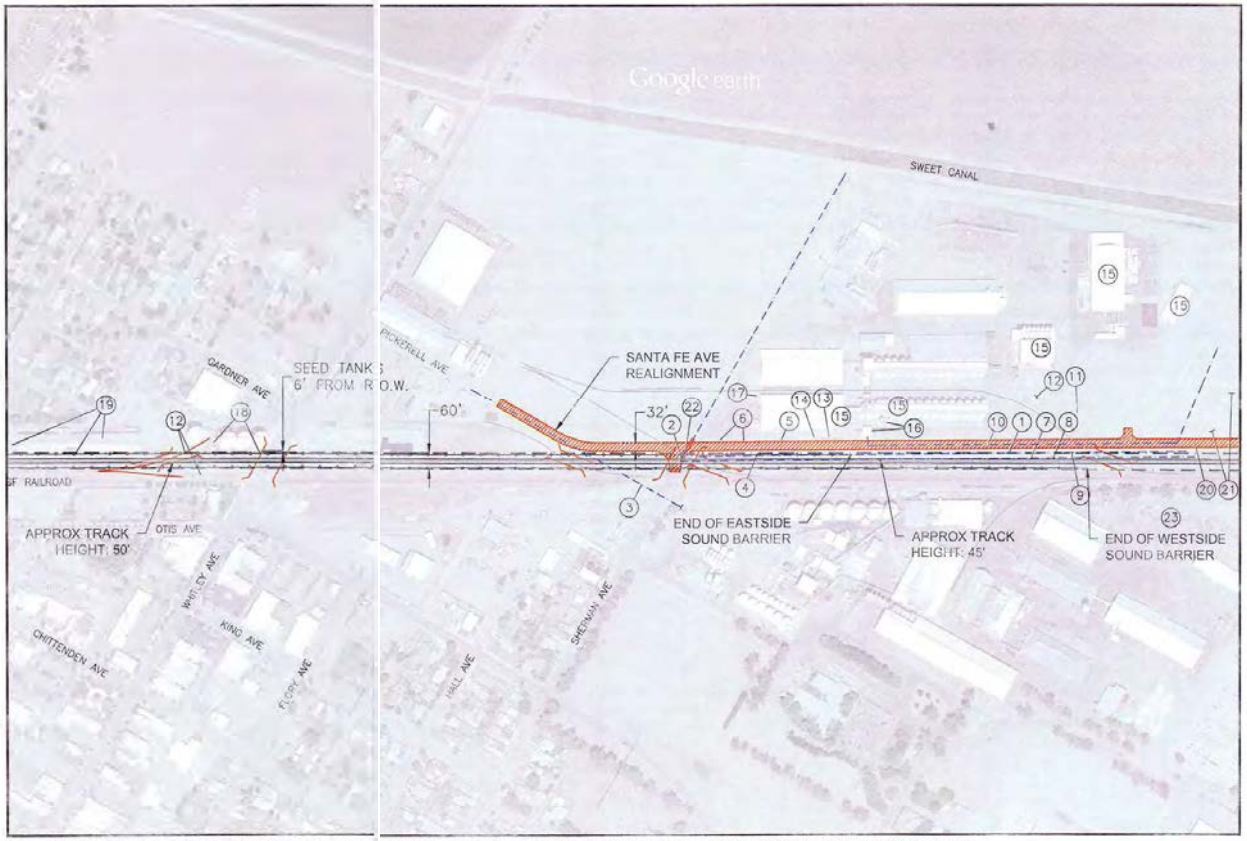
EASTSIDE ELEVATED OPTION:

1. RELOCATION OF PG&E 12kV OH DISTRIBUTION LINE ALONG EASTSIDE OF SANTA FE AVE.
2. RELOCATION OF CONNECTION POINT OF PG&E 12kV OH DISTRIBUTION LINE EASTERLY ALONG NORTH SIDE OF SHERMAN AVE EXTENDED.
3. REVISION OF PG&E 12 kV OH DISTRIBUTION LINE FROM WEST SIDE OF PICKERELL AVE INTO N.E. CORNER OF JGB WEST SITE.
4. RELOCATION OF UG PULL/SPLICE BOX FOR JGB MAIN FIBER OPTIC COMMUNICATIONS CABLE BETWEEN WEST AND EAST SITES.
5. RELOCATION OF SAMPLING PLATFORM AT CALIFORNIA STATE GRADING STATION.
6. LOSS OF TRUCK PARKING AND TRAFFIC FLOW PATTERN AT THE GRAIN GRADING STATION.
7. RELOCATION OF JGB EAST SITE, MAIN NORTH SOUTH SURFACE RUNOFF COLLECTION SWALE/GUTTER.
8. RELOCATION OF JGB EAST SITE, WEST SIDE SURFACE RUNOFF COLLECTION SUMP AND PUMP STATION.
9. RELOCATION OF PUMPED OUTFLOW LINE ALONG EAST SIDE OF SANTA FE AVE.
10. RELOCATION OF 8" DIAMETER JGB WATER LINE ALONG EAST SIDE OF SANTA FE AVE.
11. RELOCATION OF 12kV SERVICE/METER POLE FOR JGB GIN#5.
12. POSSIBLE INTERFERENCE WITH RAILROAD SPURS INTO EAST SITE AT "D" TANKS.
13. LOSS OF TRUCK PARKING AND TRAFFIC FLOW PATTERN AT RANCH OFFICE (EAST) TRUCK SCALES.
14. LOSS OF RANCH OFFICE PARKING LOT AND TRAFFIC PATTERN.
15. ELEVATED EXPOSURE LEVELS OF NOISE AND VIBRATION TO EAST TOWNSITE
16. REDUCED ACCESS, LOSS OF PARKING (STAGING AREA) AND TRUCK TRAFFIC FLOW PATTERN AT WEST ELEVATOR/WEST SIDE LOAD OUTS AND SHANZER DRYER.
17. POSSIBLE REVISION/RELOCATION OF EAST SITE PUMPED SEWER LINE.
18. POSSIBLE LOSS OF ACCESS AND REDUCED TRAFFIC FLOW PATTERN AT JGB "D" TANKS WAREHOUSE.
19. COMPLETE LOSS OF JGB WAREHOUSE "B", TRUCK DOCK, AND RAILROAD SPUR.
20. LOSS OF SURFACE WATER DRAINAGE SYSTEM AT SOUTH END OF EAST SIDE.
21. REDUCED MODULE STORAGE YARD CAPACITIES.
22. POSSIBLE REVISION TO TELEPHONE COMPANIES MAIN FIBER OPTIC COMMUNICATIONS CABLE LOCATION AND COVER.
23. ELEVATED EXPOSURE LEVELS OF NOISE AND VIBRATION TO WEST TOWNSITE

LEGEND

- HSR RIGHT OF WAY
- HSR TRACKS
- SOUND BARRIER
- RED: ROADWORK
- RED: STREET OR RAILROAD CROSSING



NOTE: IMAGE IS APPROXIMATE, BASED ON INTERPRETATION OF AVAILABLE INFORMATION REGARDING ALIGNMENT AND LOCATION OF THE RAILROAD, ROADWAY, AND COMMUNICATION TOWERS

SCALE	PROPOSED HIGH SPEED RAIL ELEVATED ALTERNATIVE C-1 CONFLICTS AND CONCERNS	10/7/12
1"=400'	J. G. BOSWELL COMPANY	FIGURE #1

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ENCLOSURE 2

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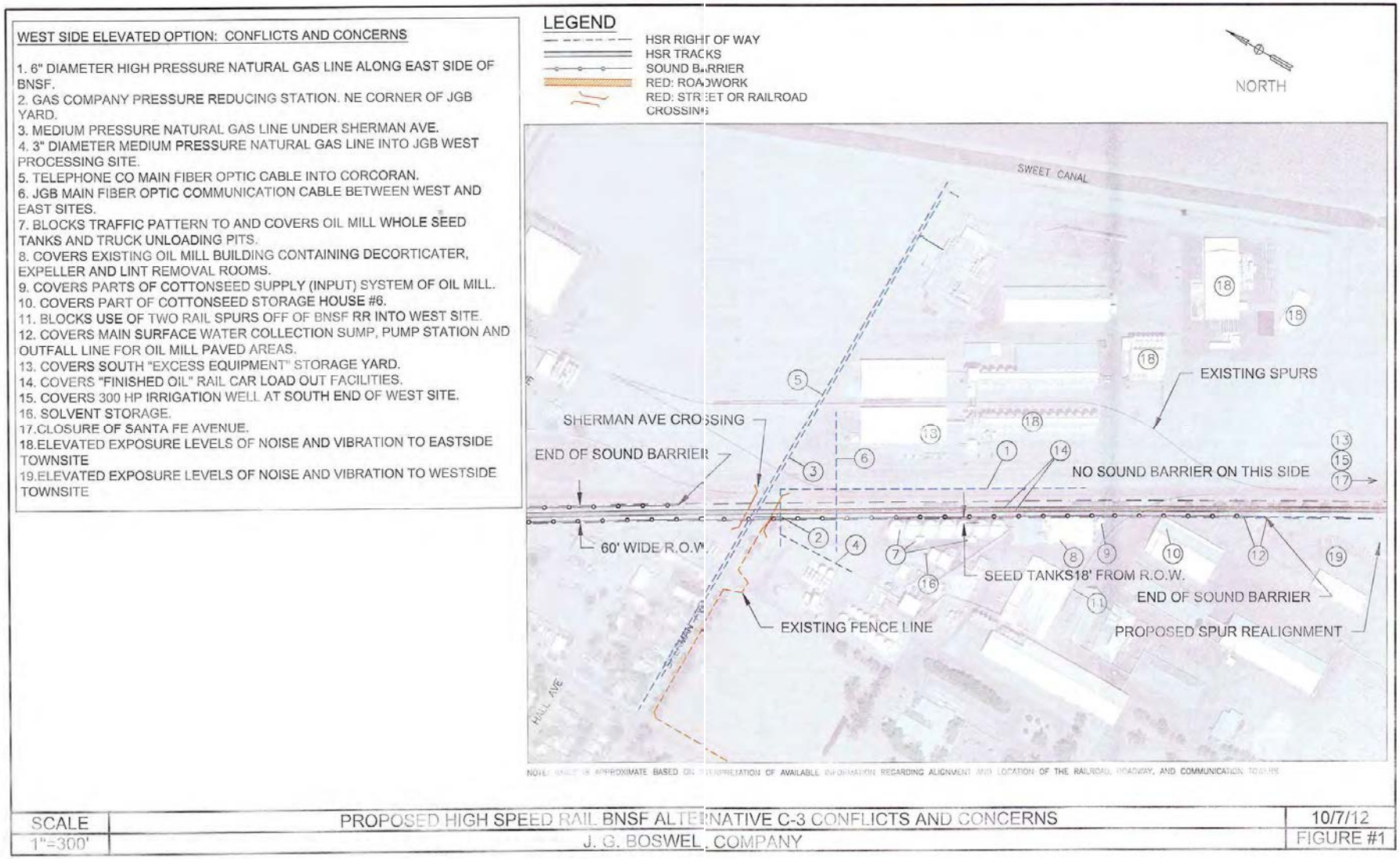

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ENCLOSURE 3

Physics, Physiology and Psychology

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When we complain about instrusive noise, sooner or later we encounter the word decibel. Typically what happens is that some official comes along and mumbles something about decibels and then explains to the authorities that the noise we are complaining about isn't really all that loud at all. He will say something about logarithms, which municipal council members don't understand at all but will be impressed by the long words, and your complaint is dismissed.

I have suffered through this process, and I have had to listen to a professional acoustical engineer spouting jargon to a municipal council, and the council swallowing everything he says. What makes it all the more annoying for me is that I am by profession a research physicist and I have had to sit through technical evidence that is to me manifest scientific nonsense.

One apparently common misconception (deliberate or otherwise I know not), is that an increase of 10 decibels corresponds to only a doubling of perceived loudness. I have heard an engineer give evidence to this effect to a municipal council, and it is repeated, quite erroneously, in the Harvard Medical School Health Letter article "Noise Pollution: Irritant or Hazard" which has been distributed by our own Society. I have from time to time had occasion to teach physics to medical students, and I can tell you that it is a rather discouraging experience! The problem with this particular myth is that we are told that the "perceived loudness" of, say 60 decibels is not all that much louder than, say, 55 decibels. We need to put this straight.

Another problem is that we are often told that 55 dB is about the level of normal conversation and is therefore nothing to complain about. Again, we need to put this straight.

This article will be technical where need be, and I shall not avoid equations when necessary. Not everyone will understand the more technical and mathematical bits. But I feel that it is very important to put it on record correctly and in a manner that can be understood at a scientific level. To avoid this would mean trying to argue scientific matters by polemics rather than by reason. In any case I am sure that most members will follow most of the article and are capable of skipping over the mathematical bits.

The problem of how loud a sound is, or is perceived to be, or how annoying it is, can be discussed from the points of view of physics, or of physiology, or of psychology. I am going to take each of these in turn. Of these, believe it or not, it is physics that is easiest!
In physics it is possible to specify and measure a sound level with great precision, and the decibel scale has its basis in good physics. Sound is a form of energy, and energy is expressed in a very precise unit called the joule. The sound intensity arriving at your dwelling can be very

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precisely measured in terms of the rate of arrival of energy across unit area, and is expressed in joules per second per square metre. There is nothing at all subjective about it. Nor does it depend on the frequency of the sound wave.

The decibel scale is used to express the ratio of a particular sound intensity to some standard, usually taken to be an intensity of 1.E-12 joules per second per square metre. (Sorry for the technicality there, but we must put it on record in precise terms.) The scale is such that if one sound has TEN times (NOT twice!) the intensity of another, the difference in sound levels is said ten decibels, or 10 dB. Those familiar with logarithms will understand (and those unfamiliar will be mystified!) that a factor of two in sound intensity corresponds to a difference of THREE (NOT ten!) decibels.

In summary: 53 dB is twice the sound intensity of 50 dB, 60 dB is ten times the sound intensity of 50 dB.
And do not let anyone tell you otherwise!!!!

We now move on to a science a little less precise than physics, namely physiology. The ear is not equally sensitive to all frequencies, and entirely insensitive to very high and very low frequencies. The frequency response of the ear varies from individual to individual, and especially it varies with age, and it also varies with the intensity of the sound. The relative sensitivity of the ear to different frequencies can be measured (somewhat subjectively) by asking an individual to compare two sounds of different frequencies, and by varying the intensity of one sound until the subject judges them to be equally loud. Thus we can measure something that might be called "perceived loudness", which is not the same thing as sound intensity; it does depend on the sound intensity, but it also depends on the frequency spectrum.

In order to allow for the properties of the human ear, a "dBA" scale, or "decibels on the A scale" has been set up, in which a decibel meter is set up to imitate as closely as possible the frequency sensitivity of the human ear. This varies from human to human; however, the dBA scale is set up in reference to a "standard" human ear, whose frequency sensitivity is in fact precisely defined, even if it may not coincide exactly with your own ear. Thus the dBA scale, even though intended to imitate a sort of average human ear, is quite precisely defined in the sense that the sound intensity on the dBA scale is not a matter of opinion but it is capable of almost as precise definition and measurement as a frequency-independent scale.

I have seen no justification in any scientific literature of the common statement that "perceived loudness" doubles for every increase of ten on the dBA scale. I have seen this incorrect statement accompanied by an explanation that perceived loudness is proportional to the logarithm on the sound intensity. I first heard these assertions given in evidence to a municipal council by an engineer who was attempting to convince the council that 60 dB wasn't all that much louder than 55 dB, and that my complaints about noise were unjustified. In fact the engineer was merely displaying his ignorance of elementary logarithms at a high school level, for both statements cannot possibly be true. If it were indeed so that 10 dB results in only a two-fold increase in perceived loudness, it does not mean that perceived loudness is proportional to the logarithm of the intensity. It would mean that the perceived loudness is proportional to the intensity to the power of 0.3. This may sound very technical, but it is important to put it on record, because we who are disturbed by noise are often portrayed as ignorant and it needs an engineer to come along and make some measurements and talk about logarithms and decibels to prove that we really aren't disturbed by the noise at all!

In fact one of the reasons that the decibel scale was first set up was to accommodate a physiological "law" known as the Weber-Fechner law, in which it was supposed that perceived loudness was proportional to the logarithm of the intensity; or, put another way, if the sound intensity increases geometrically, the perceived loudness increases arithmetically. According to this law, the perceived loudness would be linearly proportional to the decibel scale. The Weber-Fechner law is, however, only a rather approximate rule of thumb rather than a physical law, although it is fairly good over a moderate range of intensities. No very simple mathematical expression exists, for accurately describing perceived loudness over a wide range of frequencies and intensities, and there is no basis at all for the "doubling for every 10 dB". What cannot be denied, however, is that sound intensity, if not perceived loudness, increases tenfold for every 10 dB.
We have seen, then, that from the point of view of physics, the decibel scale is perfectly well defined. From the point of view of physiology, the "dBA" scale has been set up to approximate the response of the human ear. The third word in our title was psychology, and this deals with how annoying or disturbing a sound actually is. Psychology is the least amenable to quantification of the three sceinces in the title. It is barely possible to set up a mathematical scale to determine how annoying a particular noise is, and indeed from this point of view the engineer's measurments of decibels and his learned if erroneous talk of logarithms is largely irrelevant. For example, it is sometimes held that normal conversation is about 58 dB and a noise at this level is therefore nothing to complain about. Indeed Saanich Municipality on this basis allows 58 decibels continuously from 9 a.m. to 10 p.m. at my property on this very basis that 58 dB is "only" normal conversation and is not harmful and it is therefore unreasonable to complain about. But try yourself to hold a conversation with someone, or to read a book or to watch television, or to study or to go to sleep when someone is unceasingly making a noise at 58 dB! Such an unwanted intrusion is utterly intolerable, and it is no answer at all to say it is "only" 58 dB and is not "harmful".
We can give many very simple and ridiculously obvious examples to show that the decibel scale gives no indication at all as to how annoying or disturbing an unwanted noise can be. We have seen above that 58 dB is twice the sound intensity of 55 dB. Does it follow that 58 dB is twice as annoying? Not a bit of it! Consider the following examples.

(1) Which is the more annoying:
(a) 58 dB for five seconds? or
(b) 55 dB for five hours?

(2) Which is the more annoying:
(a) 58 dB at 3:00 p.m.?or
(b) 55 dB at 3:00 a.m.?

(3) Which is the more annoying:
(a) a Mozart piano sonata at 58 dB?
(b) someone scraping his fingernails over a blackboard at 55 dB?

These absurdly simple examples demonstrate clearly that the amount of annoyance a noise causes is not to be measured by decibels or by engineers, and **we must not allow "authorities" to tell us that we are not annoyed by some noise because the decibel reading proves that we are not annoyed**.

This is an important point, because there are generally two types of municipal noise bylaw. In

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one, it is deemed to be an offence to make a noise thay causes disturbance to persons. In the other, it is deemed to be an offence to make a noise that exceeds a certain decibel level. It is often held that the latter type of bylaw is more "scientific" and more "objective" and hence more desirable. In a future article I shall argue very strongly against this viewpoint and I would warn very strongly about accepting a bylaw that sets a decibel level rather than one which prohibits disturbance.

http://interact.uoregon.edu/MediaLit/wfae/readings/Physics.html

ENCLOSURE 4

http://www.lowertheboom.org/links/oi09_physiology.html 10/13/2012

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COMMENTARY

Noise Measurements and Rail Traffic Development: A Swedish Case Study

Erik Skärbäck

Public involvement in the planning process is a prerequisite for democratic outcomes. Environmental issues regarding impacts of sound tend to be limited to mere exercises in noise estimation and guideline values. Such information is difficult for the layman to understand, and such a lack of understanding produces shortcomings in the democratic process. In addition to decibel calculations interpretable by experts, the sonic environment also can be described in more accessible ways. This article reports on a concrete planning case, the widening of the railway through Åkarp in southern Sweden, where the usual calculations of equivalent noise and maximum noise are undergoing critical analysis. In order to complement the noise description, a new measurement has been devised, "high noise time," which is equal to the total time per 24 hours in which trains pass through a place without stopping. The frequency and duration of the passing of trains may be a better measure of disturbance than the maximum noise peak per passage or the equivalent (average) noise level distributed over 24 hours. Film technology also has been developed as a method for recording the frequency and duration of train passage.

Environmental Practice 9:119–127 (2007)

This study shows how the use of decibel values, which are difficult to understand, has become an obstacle when dealing with relatively extreme noise situations. The article also compares and analyzes the evaluations of various traffic situations.

Research has shown that peace and quiet are important components for an individual's positive perception of his or her surroundings. The World Health Organization (2001) states,

> The noise problems of the past are incomparable with those plaguing the modern society: the roar of aircraft, the thunder of heavily laden lorries and the thumps and whines of industry provide a noisy background to our lives. But such noise can be not only annoying but also damaging to the health, and is increasing with economic development.

It is therefore important to ensure that future infrastructure projects will be even better planned than today's projects so that our children will not be drowned by noise. "[e]nsuring that environmental, including health, considerations are thoroughly taken into account in the development of plans and programmes" (Economic Commission for Europe, 2003).

Rail traffic has increased to previously-unseen levels in the southwestern part of Skåne County in southern Sweden (see Figure 1). Disturbance surveys are inadequate with regard to traffic quantities of high magnitude, which is why socio-medical effects may not have been taken fully into consideration.

Sweden has long used what is, by international standards, a very high threshold value for the "equivalent" (or average, over 24 hours) noise level of exposure to rail traffic: 60 decibels adjusted, or dBA.[1] The fact that trains are infrequent at night accounts for the continuance of this decades' old "bonus" of 5 dBA that rail traffic holds over road traffic. Alternatively, Sweden has another threshold value, maximum noise level of exposure (70 dBA), which states that the impact of noise from passing trains upon human dwellings may not exceed 70 dBA.

Calculation models are used to estimate equivalent noise and maximum noise; the Swedish Parliament, Riksdagen, has decided on guideline values for each. These values are, however, non-mandatory. The Swedish Environmental Code

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Figure 1. The study area, centering on Åkarp, southwestern Skåne County, in the south of Sweden.

provisions do not require conformity to specified levels of calculated noise. Instead, the Code mandates that environmental effects must not be damaging to health. Research dating back several decades has demonstrated a connection between the levels of average noise and perceived disturbance; the guideline values are based on this information. Subsequently, other research has shown that people also have a need for peace and silence. In a number of studies, Grahn and others have described eight different outdoor environmental characteristics that have been shown to correspond to people's fundamental needs. Four of these characteristics presume low noise, or, defined differently, a relatively high degree of silence. These characteristics are "serene," "wild," "spacious" ("to enter into another world"), and "the pleasure garden" (Grahn, Stigsdotter, and Berggren-Bärring, 2005).

The general public's participation in physical planning is a prerequisite for democratic outcomes, but sonic environmental issues tend to be limited to mere calculations of noise levels using various decibel measures. It is difficult for the public to understand what the various decibel values mean in practice, and those who fail to understand cannot participate adequately in the planning process. The affected public needs complementary descriptions of the sonic environment in terms that they can understand. This article reports on experiences from an actual case, the planning of the railway line through Åkarp—a densely populated area between Malmö and Lund in southwestern Skåne (see Figure 1)—where the Swedish communication network funnels down to the European continent. Åkarp is surrounded by two noisy motorways (see Dufort, 2004); one railroad goes straight through the town, dividing it in two. In this case study, regular calculations of equivalent noise made by Banverket (the public authority with responsibility for the Swedish railway network) and their consultant have been complemented with estimates of "high noise time," a new measurement I devised at the request of Burlöv Municipality, the small municipality in which the town of Åkarp is situated. My definition of high noise time is the total time throughout a 24-hour period in which trains pass through without stopping, thus exposing people living close to the railroad to high noise levels. In my opinion, high noise time is easier to understand and compare across different railroads than is the equivalent noise measure, which is a mathematical average of the noise dose.

As previously indicated, Sweden has an established maximum noise guideline value of 70 dBA. If the *intensity* of the noise distribution is equalized at 70 dBA, then the *time* (that is, the duration) during which the noise continues

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will become the decisive variable. What is more, the high noise duration not only indicates the duration of noise, but also its opposite, the "duration of quiet time."

From a democratic perspective, it is important that analyses regarding sound answer the questions posed by the people concerned. People do not ask for decibel values. People ask questions like, "How often or how long should I expect conversations to be broken off as a result of passing trains?" "How often will I be woken up during the night?" "Will I be allowed a half-hour or a one-hour peaceful walk in the evening after a stressful day at work?" "Will I be able to have, in my immediate surroundings, a 'serene,' 'wild,' or 'spacious' experience, to enter into another world, and will it be possible to experience peace in my garden?" The equivalent noise guideline values do not convey any sense of the frequency or duration of the noise events or silences.

The Case Study

Rapid Increase in Rail Traffic in the Öresund Region

Train travel in Skåne has doubled during the period 1999–2004. This represents a 15% increase in travelers each year. The total number of trains has increased by 21% over the past five years. One strategy to cope with the travel increase so far has been to fill previously half-full trains. The same period has seen a 19% increase in the number of freight trains through Åkarp.

A European Union report forecasts that, in the future, the Öresund Region in southern Sweden will become one of three logistics centers in Europe. The Malmö Harbor area is expected to double its current size, from 1.5 to 3 million m², when the excavation residues from construction of the City Tunnel through Malmö are used to fill the low water area adjacent to the present harbor. Preliminary planning is underway to build a Freight Train Bypass Line around the Lund and Malmö urban areas; however, substantial quantities of freight must be transported into the Malmö International Railway Station. Such freight must pass through the municipality of Burlöv twice, once going into Malmö, and again going out.

Banverket's Focus and Responses

At an early stage, Burlöv Municipality pointed out to Banverket that the development of Malmö into a logistics center for Northern Europe would lead to a massive increase in the freight train flow, in addition to the substantial increase in passenger trains caused by development of the Öresund Region. Banverket responded to this forecast with a confusing display of noise calculations and statements concerning disturbances varying in relation to different equivalent noise values (Banverket, 2004). In the Environmental Impact Report, an increase of 30 to 40 freight trains through Åkarp (from 70–80 to 109–120) was forecast to increase the 24-hour equivalent level by 1 dBA. This may be correct, because 3 dBA corresponds to a doubling of the noise level. What was bewildering, however, was that the consultant called this 1 dBA increase an "extremely marginal change in impact." The noise consultant furthermore stated that a potential subsequent twofold increase, from 120 to 240 freight trains, would entail a 2 dBA increase in the 24-hour equivalent noise level, which was described as a "barely audible change." Burlöv Municipality found this estimate most surprising, given that 240 freight trains is a very large number.

In an attempt to appease the municipality, Banverket offered them sound protection banks and walls similar to those that had been erected in Kallhäll, outside Stockholm. When the municipality inspected the Kallhäll traffic situation more closely, they found that only three freight trains pass through there per week, as compared to Burlöv's 79 freight trains per 24 hours.

Burlöv Municipality Requires More Understandable Data

This discovery caused Burlov Municipality to call for their own reasonability assessment of the extent of the traffic and ensuing noise. My role was to carry out a comparison with existing traffic situations elsewhere. From Banverket's own systems department, traffic statistics were collected for locations boasting the heaviest Swedish rail traffic, and data also were collected from the Danish National Rail Administration (Banestyrelsen) concerning Tårnby, located between the Öresund Bridge and Copenhagen (the railway was transformed into a tunnel line through Tårnby in connection with the construction of the Öresund Bridge). Traffic figures were subdivided into three categories: freight trains, non-stop passenger trains, and stopping passenger trains (see Table 1).

The passage of freight trains and that of non-stop passenger trains is perceived as a high noise experience, as opposed to the very low noise of stopping trains. The duration of "high noise" from non-stop passenger trains was estimated at 6 seconds, and 36 seconds from freight trains. This duration was observed empirically onsite near the railway line in Åkarp. The total duration of all the trains was calculated per 24 hours. The current high noise time periods thus calculated are illustrated in Table 2, whose statistics are also shown as a bar graph in Figure 2.

Thus, Kallhall, the station that Banverket tried to present as the model for Burlöv to follow, has less than one-tenth the duration of high noise as compared with Åkarp. Tårnby in Denmark, where the tunnel was built, has only one-fifth the duration of high noise. Stockholm North (Märsta Line) and Stockholm South have about half the high noise duration, as well as Sweden's so-called "freight waist," Frövi-Hallsberg, and the Gothenburg region (Lerum). Representatives have consistently described Gothenburg as the "freight gateway to the world" and Lerum's heavy noise load has been well attested to and scientifically explored by environmental health experts (Öhrström & Barregård, 2005).

Table 1. Number of trains per 24 hours (based on a weekly average) through stations with heavy traffic loads in Sweden and Denmark, based on statistics from Swedish Banverket and Danish Banestyrelsen, autumn 2004

Station	Freight trains	Non-stop passenger trains: express trains or other trains that do not stop	Stopping trains: commuter trains, "pågatåg," Öresund trains, or fast trains that stop	Total number of trains
Kallhäll (newly rebuilt)	0.3	53	135	188
Haggvik (4-track to Märsta)	11	269	141	421
Stockholm City	23	10*	731	764
Stockholm South	23	150	283	456
Tårnby near Kastrup (tunnel)	16	24	126	166
Frövi-Hallsberg	48	9	67	124
Lerum	42	75	75	192
Åkarp	89	183	83	335

*All fast trains stop at Stockholm City. Only a small number of work trains pass through without stopping. The number is assumed.

Table 2. High noise time per 24 hours for stations with heavy traffic loads (up to 100 dBA on the platform)

Station	High noise time, minutes: Freight trains (0.6 minutes/passage)	Non-stop passenger trains (0.1 minutes/passage)	Total, minutes of high noise/24 hours (non-stop trains)	Total, hours of high noise/24 hours
Kallhäll	0.3	5.3	5.6	0.09
Haggvik	6.6	26.9	33.5	0.56
Stockholm City	13.8	1.0	14.8	0.25
Stockholm South	13.8	15.0	28.8	0.48
Tårnby (tunnel)	9.6	2.4	12.0	0.20
Frövi-Hallsberg	28.8	0.9	29.7	0.50
Lerum	25.2	7.5	32.7	0.55
Åkarp	41.4	18.3	59.7	1.00

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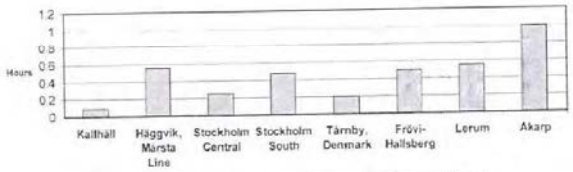

Figure 2. Hours of high noise per 24 hours for stations with heavy traffic loads.

Surprising Results

The High Noise Parameter Versus Equivalent Noise

Everyone involved appeared to be surprised by the fact that the railway stations between Malmö and Lund are apparently the locations with the heaviest train noise loads in all of Sweden. This is remarkable, given that Banverket has such high-standard traffic statistics and that the state priorities for noise protection investments must in all likelihood be related to needs. This general overview of the nationwide differences, disclosed through my relatively simple high noise calculations, either did not exist at Banverket or did exist but was never divulged.

The statistics show that the assessment, "extremely marginal change in impact," in relation to a 1 dBA equivalent noise increase, must be called into question. The increase of 30–40 freight trains per 24 hours alone is more than today's total number of freight trains on several heavily-used Swedish railway lines (see Table 1, e.g., Lerum). A survey has been carried out in Lerum by the Department of Occupational and Environmental Medicine, University of Gothenburg (Öhrström & Barregård, 2005). It reports on the Lerum population's intense irritation over what they consider disturbing train noise. At 51–55 dB_{Aeq}, 37% responded "rather disturbed," "very disturbed," and "extremely disturbed" and at 56–60 dB_{Aeq}, 58% made the same distinctions.[2] That report hardly would characterize 30–40 freight trains as an "extremely marginal change in impact."

Banverket's railway report concerning the Southern Trunk Line, Hässtad-Arlöv route, forecasts intervals for the highest and lowest potential development by 2020 (Banverket, 2004). Assuming medium values of these intervals, the result is an increase of approximately 42%, without a Freight Train Bypass Line, in the number of trains through Åkarp by the year 2020 (up from today's 333 trains) and an increase of approximately 50% with a Freight Train Bypass Line (see Table 3). A separate review of freight traffic development in the report reveals that Banverket is counting on a mere 9% increase if the Freight Train Bypass Line is not constructed, which is considerably less than the most recent developments show. Taking into consideration the development of Malmö Harbor into a major logistics center in Northern Europe, the modest forecast appears unrealistically low. If the Freight Train Bypass Line were constructed, the Banverket 2020 forecast amounts to a 60% increase. Traffic development in the long term has been investigated by an independent consultant (Inregia, 2005). The fastest forecast alternative,

Table 3. Traffic development forecast for Åkarp in 2020, according to the Banverket railway report for the Hässtad Arlöv route

	Freight trains	Passenger trains	Total
Åkarp in 2020, according to Banverket, without GTBL (Freight Train Bypass Line)	70–80 (a 9% increase from the present)	350–450	420–530 (a 42% increase from the present)
Åkarp in 2020, according to Banverket, including GTBL (Freight Train Bypass Line) alt. 1	100–120 (a 80% increase from the present)	350–450	450–570 (a 50% increase from the present)

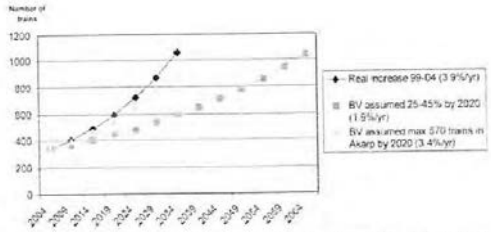

Figure 3. Traffic increase in number of trains per 24 hours in Arlöv and Åkarp; BV = Banverket.

corresponding to an actual traffic increase of 3.9% from 1999–2004, implies that a 900-train scenario (approximately full capacity) will be attained as early as the 2030s; see Figure 3. If, conversely, Banverket's lowest forecast is assumed (a total traffic increase of 1.9%), the ceiling will be hit in the 2050s.

The illustration of today's high noise time situation in Figure 2 may serve as a model for a forecast of the future situation; see Figure 4. In the future, Åkarp will further surpass the rest of Sweden in terms of high noise duration. The second and third bars of Figure 4 correspond to Banverket's forecast for number of trains by 2020, as also seen in Table 3.

The fourth bar, a second alternative regarding the Freight Train Bypass Line, corresponds to a noise calculation made by Banverket concerning a case in which freight traffic is assumed to be twice that of the first alternative. In the second alternative, equivalent noise is affected by 2 decibels, an increase characterized by the Banverket noise consultant as a "barely audible change." The high noise duration, however, increases by 1 hour and 20 minutes. This increase alone is almost three times that of the total high noise duration of the other train routes with the heaviest traffic loads in Sweden; see comparisons in Figures 3 and 4. In this case, the total number of trains amounts to 590–690 trains per 24 hours. Even so, the four-track capacity is not fully taken into account.

The fifth bar indicates a further increase potential of 200–300 trains that would fill the maximum capacity, expected to be reached sometime from 2040–2060. Depending on the combination of train types, the high noise ratio may amount to a total of four hours out of 24.

One may ask how Banverket can allow themselves to choose a forecasting period as imminent as the year 2020 when the track capacity is filled to only slightly more than half by that date. Furthermore, doing so is in violation of the Swedish Environmental Code, which now

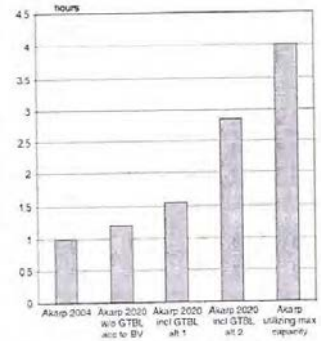

Figure 4. High noise duration in Åkarp for future cases; BV = Banverket, GTBL = Freight Train Bypass Line.

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has ruled that noise protection must be adjusted for future full-scale traffic, even if such traffic quantities lie far in the future.

Discussion

Confusion Regarding Different Research Results

How, then, is it possible for the Banverket consultant to claim that an additional 30–40 freight trains is potentially an "extremely marginal change in impact" and that a further addition of 120 freight trains amounts to a "barely audible change"? Professor Tor Kihlman (2003) declares this to be a clear error, a confusion of audiometric tests and equivalent noise calculations.

Equivalent sound intensity level is tested when a test subject makes a direct comparison between two sounds interchangeably presented to him or her, reporting the perceived difference between the two. In this test, a 10-decibel increase is perceived as a twofold increase and an increase of 3 decibels is required to perceive a change. Three decibels is technically a doubling of the noise energy. The curve is, thus, logarithmical. Equivalent noise, on the other hand, is the average noise during a longer period of time. If a comparison is made between a variety of cases involving alternative traffic intensities, that is, different frequencies and lengths of trains, and the point of departure is that the fleet of train cars produce equivalent amounts of noise in the various cases, then the disturbance dose is proportional to the combined duration of the noise from the trains passing by.

The Need for New Dose/Response Investigations

According to Kihlman, new dose/response investigations are necessary to enable calculations of disturbances regarding the substantial traffic quantities occurring between Lund and Malmö, because train traffic of such a magnitude has not been experienced there before. Occupational and environmental health experts are so far unable to express any opinions concerning the effects on public health, as is stipulated in the Swedish Environmental Code.

It seems self-evident that a response would be logarithmical in correspondence with the equivalent sound intensity level test; that is, at already increased noise levels, it takes an ever higher noise increase to be discernible as an increase in noise. Instead, the opposite may apply with regard to equivalent noise from trains; that is, the more often and longer we are interrupted in our conversations by passing trains, the less tolerant we are about accepting yet another train. We may accept being woken up by trains twice a night, but the third occasion may become the straw that breaks the camel's back. In a Berlin study, Babisch et al. (2005) showed a remarkable 30% increased risk of myocardial infarction in men exposed to >70 dBA (6–22 hours). If the duration of exposure at the same level, >70 dBA, lasted more than 10 years, the risk increased to 80%. At a noise level of 60–65 dBA, the increased risk after 10 years' exposure was 40%. These results reveal that there may be no such thing as adaptation to noise. On the contrary, research in the fields of occupational and environmental health indicates that one can endure only a certain "life dose" of high stress, and because high traffic noise produces unwanted stress, organisms can accommodate only a limited life dose of high noise.

The Equivalent Noise Guideline Value Needs to Be Adjusted

Our study of high noise duration also revealed that Sweden has an unreasonably high guideline value for equivalent noise. Although the Malmö–Lund route, as compared with the other most heavily trafficked railway routes in Sweden (Gothenburg, Stockholm, the Frövi–Hallsberg stretch) has twice as much, or more, average noise counted as high noise duration, it is the maximum noise value and not the equivalent noise value that is used as the dimensioning factor for the noise protection investments in Åkarp (at least with a calculated traffic increase up to 2020, the forecasting period in the Banverket railway report). Unless equivalent noise is accepted as the dimensioning factor in Åkarp, it may not be used in any other planning situation in Sweden either, because the high noise level is less persistent in other places. This confirms that our equivalent noise guideline value has been set at a very high level and is unparalleled, insofar as it never will be enforced.

The equivalent guideline values applying in Germany are 59 dBA daytime value (6 am to 10 pm) and 49 dBA at night (10 pm to 6 am) in housing areas, and, for places such as schools and daycare centers, there is a 57 dBA daytime value. Looking at this comparison, there may be cause to recall the joint statement by the Swedish and Danish prime ministers, who said that "the Öresund region will be among the most environmentally friendly regions in Europe." If that goal is to be reached, the equivalent noise guideline value must be lowered considerably.

Films with Analytical as well as Instructive Impacts

A problem with showing the equivalent noise measure as an average value is that it does not describe how rail traffic produces short sequences of high noise and intervening periods without train noise. The equivalent measure in relation to road traffic noise is slightly more intelligible, because road traffic is more evenly distributed over time. Consequently, comparisons of decibel values for road traffic and rail traffic are difficult. One way of bridging the gap in knowledge is to show the instantaneous noise on film; for example, railway noise can be depicted as foreground noise bubbles moving across a plan map, while road traffic noise is shown as a background image, an integral part of the map.

This is what John Wadbro (2005) has done in a film of Åkarp. His aim is to make road, as well as rail, traffic noise intelligible and comparable in the same film sequence. Four different films have been produced for different noise protection measures: (1) The ground alternative with walls 2 meters high, (2) embedded 1.5 meters plus walls, (3) tunnel alternative 1 km, and (4) tunnel alternative 1.6 km. Wadbro's color scale for the instantaneous noise is identical for road traffic noise and train noise. Consequently, one is not left with a single option of transforming train noise into equivalent noise in order to compare it with road traffic noise. Transforming the sound into a visual image improves our capacity to make the comparisons. To interpret the film, it is important to note that it does not primarily display the dose, that is, the average noise per time unit; however, such a display should be possible in a further developed version. The dose/response investigations originate from the premise that it is the combined dose over a certain period of time that is correlated to the response/health impact. Can one be certain, however, that the dose measure has the highest correlation with disturbance? Perhaps disturbance is also a function of the frequency of peaks in train noise, or the duration/length of trains, or the distribution between maximum noise and silence. Further studies are required in this area.

Not Only Regulations, but also Local Considerations

It also must be noted that "guideline values are not legally binding, but must serve as guidance when local factors and special circumstances in each individual case are taken into consideration" (Sahlin, 2005). This article primarily discusses calculation measurements and guideline values, but also deals with special circumstances, such as the need for serene places in one's surroundings. The sonic environment should not only focus on regulating the level of noise exposure, but also on developing quiet places and areas. Recent research has shown that among several environmental characteristics, serenity is key to basic human needs (Grahn, Stigsdotter, and Berggren-Bärring, 2005); however, serenity has not yet become a factor on par with other indicators of a sustainable society.

Conclusion

The Åkarp case study reveals that the duration of high noise from the railway line between Lund and Malmö, including Åkarp, is double that of other stretches of railway in Sweden. This implies that the maximum noise level of exposure has so far been the dimensioning factor for every other railway project in Sweden. From this it follows that traffic intensity has never weighed heavily into Banverket's calculations concerning noise protection; instead, Banverket has decided upon the same requirements for noise protection nationwide, regardless of the number and length of trains. Ten trains producing an X decibel noise level have resulted in demands for the same noise protection as 600 trains producing a noise maximum of X decibels. If the level of maximum noise exposure is equalized at 70 dBA, then the total exposure time to the noise of passing trains over a 24-hour period will be a determining parameter for comparisons between rail traffic noise in different cities. Thus, comparing the duration of high noise exposure is relevant and far easier to understand than is the comparing of equivalent noise values; therefore it is more appropriate from a democratic perspective.

The case study also exemplifies how the difficulty in assessing long-term traffic development has led Banverket to choose a somewhat short-term forecast period with a relatively moderate traffic development and, therefore, to suggest relatively limited noise protection. Judgments passed in Swedish Environmental Code cases have ordained, however, that traffic installation noise protection must be based on full use of the installation, irrespective of the time it takes for full use to appear. The study concludes, among other things, that the "bonus" of 5 dBA is not relevant today, because some rail sections in urban areas show high frequency use at night.

Recent research shows a significant increase in myocardial infarction associated with long-term high noise exposure (Babisch et al., 2005). Examples of "local factors and special

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circumstances" that must be taken into consideration are overlapping noises from other sources, such as nearby motorways, as well as local climatic phenomena—for example, ground inversion that may sometimes cause exceptional sound amplification. The value of public access to quiet and peaceful places, where inhabitants can satisfy their needs for relaxation, for hearing natural sounds, and the like, is also elucidated by the case study.

Public involvement in planning is critical to democratic outcomes. People must understand the technical issues (in this case, analysis of sound) if they are to participate in shaping public policy. This is only possible when the issues are presented in terms that make sense to the layperson. I have tried to show the kinds of questions for which the public requires answers, if they are to understand issues surrounding sound levels. The use of equivalent noise for rail traffic estimations is a special point of democratic weakness in the planning process. Using the more informative, accessible high noise parameter is a complementary option. I also have demonstrated how the film medium can be useful in illustrating comparisons between road and train traffic noise and in making alternative solutions for future rail traffic situations more intelligible.

Notes

1. Decibels adjusted (dBA), also called "A-weighted decibels," refers to the expression of the relative loudness of sounds in air as perceived by the human ear.
2. dB_{eq} refers to equivalent sound level per 24 hours; please also see E. Ohrström, A. Skånberg, L. Barregård, H. Svensson, and P. Ängerheim, 2005, "Effects of Simultaneous Exposure to Noise from Road and Railway Traffic," *Internoise 2005*, The 2005 International Congress and Exposition on Noise Control Engineering, Rio de Janeiro, Brazil, August 7–10.

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ENCLOSURE 5

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Crystal Curtis, Environmental Affairs Specialist, J.G. Boswell Company. Ms Curtis has over 10 years experience in environmental and regulatory issues affecting the J.G. Boswell Company. She has overseen compliance with Hazardous Materials Management and Communications; Federal and State Air compliance regulations including federal Title V; and federal and state water quality regulations, including industrial storm water compliance.

Isaac Faria, P.E., Environmental Affairs Specialist, J. G. Boswell Company. Mr. Faria stays current on environmental regulatory issues affecting the Company. As an environmental engineer, Isaac works directly on projects, conducting analysis, calculations, research, monitoring and reports. His recent projects include planning (CEQA and greenhouse gas regulations), Spill Prevention Control and Countermeasure plans, Risk Management Plans, and storm water regulations. Prior to joining the J.G. Boswell Company, Isaac worked at Boyle Engineering (now AECOM), an engineering consulting firm dedicated to water, wastewater, and transportation infrastructure projects. Mr. Faria received a B.S. in Civil and Environmental Engineering in 2005 from the University of California, Berkeley.

Raymond L. Carlson, partner, Griswold, LaSalle, Cobb, Dowd & Gin, L.L.P. Mr. Carlson has practiced law for the last 23 years in the fields of water rights; public entity law; environmental and administrative entity law and litigation; agricultural cooperatives; and business transactions and litigation. He received his J.D. from Boalt Hall in 1987.

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October 12, 2011

VIA UPS NEXT DAY AIR
TRACKING NO. 1Z F74 78R 01 9367 7010

Board of Directors
CALIFORNIA HIGH SPEED
RAIL AUTHORITY
770 L Street, Suite 800
Sacramento, CA 95814-3359

Re: The California High Speed Train Project Draft EIR/EIS
Fresno to Bakersfield Section
Comments of J.G. Boswell Company

Dear Chairman and Members of the Board:

This letter contains the comments of J.G. Boswell Company on the Draft EIR/EIS ("DEIR/DEIS") for the Fresno to Bakersfield Section of the California High Speed Train ("HST") Project ("Project").[1] The sponsoring agency for the Project is the California High Speed Rail

[1]There is ambiguity and uncertainty in the Project description. The Authority released the DEIR/DEIS for the Merced to Fresno section simultaneous with the Fresno to Bakersfield DEIR/DEIS. Each of these sections in itself constitutes a project for CEQA and NEPA purposes, but both are components of the larger state-wide high-speed train project. Proposotion 1A, approved by voters at the November 2008 general election, enacted Chapter 20 of Division 3 of the Streets and Highways Code, commencing with § 2704. Section 2704.04(a)(3)(A)-(G) authorized seven "high-speed train corridors" which do not include a separate Merced to Bakersfield "corridor" or a Merced to Fresno "corridor" or a Fresno to Bakersfield "corridor." Stand alone Merced-Fresno or Fresno-Bakersfield sections at most might be considered "usable segment[s]" under § 2704.01(g), but are not authorized for separate funding under § 2704.04(a)(3). Moreover a usable segment must be a portion of a corridor which in turn is a portion of the high-speed train system. If the Authority is proposing separate Merced-Fresno or Fresno-Bakersfield as (potentially) stand alone "sections", these projects are not legally fundable

Authority ("Authority"), created by the Legislature in 1996. See Cal. Public Resources Code §§ 18500 et seq., § 185020(a).

The DEIR/DEIS and accompanying technical appendices and memoranda are lengthy (17,000 pages). The Authority allowed at first only 45, and later, 60 days to review and comment on these environmental documents. This is a legally inadequate time period for review and comment on these environmental documents. The Merced to Fresno DEIR/DEIS and supporting appendices and memoranda add another 31,000 pages. The public is expected to meaningfully review and comment on 48,000 pages of documents describing the largest public works project in the history of the San Joaquin Valley, all in 60 days.

I. INTRODUCTION.

J.G. Boswell Company farms land in the vicinity of Corcoran, CA, and owns and operates agricultural processing facilities in Corcoran along both sides of the existing Burlington Northern Sante Fe ("BNSF") tracks. These facilities will be severely adversely impacted if not rendered unusable if the Corcoran Elevated Alignment or the BNSF Alignment is chosen by the Authority. These impacts are largely undisclosed in the DEIR/DEIS, and, given the lack of specificty of the DEIR/DEIS as a whole, this lack of disclosure is not surprising. The DEIR/DEIS itself admits that it is only a 15% concept design.

This lack of specificity hampers the DEIR/DEIS throughout and renders it an inadequate disclosure document. The impacts pointed out in this letter were derived by taking the 15% level detail presented on the appropriate map sheets and drawings in Volume III of the DEIR/DEIS, then using other tools (GIS, AutoCad, etc.) and data sets (legal descriptions, surveys, etc.) to attain a better understanding of the relationship between the actual footprint of the project works relative to the location of existing facilities and infrastructure and the impacts and encroachments of the former on the latter.

with bonds sold under the authority of Proposition 1A. There is no authority under Proposition 1A to build stand alone segments or sections of "high speed train corridors" without building the entire California High Speed Train Project of which the recognized corridors are a part. Therefore the ambiguity for purposes of the project description exists with respect to whether the "Project" is the full HSR state wide project (as suggested by the title of the DEIR/DEIS) or as a stand alone project or segment or section which cannot be funded as such with Proposition 1A bond funds. This ambiguity in the project description results in the DEIS/DEIR failing to adequately and consistently describe the project from which flows the deficient disclosure of impacts and ultimately the legal insufficiency of the DEIR/DEIS.

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J.G. Boswell previously submitted its letter dated September 8, 2011[2] explaining that the 60 day comment period was inadequate and illegal under CEQA, the CEQA Guidlines, and the requirements of due process. A further letter dated September 14, 2011 pointed out that the unannounced cancellation of the Board's scheduled September 22, 2011 meeting was a further deprivation of due process as well as denial of interested parties' First Amendment petition rights. A California Public Records Act request dated September 16, 2011 was submitted for all documents relating to the cancellation of the September 22, 2011 meeting.[3] The Authority did not reply to the PRA request within the required time, nor make any documents available for inspection or copying.

Due to lack of a legally adequate time for review and comment on the DEIR/DEIS, J.G. Boswell Company reserves the right to supplement these comments after October 13, 2011.[4]

The Authority and the Federal Railroad Administration agreed on a 45 to 60 day comment period on the DEIR/DEIS in the Grant/Cooperative Agreement FR-HSR-0009-10-01-01

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[2]All documents referred to, whether enclosed with this letter or not, are designated as part of the record of proceedings in this matter, and are intended for inclusion in the administrative record in any later proceedings that may be had.

[3]Cancellation of the meeting was in violation of the Bagley-Keene Open Meeting Law, Government Code §§ 11120-11132. The Act provides for regular, special, and emergency meetings, and for adjournment of regular and special meetings. Government Code § 11128.5. The Act does not provide for the "cancellation" of meetings and certainly does not provide for the cancellation of meetings sua sponte by the Board's staff, by any individual Board member or by the Board without taking such action at a properly noticed meeting. These matters are pointed out to show that during the crucial review and comment phase of the DEIR/DEIS process, the Authority is not proceeding in the manner required by law. In this case the September 22, 2011 meeting was simply and without notice deleted from the list of scheduled meetings, all in the best Orwellian fashion. In contrast the January 13, 2011 meeting remains listed but with a line drawn through it and the word "Canceled" next to it.

[4]As a further example of denial of due process and a legally inadequate time to comment, J.G. Boswell Company received a letter dated August 22, 2011 from James Labanowski of the URS/HMM/ARUP Joint Venture. The letter was in connection with planned utility relocation caused by impacts on existing utility infrastructure by the HST. The letter requested a response within 15 days (by September 6, 2011) of detailed information confirming the location, size and depth of utilities within map segments furnished with the letter. In other words the Authority's consultant was requesting the parties impacted by the Project to do its (the consultant's) work at the same time as the party was attempting to review and prepare comments on massive environmental documents totalling some 17,000 pages for the Fresno-Bakersfield section alone.

Amendment No. 1 dated December 2010. See Id. at p. 19. However, the legally adequate review period required by CEQA, the CEQA Guidelines and due process cannot be a matter of such an agreement. The requirement arises under requirements that exist extrinsic to the contract.

The extension of the comment period from 45 to 60 days on August 25, 2011 apparently was an act of the Authority's staff. The agenda for the August 25, 2011 Board meeting did not include extending the comment period. At that meeting, staff presented its "Update on Business Plan and Funding Plan." At that time, staff reported it intended to submit the draft Business Plan to the Board and to release the Business Plan for public review on October 14, 2011.

The Authority could not allow comments beyond October 13, 2011 because a longer comment period would expose its Business Plan for public review, comment and criticism. The economic viability of the Project has been seriously questioned. See California State Auditor, High-Speed Rail Authority: It Risks Delays or an Incomplete System Because of Inadequate Planning, Weak Oversight, and Lax Contract Management (April 2010 Report) at 19-24; Enthoven, et al., Revisiting Issues in the October 2010 Report: The Financial Risks of California's Proposed High-Speed Rail Project-The 2011 Edition (September 14, 2011) passim. The economic viability of the Project is tied to its alleged benefits such as creating 450,000 jobs, but not being a growth inducing project, merely offsetting traffic from clogged roads to the HST, etc. Extending the comment period beyond October 13 would permit commenters to criticize the Business Plan and the legitimacy and efficacy of the Project ("the project purpose and need").

The claimed benefits of the Project are all presented on a statewide basis rather than a section by section basis. These claimed benefits will be used to justify an elaborate set of Statements of Overriding Considerations that will be submitted under CEQA Guidelines 15093. SOCs will be necessary because of the numerous significant impacts which cannot be mitigated to a level of less than significant. See, e.g., DEIR/DEIS Table S-3. The SOCs will not be made available for prior review, comment and potential revision. The procedure in adopting the SOC's is entirely lacking in any semblance of due process. The Authority is shaping the DEIR/DEIS public review and comment process to be as inconvenient to the public as possible. Thus it continues to insist on the October 13, 2011 comment deadline date and has stated it will not review any comments submitted after that date.

The extremely restricted review and comment process cause the remainder of these comments to necessarily[5] focus on the localized impacts to J.G. Boswell Company's facilities

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[5]It was not possible in the time available to engage suitable outside consultants to address the more general aspects of the DEIR/DEIS. Such consultants are not retained nor is their work performed in the severely limited time that was avialable. A panel of experts cannot be assembled in an instant. The focus had to be on the Company's activities and facilities along the

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located in Corcoran, CA. Reference is also made on occasion to impacts to the community and City of Cororan. Attention is given to impacts that are ignored, unrecognized and undisclosed. These defects in the analysis in no way relieve the Authority of its duty to mitigate these impacts.

The discussion is organized as follows:

Part II: Alternative C1 - Corcoran Elevated Alignment--SEE MAP ENCLOSURE #1
Part III: Alternative C2 - Corcoran Bypass Alignment--SEE MAP ENCLOSURE #2
Part IV: Alternative C3 - BNSF Alignment--SEE MAP ENCLOSURE #4

II. ALTERNATIVE C1 - THE CORCORAN ELEVATED ALIGNMENT WILL HAVE SIGNIFICANT NEGATIVE ADVERSE IMPACTS TO THE AGRICULTURAL PROCESSING FACILITIES LOCATED ON BOTH SIDES OF THE EXISTING BNSF TRACKS. SEE MAP ENCLOSURE #1.

J.G. Boswell Company owns and operates various agricultural processing facilities that are significantly and negatively impacted by the HST Corcoran Elevated Alternative Alignment. Adjacent or in close proximity to the Corcoran segment of the Corcoran Elevated Alternative are office facilities, a vegetable oil processing mill, cotton gins, seed treatment facilities, seed storage facilities, warehouse facilities, cotton bale and cotton module storage yards, irrigation pumps, water conveyance structures, and various other agricultural commodity processing operations plus shops, vehicle storage sites, fueling locations, etc. In addition to generating substantial economic activity, these operations provide significant employment for the general region. The noise, aesthetics, and impacts to existing structures and employees are adverse and substantial.

Each of the facilities are subject to various regulatory programs administered by multiple state and federal agencies, including but not limited to, state and federal occupational health and safety standards, air quality, water quality, storm water, and other requirements. Many of the permits issued to specific facilities would be affected by impacts from the Corcoran Elevated Alternative on the respective facility (e.g., closure, relocation, etc.). One of the main problems encountered was lack of detail in the alignments. Addressing the impacts of the Corcoran Elevated Alternative utilizing the DEIR/DEIS conceptional level (15 percent) design plans creates a significant and burdensome requirement. The lack of detail forced our staff to provide data detailing our site specific utilities, pipelines, conveyance structures, traffic patterns, and structures.

Limited and legally indequate time was provided to review the DEIR/DEIS and the supporting technical reports and alignments. Therefore, in the limited time available, J.G. Boswell Company's efforts concentrated on the impacts identified within selected sections of the

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various alternative alignments in the Corcoran area.

DEIR/DEIS.[6] Due to the insufficient time for the comment period, our efforts concentrated on reviewing the following sections:

1. Noise and Vibration
2. Socioeconomics, Communities, and Environmental Justice
3. Volume III: Section A - Alignment Plans Part 1

Noise and Vibration Section 3.4

J.G. Boswell Company developed scaled renditions of the agricultural processing facilities in order to analyze the impacts of the Corcoran Elevated Alternative on the industrial facilities and identify facilities that are impacted by the project. Also reviewed were traffic circulation patterns within the Corcoran Elevated Alternative Alignment on operations and potential impacts. Based on the Company's experience in operating these facilities, the impacts are significant and adverse.

The DEIR/DEIS Section 3.4 is deficient in addressing the noise and vibration impacts to J.G. Boswell Company's agricultural processing facilities. The noise impacts to employees at industrial operations are represented by only one monitoring site study. The additional noise and vibration from the HST is not specifically addressed; there is only a generalized analysis to residences and sensitive receptors. The combination of noise and vibration from current processes, the existing rail, and HSR would be adverse and substantial. Section 3.4 states in part: "There would be substantial effects under NEPA and significant impacts under CEQA for many of the receivers along the Corcoran Elevated Alternative Alignment, before consideration of mitigation. Table 3.4-15 lists the number of sensitive receptors along the Corcoran Elevated Alternative that may receive moderate or severe noise impacts from operation of the proposed project. There are 201 additional severe noise impact receivers and 131 additional moderate noise impact receivers with this alternative, compared with those of the corresponding portion of the BNSF Alternative. Appendix 3.4-A Noise and Vibration Tables 6 and 7 (pp. 3.4-A-45, 46) list the potential noise impacts under the Corcoran Elevated Alternative Alignment without mitigation for the design year (2035) at each of the locations where existing noise measurements were conducted. Additional site specific noise and vibration studies are recommended to be conducted analyzing the short and long term impacts to existing structures including noise level exposure to employees at the J.G. Boswell Company's agricultural processing facilities from the Corcoran Elevated Alternative Alignment. This manner of procedure constitutes impermissible deferred mitigation.

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[6]The legally inadequate comment/review period also precluded being able to assemble the consultants and experts who could have materially assisted the review. There simply was not enough time to engage consultants or for them to do substantive work in terms of reviewing and commenting on these massive documents (17,000 pages for Fresno-Bakersfield and 31,000 for Merced-Fresno).

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The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.4.7 and 3.4.8 are deficient due the absence of analyzing the site specific effects of noise and vibration on the J.G. Boswell Company's agricultural processing facilities, including structures and employees.

Summary DEIR/DEIS Section 3.4 Noise and Vibration

Due to insufficient time to address the DEIR/DEIS Noise and Vibration not all deficiencies have been addressed in detail, but suffice it to say that the above significant deficiencies may be added too or amended at a later date. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.4.7 and 3.4.8 are deficient due the absence of analyzing the site specific effects of noise and vibration on the J.G. Boswell Company's agricultural processing facilities, including structures and employees.

Section 3.12 Socioeconomics, Communities, and Environmental Justice

DEIR/DEIS Section 3.12 is deficient in addressing Disruption or Division of Existing Communities from the Corcoran Elevated Alternative Alignment. The DEIR/DEIS states "The displacements, along with the increased noise and visual impacts associated with the HST project, could affect social interactions, community cohesion, and perceived quality of life in Corcoran. This would be a moderate to substantial effect under NEPA, but a less-than-significant impact under CEQA, because of the presence of an existing transportation corridor and availability of relocation resources in the community." The statement that these impacts are less than significant under CEQA due to "an existing transportation corridor and availability of relocation resources" is misleading. J.G. Boswell Company disagrees that the additional noise will not create a significant impact under CEQA. The noise impacts on employees and office personnel have not been studied to account for the additive noise effect of both HST operation and that of the existing rail road. This must be analyzed further to understand the additional mitigation required. To state that the ability of relocation resources will suffice as adequate mitigation for J.G. Boswell Company and the Corcoran community on the loss of high value agricultural processing facilities is misleading and inappropriate. Certain facilities, for instance the seed warehouse and storage tanks adjacent to Whitley Avenue and the scale house and unloading facilities at the east townsite agricultural processing facilities are subject to potential closure under the Corcoran Elevated Alternative Alignment. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.12.7 and 3.12.8 are deficient due the absence of identifying J.G. Boswell Company's agricultural processing facilities as an affected business subject to closure and relocation.

Summary EIR/EIS Section 3.12 Socioeconomics, Communities, and Environmental Justice

Due to insufficient and legally inadequate time to address the DEIR/DEIS Socioeconomics, Communities, and Environmental Justice on the agricultural processing facilities, not all deficiencies

have been addressed in detail. Suffice it to say that the above significant deficiencies may be added too or amended at a later date. Each of the aforementioned deficiencies are significant adverse impacts. As such, the NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.12.7 and 3.12.8 are deficient due the absence of identifying J.G. Boswell Company's agricultural processing facilities as an affected business subject to closure and relocation.

The base engineering criteria used to review Transportation Section 3.2 was the High Speed Rail Authority's Publication Volume III Section C – Roadway and Grade Separation Plans Part 1 of 2. In house engineering staff developed a rendition map of the impacts from the proposed Corcoran Elevated Alternative Alignment. That map is attached as Enclosure #1 and an explanation of the impacts is listed below keyed to the numbers shown on the map:

1. THE CORCORAN ELEVATED ALTERNATIVE REQUIRES RELOCATION OF THE PG&E 12kV OVER HEAD DISTRIBUTION LINE ALONG THE EAST SIDE OF SANTA FE AVENUE.

The DEIR/DEIS is deficient in analyzing the PG&E overhead 12-kV electrical service line serving the community and J.G. Boswell Company's agricultural processing facility. The Corcoran Elevated Alternative would impact PG&E overhead 12KV electrical service line thereby affecting the J.G. Boswell Company agricultural processing facility.

2. RELOCATION OF THE CONNECTION POINT OF PG&E'S 12kV OVERHEAD DISTRIBUTION LINE EASTERLY ALONG THE NORTH SIDE OF SHERMAN AVE EXTENDED.

The DEIR/DEIS is deficient in analyzing the PG&E overhead 12KV electrical service line serving the community and J.G. Boswell Company's agricultural processing facility. The Corcoran Elevated Alternative would impact the PG&E overhead 12KV electrical service line thereby affecting J.G. Boswell Company's agricultural processing facility.

3. RELOCATION OF PG&E'S 12 kV OVERHEAD DISTRIBUTION LINE FROM THE WEST SIDE OF PICKERELL AVENUE INTO THE NORTH-EAST CORNER OF J.G. BOSWELL COMPANY'S WEST AGRICULTURAL PROCESSING SITE.

The DEIR/DEIS is deficient in analyzing the revision to the PG&E overhead 12-kV distribution line from the west side of Pickerel Avenue into the northeast corner of J.G. Boswell Company's west agricultural processing facility. The issue of analyzing the relocation of this line is important because it is essential to the operation of the facilities.

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

4. RELOCATION OF UNDER GROUND PULL/SPLICE BOX FOR J.G. BOSWELL COMPANY'S MAIN FIBER OPTIC COMMUNICATIONS CABLE BETWEEN THE WEST AND EAST AGRICULTURAL PROCESSING FACILITIES.

The DEIR/DEIS is deficient in analyzing the relocation of the underground pull/splice box for J.G. Boswell Company's main fiber-optic communication cable between the east and west of J.G. Boswell Company's agricultural processing facilities. The issue is whether maintenance will be able to continue on this main communication with the operation of the HST.

5. RELOCATION OF THE SAMPLING PLATFORM AT CALIFORNIA STATE GRADING STATION.

The DEIR/DEIS is deficient in analyzing the relocation of the sampling platform at the California State Grading station. The California Department of Food and Agriculture maintains a sampling station at the east facility. This is an important regional commodity sampling station; the HST DEIR/DEIS must address the continued operation of the station and under what conditions.

6. LOSS OF TRUCK PARKING AND TRAFFIC FLOW PATTERN AT THE GRAIN GRADING STATION.

The DEIR/DEIS is deficient in analyzing the loss of truck parking and traffic flow pattern at the the grain grading station serving the J.G. Boswell Company agricultural processing facility east of the Corcoran Elevated Alternative for the reasons stated in item 5 above.

7. RELOCATION OF J.G. BOSWELL COMPANY EAST SITE, MAIN NORTH SOUTH SURFACE RUNOFF COLLECTION SWALE/GUTTER.

The DEIR/DEIS is deficient in analyzing the stormwater regulatory impacts for impacted industrial sites. The Corcoran Elevated Alternative effects individual elements of the total surface runoff collection system that may result in the necessity to completely redesign the site's grading to accommodate the drainage.

8. RELOCATION OF J.G. BOSWELL COMPANY EAST SITE, WEST SIDE SURFACE RUNOFF COLLECTION SUMP AND PUMP STATION.

The DEIR/DEIS is deficient in analyzing the stormwater regulatory impacts for impacted industrial sites. The Corcoran Elevated Alternative effects on individual elements of the total surface runoff collection system that may result in the necessity to completely redesign the site's grading to accommodate the drainage.

9. RELOCATION OF PUMPED OUTFLOW LINE ALONG THE EAST SIDE OF SANTA FE AVENUE.

The DEIR/DEIS is deficient in analyzing the stormwater regulatory impacts for impacted industrial sites. The Corcoran Elevated Alternative effects on individual elements of the total surface runoff collection system that may result in the necessity to completely redesign the site's grading to accommodate the drainage.

10. RELOCATION OF 8" DIAMETER J.G. BOSWELL COMPANY WATER LINE ALONG THE EAST SIDE OF SANTA FE AVENUE.

The DEIR/DEIS is deficient in analyzing the relocation of the 8" diameter J.G. Boswell Company water line along the east side of Sante Fe Avenue thereby affecting the east J.G. Boswell Company agricultural processing facility.

11. RELOCATION OF 12kV SERVICE/METER POLE FOR JGB GIN#5.

The DEIR/DEIS is deficient in analyzing the relocation of the 12 kV service/meter pole for the east agricultural processing facility cotton gin number five. The relocation of this structure affects the operation of the entire cotton gin. The Authority must note the requirement for agricultural commodities to be processed on a timely basis and construction operations must not interfere with the timely operation of these facilities.

12. INTERFERENCE WITH RAILROAD SPURS INTO EAST SITE AND AT "D" TANKS.

The DEIR/DEIS is deficient in analyzing interference with the railroad spur into the east site at the large capacity storage tanks. The lack of detail in the design maps prevents an accurate determination of this effect, but presently it appears that the Authority must perform additional analysis on the impacts to this location.

13. LOSS OF TRUCK STAGING AND TRAFFIC FLOW PATTERN AT RANCH OFFICE (EAST) TRUCK SCALES.

The DEIR/DEIS is deficient in analyzing the loss of truck parking and traffic flow patterns at the east J.G. Boswell Company agricultural processing facility Ranch Office. The elimination of the truck parking and altering of the traffic patterns may require a redesign of the facility. The Authority should recognize that altering traffic flows and access requires facility design modifications that could be very significant.

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14. LOSS OF RANCH OFFICE PARKING LOT AND TRAFFIC PATTERN.

The DEIR/DEIS is deficient in analyzing the loss of parking and traffic flow pattern at the east J.G. Boswell Company agricultural processing facility Ranch Office. The elimination of the truck parking and altering of the traffic patterns may require a redesign of the facility. The Authority should recognize that altering traffic flows and access requires facility design modifications that could be very significant. This effect is similar to item 13 above.

15. ELEVATED EXPOSURE LEVELS OF NOISE AND VIBRATION AT AGRICULTURAL PROCESSING FACILITIES OFFICE OCCUPANTS.

The DEIR/DEIS is deficient in analyzing the noise and vibration impacts to J.G. Boswell Company's agricultural processing facilities. The noise impacts to employees at industrial operations are represented by only one monitoring site study. The additional noise and vibration from the HST are not specifically addressed, and only generalized analysis to residences and sensitive receptors is presented. The combination of noise and vibration from current processes, the existing rail, and HST, would be adverse and substantial. Section 3.4 states in part: "There would be substantial effects under NEPA and significant impacts under CEQA for many of the receivers along the Corcoran Elevated Alternative Alignment, before consideration of mitigation. Table 3.4-15 lists the number of sensitive receivers along the Corcoran Elevated Alternative that may receive moderate or severe noise impacts from operation of the proposed project. There are 201 additional severe noise impact receivers and 131 additional moderate noise impact receivers with this alternative, compared with those of the corresponding portion of the BNSF Alternative. Appendix 3.4-A Noise and Vibration Tables 6 and 7 list the potential noise impacts under the Corcoran Elevated Alternative Alignment without mitigation for the design year (2035) at each of the locations where existing noise measurements were conducted." Additional site specific noise and vibration studies should be conducted analyzing the short and long term impacts to existing structures including noise level exposure to employees at J.G. Boswell Company's agricultural processing facilities from the Corcoran Elevated Alternative Alignment.

16. REDUCED ACCESS, LOSS OF PARKING (STAGING AREA) AND TRUCK TRAFFIC FLOW PATTERN AT WEST ELEVATOR/WEST SIDE LOAD OUTS AND SHANZER DRYER.

The DEIR/DEIS is deficient in analyzing the loss of parking (staging area) and truck traffic flow patterns at the east J.G. Boswell Company agricultural processing facility's west elevator/west side load outs and Shanzer dryer. The Authority should recognize that altering traffic flows and access requires facility design modifications that could be very significant. This effect is similar to item 13 above.

17. POSSIBLE REVISION/RELOCATION OF EAST SITE PUMPED SEWER LINE.

The EIR/EIS is deficient in addressing the sanitary sewer system at impacted facilities. The Whitley Avenue Overcrossing and the Corcoran Elevated Alternative will eliminate the pumped sanitary sewer line out of the east site to the city sewer line affecting J.G. Boswell Company Agricultural Processing Facility. The elimination of this station will require a redesign of the sewer line system at the east site.

18. LOSS OF ACCESS AND REDUCED TRAFFIC FLOW PATTERN AT "D" TANKS WAREHOUSE.

The DEIR/DEIS is deficient in analyzing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to the J.G. Boswell Company agricultural processing facility. The Corcoran Elevated Alternative will eliminate vehicle access to the north entrance (emergency access) of the west processing site. This is an adverse and significant impact to the security and safety of the facility.

19. COMPLETE LOSS OF WAREHOUSE "B", TRUCK DOCK, AND RAILROAD SPUR.

The DEIR/DEIS is deficient in analyzing the Corcoran Elevated Alternative's impacts to the J.G. Boswell Company agricultural processing facility "warehouse B". The Corcoran Elevated Alternative will eliminate the warehouse, truck dock, and railroad spur. This compete loss of a facility is a significant and adverse impact to the operations of the J.G. Boswell Company.

20. LOSS OF SURFACE WATER DRAINAGE SYSTEM AT SOUTH END OF EAST SIDE.

The DEIR/DEIS is deficient in analyzing the loss of the existing surface drainage system at the south end of the east J.G. Boswell Company agricultural processing facility. The Corcoran Elevated Alternative's effect on individual elements of the total surface runoff collection system may result in the necessity to completely redesign the site's grading to accommodate the drainage.

21. REDUCED MODULE STORAGE YARD CAPACITIES.

The DEIR/DEIS is deficient in analyzing the localized impacts of the Corcoran Elevated Alternative to the East Facility cotton ginning operations and seed cleaning and storage operations. The DEIR/DEIS is silent in analyzing the setback requirements for cotton module storage and other risk avoidance measures created by the loss of cotton module storage yard area. Decrease in the module yard storage area caused by the relocation or closure of Sante Fe Avenue may have the unintended consequence of limiting the operating capacity of the cotton gin.

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22. POSSIBLE REVISION TO TELEPHONE COMPANY'S MAIN FIBER OPTIC COMMUNICATIONS CABLE LOCATION AND COVER.

The DEIR/DEIS is deficient in addressing the impacts of the Corcoran Elevated Alternative to the telephone company's main fiber optic communication cable location and cover. The telephone company's main fiber optic communication cable affects the entire community. The Authority must recognize that any interruption to communication service represents a significant adverse impact.

The above 22 points shows numerous undisclosed impacts of the Corcoran Elevated Alternative that result in closure of the vegetable oil mill, the cotton gin and have many other negative impacts, as noted. These are shown on the enclosed map, which is Enclosure #1 to this letter and keyed by number to the impact.

III. ALTERNATIVE ALIGNMENT C2 - CORCORAN BYPASS DOES NOT IMPACT PUBLIC SAFETY BY PASSING AT A POINT IN THE VICINITY OF THE PRIVATE SALYER FARMS AIRPORT. SEE MAP ENCLOSURE #2.

J.G. Boswell Company owns and operates a private airport, the Salyer Farms Airport or Salyer Airport. Salyer Farms Airport is a 6818 foot long runway facility, located on the east side of Corcoran, and immediately to the west of State Highway 43. The airport is utilized by a variety of jet, turboprop, turbine helicopter, and piston engine aircraft. With other local public and private airports unable to handle some of these aircraft, there is no local suitable alternative. The Salyer Airport is referenced in Section 3.11 Safety and Security and Section 3.19 Cumulative Impacts. The airport is referenced in the document interchangeably as either "Salyer Airport" or "private airport", or both. This lack of a consistent reference term creates confusion on the part of the reviewers both in finding references to the facility in various sections and technical reports and in determining if the reference actually refers to the "Salyer Airport."

Table 3.11-5 Airports, Airstrips, and Heliports within 2 Miles of Alignment Alternative Centerlines, identifies the Salyer Farms Airport (private airport) as being 0.56 miles from the centerline of the BNSF Alternative and 0.18 miles (950 feet) from the Corcoran Bypass Alternative. On page 3.11-32 the statement is made, without reference to any substantial evidence, that the Corcoran Bypass Alternative Alignment is within 0.07 mile (370 feet) of the Salyer Farms Airport. The DEIR/DEIS states that the location of the HST this close to the airport would be a hazard to aviation and therefore would pose a hazard for people residing or working in the project area. The DEIR/DEIS further states that the "This would be a substantial effect under NEPA to the Salyer Farms Airport and would be a potentially significant impact under CEQA."

As demonstrated by the attached analysis conducted by Tartaglia Engineering, the foregoing statement is not supported by substantial evidence, is incorrect, and must be modified to reflect that

the HST does not create a hazard to aviation, and does not pose a threat to people residing or working in the project area. The Tartaglia Engineering report states in part in their conclusions and recommendations that the HST and the proposed communication towers do not present any impact to the existing operations at the Salyer Airport.

Section 3.11.8 NEPA Impacts Summary must be modified to delete the statement "Substantial effects from proximity to a private airstrip along the Corcoran Bypass Alternative." Section 3.11.9 CEQA Significance Conclusions must also be modified to delete reference to the Salyer Airport project impact. Based upon the site specific analysis, the effects of the Corcoran Bypass Alternative are considered negligible under NEPA and impacts would be less than significant under CEQA.

The proposed mitigation measure is not necessary, the present data does not justify the removal of the airport as a mitigation measure. The following statements in the DEIR/DEIS were apparently used to justify removal or seizure of the airport as a mitigation measure. These statements should be deleted or revised to conform to the Tartaglia Engineering report submitted herewith. The DEIR/DEIS presents the following on page 3.11:

"Corcoran Bypass Alternative Alignment

"The Corcoran Bypass Alternative Alignment is not in proximity to any public service airport. It is within 0.07 mile of the Salyer Farms Airport. The location of the HST this close to the airport would be a hazard to aviation and therefore would pose a hazard for people residing or working in the project area. This would be a substantial effect under NEPA to the Salyer Farms Airport and would be a potentially significant impact under CEQA."

And then further on page 3.11-38 under the Safety and Security measure:

"3.11.7 Mitigation Measures

"• S&S-MM#1: Compensation for Loss of a Private Airstrip. Provide compensation to the property owner of a private airstrip where the airstrip could no longer be used because of the proximity of HST facilities. Compensation is provided when the property owner planned to otherwise continue airstrip operations. The choice of continued operation is based on use of the airstrip for 3 years prior to project construction."

The mitigation measure states in a cavalier fashion that the owner would be compensated for the loss of a Private Airstrip.". This remark is entirely deficient and points to the complete lack of due diligence on the part of High Speed Rail Authority in understanding the function and purpose

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of the airport. The verbage "Airstrip" conveys an opinion that the airport is nothing more than an inconsequential facility of low utility and value. From the design description provide in these comments, the Authority will subjected to a rude awakening of the utility and value of this fully functioning private airport operation.

IV. ALTERNATIVE C3 - THE BNSF ALTERNATIVE HAS SIGNIFICANT UNDISCLOSED ADVERSE IMPACTS INCLUDING IMPACTS ON EXISTING INFRASTRUCTURE AND ON THE OPERATION OF EXISTING AGRICULTURAL PROCESSING FACILITIES. SEE MAP ENCLOSURE #4.

J.G. Boswell Company owns and operates various agricultural processing facilities that will be adversely impacted by the HST. Adjacent or in close proximity to the Corcoran segment of the HST BNSF Alternative are office facilities, a vegetable oil processing mill, cotton gins, seed treatment facilities, seed storage facilities, warehouse facilities, cotton bale and cotton module storage yards, irrigation pumps, water conveyance structures, and various other agricultural commodity processing operations and associated infrastructure including shops and vehicle fueling and storage areas. In addition to generating substantial economic activity, these operations provide significant employment for the general region.

Each of the facilities are subject to various regulatory programs administered by multiple state and federal agencies, including but not limited to air permits to operate, Regional Water Quality Control Board requirements, programs to manage hazardous materials and waste; utilities; and other requirements. These permits would be impacted by the through Corcoran BNSF Alternative. Attached is a rendition of the agricultural processing facilities situated east and west of the proposed BNSF Alternative, which bisects the operation.

As a limited and legally insufficient time was provided to review the DEIR/DEIS and the supporting technical reports and appendices, our efforts necessarily concentrated on the impacts identified with the following sections of the DEIR/DEIS:

Transportation
Air Quality and Global Climate Change
Hydrology and Water Resources
Socioeconomics, Communities, and Environmental Justice
Volume III: Section A - Alignment Plans Part 1

One of the main problems encountered were the lack of detail in the alignments. Addressing the impacts of the BNSF Alternative utilizing the DEIR/DEIS conceptional level (15 percent) design plans created a significant and burdensome requirement. The lack of detail forced our staff to provide data detailing our site specific utilities, pipelines, conveyance structures, traffic patterns, and facility impacts.

Transportation Section 3.2

Our operations developed scaled maps or renditions of the BNSF Alternative so that we could analyze the impacts of the crossings and alignments on the industrial facilities. Our analysis identified significant deficiencies in the documents, both in the design and environmental impact analysis. The BNSF Alternative discussion regarding roadway closing and roadway crossings is grossly inadequate for the Corcoran segment. The DEIR/DEIS discussion centers on regional aspects but not on the specific off-site impacts created both by the localized project changes in the traffic patterns and the significant and irreversible adverse environmental impacts on J.G. Boswell Company agricultural processing facilities.

DEIR/DEIS Section 3.2 Transportation is deficient; there is no detailed site specific analysis of the environmental impacts associated with the overcrossings at Whitley Avenue, Sherman Avenue, and closure of Sante Fe Ave. In essence, the two overcrossing structures and Sante Fe Avenue closure restrict movement of heavy duty diesel trucks transporting commodities from the field to the facilities east of the BNSF Alternative. From the J.G. Boswell Company operational perspective the closure of Santa Fe Avenue effectively bars field commodities from being delivered via Sante Fe Avenue to the facilities east of the BNSF Alternative from the field and effectively results in the industrial site east of the tracks being landlocked. The Authority appears to assume, without substantial evidence, that all commodity truck traffic would be diverted through the main industrial facility on the west of the BNSF Alternative, via the narrow private overpass, to the East facility. Access from Whitley Avenue is not an option due to the closure of the crossing. The Whitley Avenue overcrossing does not provide adequate access to the East facility, and the intersection at Whitley would require a switchback around to Sante Fe Avenue. The traffic pattern for delivery of commodities from the field and other offsite locations to J.G. Boswell Company east of the BNSF Alternative is not feasible due to the traffic pattern created by the changes from the pre-project surface streets. The Whitley Avenue, Private Overcrossing, and closure of Sante Fe Avenue constitutes a substantial adverse impact under NEPA and a significant impact under CEQA. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.2.7 and 3.2.8 are grossly deficient and require revision and recirculation of the DEIR/DEIS in light of these comments.

DEIR/DEIS Section 3.2 Transportation is deficient in analyzing the localized impacts of the increase in truck traffic through the existing industrial site. The overcrossings and road closures, including the south closure of Sante Fe Avenue, effectively land locks J.G Boswell facilities located on the east side of the BNSF Alternative, providing no direct truck routes to the gins located there, and other grain processing and storage facilities from the fields. An inadequate overcrossing is proposed to be provided at Sherman Avenue. Based upon our analysis the overcrossing will be a single lane passage. The overcrossing ingress and egress onto Boswell sites modifies the entire truck traffic circulation pattern. Increasing the width of the private overpass would only exacerbate the circulation issues. This constitutes a severe deficiency in addressing the localized impacts. The

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DEIR/DEIS states "To obtain existing conditions information, traffic analysts conducted traffic counts for existing daily operating conditions for roadways that are outside the range of the regional model along the BSNF Alternative, Corcoran Elevated and Corcoran Bypass alternatives, the Allensworth Bypass, Wasco-Shafter Bypass, and Bakersfield South alternatives. This helped determine the current adequacy of the roads, and provide a baseline for comparing future roadway segments that may be affected by the project alignment." There was no discussion regarding the timing or frequency of the traffic counts, and to our knowledge there was no local Corcoran or J.G. Boswell Company stakeholder input into the traffic counts. The modified onsite and offsite traffic patterns constitute a substantial adverse impact under NEPA and a significant impact under CEQA. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.2.7 and 3.2.8 are deficient and require revision and recirculation of the DEIR/DEIS in light of these comments.

DEIR/DEIS Section 3.2 Transportation is deficient in analyzing the localized impacts of the Whitley Ave. overcrossings to the east facility cotton ginning operations and seed cleaning and storage operations. The DEIR/DEIS is silent in addressing the setback requirements for cotton module storage and other risk avoidance measures created by the bisecting of the cotton module storage yard. The overcrossing effectively eliminates the cotton module storage yard. The bisecting of the east facility cotton module storage yards and resulting elimination of cotton module storage forces the closure of the east facility cotton ginning operations. The closure of the cotton gin creates socioeconomic and environmental impacts (addressed later) that are not indentified in the DEIR/DEIS.

The Whitley Avenue warehouse will be limited in its ability to receive and store seed for treatment. It appears from the design of the Whitley Avenue overcrossing that the Authority's engineers assumed that most receiving seed would be incoming from Highway 43 and not from nearby field operations. The facility receives commodity by rail and ships by rail, the loss of a rail spur within the facility is a significant impact. The design of the Whitley Avenue overcrossing constitutes a substantial adverse impact under NEPA and a significant impact under CEQA. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.2.7 and 3.2.8 are deficient and require revision and recirculation of the DEIR/DEIS in light of these comments.

DEIR/DEIS Section 3.2 Transportation is deficient in analyzing the localized impacts of the proposed private Sherman Avenue overcrossing. The design of the overcrossing is silent in addressing the offsite consequences of this construction project which are substantial and serious. The overcrossing effectively eliminates the existing traffic pattern for finished oil load out from the vegetable oil processing mill finished oil tanks, thereby eliminating the ability to load vegetable oil trucks. The overpass encroaches on the vegetable oil mill finish oil storage tanks, resulting in the removal of storage tanks for finished oil. The closure of the vegetable oil load-out and change in J.G. Boswell Company traffic patterns is a substantial adverse impact under NEPA and a significant impact under CEQA. The NEPA Impacts Summary and CEQA Significance Conclusions described

in Sections 3.2.7 and 3.2.8 are deficient and require revision and recirculation in light of these comments.

DEIR/DEIS Section 3.2 Transportation is deficient in analyzing the localized impacts of the private Sherman Avenue overcrossing regarding agricultural commodity transport. The road is 24 feet wide; according to our internal review this is too narrow to support two-way traffic when transporting cotton modules given the width and length of module trailers and truck trailer articulation. The turn radius provides insufficient clearance for the cotton module trucks. The clearance distance between trucks is insufficient when taking into account the loaded trailer width dimensions. The result would be increased congestion combined with vehicle safety issues. The private Sherman Avenue overcrossing affects the J.G. Boswell Company traffic patterns, the ability to transport commodities such as cotton modules in a safe and economical way, and emission estimates and traffic congestion impacts. Therefore the Sherman Avenue overcrossing creates substantial adverse impacts under NEPA and significant impacts under CEQA. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.2.7 and 3.2.8 are deficient and require revision and DEIR/DEIS recirculation in light of these comments.

Summary of DEIR/DEIS Section 3.2 Transportation Impacts on Agricultural Processing Facilities:

The base engineering criteria we used to review Transportation Section 3.2 was the High Speed Rail Authority's Publication Volume III Section C - Roadway and Grade Separation Plans Part 1 of 2. We referenced alignment C3 grade separation layout drawing number CT1277, 15% design submission. Alignment C3 - BNSF Alternative presents significant challenges to the continued operation of the J.G. Boswell Company's Corcoran agricultural processing facilities. The BNSF Alternative will result in the permanent closing and or relocation of cotton module storage yards, the permanent closing and or relocation of a cotton gin, the permanent closing or relocation of vegetable oil refinery operations, and the permanent closing and or relocation of grain and seed warehousing operations. The transportation impacts were insufficiently analyzed and the proposed structures will result in the closing of a cotton gin and the closing of a portion of the vegetable oil mill. As identified in the preceding, DEIR/DEIS Transportation Section 3.2 is deficient in analyzing the offsite adverse significant impacts from the proposed Corcoran BNSF Alternative. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.2.7 and 3.2.8 are deficient and require revision and recirculation of the DEIR/DEIS in light of these comments.

Air Quality and Global Climate Change Section 3.3

J.G. Boswell Company personnel developed scaled renditions of the BNSF Alternatives so that they could analyze the impacts of the crossings and alignments on the industrial facilities and identify facilities that are permitted by air regulatory agencies. They also reviewed traffic circulation patterns within operations and potential impacts. The DEIR/DEIS discussion centers on regional aspects but not on the specific off-site impacts created both by the localized project changes in the

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traffic patterns and the environmental impacts on J.G. Boswell Company agricultural processing facilities.

The DEIR/DEIS Section 3.3 regarding global climate change is deficient in not analyzing the localized air quality impacts from the revised traffic circulation patterns, particularly the microscale impacts as they relate from increase in vehicles miles traveled due to road closures and congestion within the City of Corcoran for example at the Whitley Avenue overcorssing. Specifically, no analysis was performed regarding the traffic circulation impacts to the J.G. Boswell Company. The disruption from the overcrossings and elimination/modification of existing truck circulation routes are significant impacts to the City and to the Company. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.3.7 and 3.3.8 are deficient due the absence of emissions studies specific to Corcoran and the affected processing sites.

The DEIR/DEIS Section 3.3 is deficient in analyzing microscale emission impacts. The DEIR/DEIS analyzes CO microscale emission impacts. However the same need exists to analyze microscale effects of PM10 and PM2.5 in local areas, such as Corcoran. The section identifies the "Local" study area as having potential major air emission activities along the Project alignment and generally defined as areas within 1,000 feet of the proposed stations, major intersections and HMFs." According to the Air Quality Technical Report only specific facilities proposed as part of the Project and a 1,000 foot buffer are analyzed for potential impacts and location of sensitive receptors. This defined "Study Area" fails to take into consideration the larger extent of Project imposed traffic congestion beyond a 1,000 foot buffer in the City of Corcoran, and must do so. This defined 'Study Area" fails to take into consideration localized wind circulation changes from overcrossing structures, construction, hauling and other project related impacts that will occur. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.3.7 and 3.3.8 are deficient due to the absence of emissions studies specific to Corcoran and the affected processing sites requiring revision and recirculation of the DEIR/DEIS.

DEIR/DEIS Section 3.3 is deficient in analyzing HST operational emissions. The passage states in part "The HST project would use electric multiple unit (EMUs) trains, with the power distributed through the overhead contact system. Combustion of fossil fuels and associated emissions from HST trains would not occur. [there is no substantial evidence for this statement] However, trains traveling at high velocities, such as those associated with the proposed HST, create sideways turbulence and rear wake, which resuspend particulates from the surface surrounding the track, resulting in fugitive dust emissions. Assuming a friction velocity of 0.19 meter/second (m/s) to resuspend soils in the project region, an HST passing at 220 mph could resuspend soil particles out to approximately 10 feet from the train (Watson 1996).[7] According to the EPA methodology

[7]Watson, J.G. 1996. Effectiveness Demonstration of Fugitive Dust Control Methods for Public Unpaved Roads and Unpaved Shoulders on Paved Roads. DRI Document No.

for estimating emissions from wind erosion (EPA 2006b), HST operations would generate approximately 29.0 tons per year of PM10 of which 4.3 tons per year would be PM2.5. These emissions would be the same for the 2035 No Project Alternative compared to the HST alternatives and the 2009 existing compared to the existing plus project scenario (Tables 3.3-11 and 3.3-12)."

The above analysis extrapolates data from a study (Watson, J.G. 1996) that did not include measurements from HST activity, let alone a HST operating in close proximately to an existing freight train, as is the case in Corcoran with the BNSF Alternative. The effect of the entrainment of suspended particles, not only from the operation of the HST but in aggregation with the existing freight train, and the resulting resuspension and dispersion of the fine particulate matter, are not addressed in the DEIR/DEIS. Further, using interpolated emission factors (as is the case here) and models, HST operation may well experience a negative localized impact on coarse and fine particulate matter concentrations. These foreseeable worst case operational emissions are in contrast to the regional air quality benefits assertion presented in the DEIR/DEIS.

The San Joaquin Valley APCD operates a system of air quality monitoring stations. Enclosed with these comments is the San Joaquin Valley APCD 2011 Air Monitoring Network Plan, completed June 30, 2011 for submittal to the U.S. Environmental Protection Agency in July 2011.[8] The plan outlines the valley wide ambient monitoring network. The Corcoran monitoring station is located at 1520 Patterson Ave. An environmental impact not addressed in the DEIR/DEIS, which should also be the concern of the Authority, is that an exceedance at this single air monitoring site could result in the entire air basin being reclassified in non-attainment of the federal PM10 Standards, with additional local air quality regulations being promulgated and imposed on sources in Kings County and in Corcoran specifically. The Patterson Avenue alignment construction activities will be in close proximity to this monitoring station. The monitoring station is also in proximity to the Whitley Ave overcrossing, the Sherman Avenue private overcrossing and the Orange Avenue overcrossing. The unresolved potential impacts on the monitoring station cannot be understated.

The DEIR/DEIS is deficient in not utilizing regional specific emission factors developed in the San Joaquin Valley for high speed rail, especially in the arid southern San Joaquin Valley. The Authority must undertake emission studies to monitor the specific fugitive dust emissions resulting from the HST and adjust its analysis accordingly. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.3.7 and 3.3.8 are deficient due the absence of an analysis of the localized impacts to the Patterson Avenue ambient air monitoring station.

685-5200.IF2. August 2, 1996. Copy of study enclosed.

[8]Enclosure #6.

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DEIR/DEIS Section 3.3 is deficient in analyzing the air quality regulatory impacts to off-site facilities affected by construction of the HST. As stated in the DEIR/DEIS Air Quality Technical Report, "the project footprint would consist primarily of the train right-of-way, which would include both a northbound and southbound track in area typically100 feet wide. Additional right-of-way would be required to accommodate stations, multiple tracks at stations, maintenance facilities, and power substations." The discussions are primarily concerned within the impacted construction area, and operational aspects that will not be reiterated here. However, the potential regulatory requirements for affected businesses displaced by construction are not addressed nor discussed. These impacts can be significant, and result in environmental consequences not addressed or identified within the Air Quality Section 3.3.

Significant and adverse air quality regulatory impacts will be incurred by J.G. Boswell agricultural processing facilities as a result of the construction of the BNSF Alternative. The vegetable oil processing mill is a federal Title V regulated source and is additionally regulated by the San Joaquin Valley APCD (SJVAPCD). Any modification or change to the facility will result in modifications to the affected permits. The Air Quality Technical Report identifies the SJVAPCD's New and Modified Source Review Rule, and indentifies that offsets above certain thresholds are required to be offset, but is silent on the Issue of "Actual to Potential Emission" in permitting options faced by major sources. The document is silent on explaining the need for permit modifications to relocated emissions units within a stationary source, and the regulatory requirements of such actions. Issuance of a federal Title V permit by the agency is not required, and in fact the permit can be denied. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.3.7 and 3.3.8 are deficient due the absence of emissions studies specific to Corcoran and the affected processing sites.

Summary of DEIR/DEIS Section 3.3 Air Quality and Global Climate Change: Agricultural Processing Facilities

The base engineering criteria we used to review Section 3.3 Air Quality and Global Climate Change was the High Speed Rail Authority's Publication Volume III Section C - Roadway and Grade Separation Plans Part 1 of 2. We referenced alignment C3 grade separation layout drawing number CT1277, 15% design submission and the Air Quality Technical report. The BNSF Alternative will result in the permanent closing and or relocation of cotton module storage yards, the permanent closing and or relocation of a cotton gin, the permanent closing or relocating of vegetable oil refinery operations, and the permanent closing and or relocation of grain and seed warehousing operations. The Authority appears to have overlooked that the J.G. Boswell Company agricultural processing facilities are not mere retail establishments to be closed, bought out, or relocated; but instead are processing operations with significant air quality regulatory burdens to be addressed as part of the local project. While not addressed here, the cost to the Authority for the BNSF Alternative's intrusion into the agricultural processing facilities will be significant. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.3.7 and 3.3.8

are deficient due the absence of emissions studies specific to Corcoran and the affected processing sites.

Hydrology and Water Resources Section 3.8

Company personnel developed scaled renditions of the BNSF Alternative so that we could analyze the impacts of the crossings and alignments on the industrial facilities. Our analysis identified significant deficiencies in the documents, both in the design and environmental impact analysis. The DEIR/DEIS discussion centers on regional aspects but not on the specific off-site impacts created both by the localized project changes to issues identified in the Hydrology and Water Resources chapter and the significant adverse environmental impacts on the J.G. Boswell Company agricultural processing facilities.

DEIR/DEIS Section 3.8 is deficient in analyzing and addressing stormwater impacts on facilities affected by site modifications created by the construction of the HST. The DEIR/DEIS discusses the requirements of the statewide General Permit for Stormwater Discharges Associated with Construction Activity but fails to address construction and operation impacts to facilities subject to the Industrial Storm Water General Permit beyond the established construction footprint. The DEIR/DEIS describes the study area for hydrology and water resources as the area within 100 feet of both sides of the right-of-way for each alternative alignment. The study area includes the project's proposed physical ground disturbance footprint (e.g., stations, track, equipment storage areas, substations, temporary construction areas) and includes the construction footprint. However, no analysis is provided regarding the stormwater regulatory impacts imposed on existing businesses by the construction and operation of the HST. The J.G. Boswell Company agricultural processing facilities are significantly impacted by the construction activity and the overcrossing structures. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.8.7 and 3.8.8 are deficient due the absence of emissions studies specific to Corcoran and the affected processing sites.

The agricultural processing facilities east and west of the BNSF will be impacted by the Whitley Avenue overcrossing and Sherman Avenue Private overcrossing. The overcrossing structures eliminate a portion the west agricultural processing facility's containment structures utilized for impounding stormwater on site. The overcrossing structures alter the east agricultural processing facilities' stormwater drainage flow and conveyance channels. Both east and west facilities will encounter increased flows from enhanced runoff due the paved area drainage, which in turn will have to be engineered into the stormwater plans. Each facility will encounter increased velocities in flow due to the drainage from the overcrossing facilities. These impacts will require costly redesign of the facility grading and stormwater flow management to address potential environmental impacts.

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Summary of DEIR/DEIS Section 3.8 Hydrology and Water Resources Agricultural Processing Facilities

Due to the legally insufficient time to address the DEIR/DEIS Section 3.8, Hydrology and Water Resources, not all deficiencies have been addressed in detail; but suffice it to say that in addition to the above significant deficiency the project affects water conveyance and destroys an existing water well in the immediate project area. The track will be enclosed inside barriers and will be completely grade separated. At water crossings over canals, laterals, and other water distribution infrastructure the tracks will block the passages along the tops of the canal banks used by ditch tenders and maintenance equipment. Vehicle movement for operations and maintenance will be subject to detours to reach the other side of the grade separated tracks. This will cause additional emissions and expenditure of time due to this circuity of access. These increased emissions will have impacts to the air basin which is already in non-attainment for various NAAQS. The DEIR/DEIS fails even to recognize the impacts from blockage of canal operations and maintenance travel, and therefore there is no evalution of these impacts. Each of the aforementioned deficiencies are significant adverse impacts. As such, the NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.8.7 and 3.8.8 are deficient because these impacts are not disclosed or evaluated.

Socioeconomics, Communities, and Environmental Justice 3.12 Agricultural Processing Facilities

As noted previously, J.G. Boswell Company developed scaled renditions of the BNSF Alternative to assist in analyzing the impacts of the crossings and alignments on the industrial facilities and identify affected facilities subject to substantial adverse impacts. For Socioeconomics, Communities, and Environmental Justice J.G. Boswell Company reviewed the data presented in the DEIR/DEIS and identified the deficiencies in the DEIR/DEIS impacts on the J.G. Boswell Company together with the community (where appropriate).

The DEIR/DEIS Section 3.12 is deficient in addressing the Property and Sales Tax Revenue Changes as a result of the project. The DEIR/DEIS states that "short-term reductions in these revenues caused by land acquisition are expected to be more than offset by long-term increases in the regional property and sales tax bases resulting from the improved connectivity of the region to the rest of the state." This statement is ingenuous because there will be no improved connectivity for Corcoran or its citizens. The comment exposes the flaw in the DEIR/DEIS which throughout ignores and avoids specific impacts and adverts to claimed state-wide or regional benefits. However the DEIR/DEIS fails to address the effects on the City of Corcoran, which will be severely impacted by loss of jobs and sales tax revenues from the closure of agricultural processing facilities resulting from the construction and operation of the BNSF Alternative. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.12.7 and 3.312.8 are deficient due the absence of property and sales tax revenue analysis specific to Corcoran and Kings County.

The DEIR/DEIS Section 3.12 is deficient in addressing Disruption or Division of Existing Communities from the BNSF Alternative Alignment. The DEIR/DEIS states "The displacements, along with the increased noise and visual impacts associated with the HST project, could affect social interactions, community cohesion, and perceived quality of life in Corcoran. This would be a moderate to substantial effect under NEPA, but a less-than-significant impact under CEQA, because of the presence of an existing transportation corridor and availability of relocation resources in the community." The statement that these impact are less than significant under CEQA due to "an existing transportation corridor and availability of relocation resources" is misleading. The J. G. Boswell Company disagrees that the additional noise will not create a significant impact under CEQA. The noise impacts on employees and office personnel have not been studied to account for the additive noise effect of both HST operation and the existing freight railroad. This must be analyzed further to understand the additional mitigation required. To state that the ability of relocation resources will suffice as adequate mitigation for J.G. Boswell Company and the Corcoran community on the loss of high value agricultural processing facilities is misleading and inappropriate. The facilities are subject to closure under the BNSF Alternative. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.12.7 and 3.12.8 are deficient due the absence of identifying the J.G. Boswell Company's agricultural processing facilities as an affected business subject to closure and relocation (assuming the latter is possible).

Summary DEIR/DEIS Section 3.12 Socioeconomics, Communities, and Environmental Justice Agricultural Processing Facilities

Due to legally insufficient time to address the DEIR/DEIS Socioeconomics, Communities, and Environmental Justice, not all deficiencies in the recognition and analysis of impacts on the agricultural processing facilities have been addressed in detail; suffice it to say that in addition to the above significant deficiencies, these comments may be amended at a later date. Each of the aforementioned deficiencies are significant adverse impacts. As such, the NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.8.7 and 3.8.8 are deficient due the absence of emissions studies specific to Corcoran and the affected processing sites. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.12.7 and 3.12.8 are deficient due the absence of identifying the J.G. Boswell Company's agricultural processing facilities as an affected business subject to closure and relocation.

Volume III: Section A - Alignment Plans Part 1 Impacts on Agricultural Processing Facilities

J.G. Boswell Company owns and operates various agricultural processing facilities affected by the HST. Adjacent or in close proximity to the Corcoran segment of the HST BNSF Alternative are office facilities, a vegetable oil processing mill, cotton gins, seed treatment facilities, seed storage facilities, warehouse facilities, cotton bale and cotton module storage yards, irrigation pumps, water conveyance structures, and various other agricultural commodity processing

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operations. In addition to generating substantial economic activity, these operations provide significant employment for the general region.

The base engineering criteria used to review Transportation Section 3.2 was the High Speed Rail Authority's Publication Volume III Section C - Roadway and Grade Separation Plans Part 1 of 2. We referenced alignment C3 grade separation layout drawing number CT1277, 15% design submission. Alignment C3 - BNSF Alternative presents significant challenges to the continued operation of J.G. Boswell Company's Corcoran agricultural processing facilities. The BNSF Alternative will result in the permanent closing and or relocation of cotton module storage yards, the permanent closing and or relocation of a cotton gin, the permanent closing of vegetable oil refinery operations, and the permanent closing and or relocation of grain and seed warehousing operations. To highlight the impacts of HST construction and operation on the facility and the environment, J.G. Boswell Company has developed a map that identifies 38 major impacts to the J.G. Boswell Company agricultural processing facilities. The following list identifies and briefly describes these 38 significant and adverse impacts by a number keyed to the map sheet attached as Enclosure #4.

In the aggregate all of these impacts result in the closure of the facility, since relocation may not be an option, resulting in the potential loss of over a hundred of permanent jobs.

1. 6" DIAMETER HIGH PRESSURE NATURAL GAS LINE ALONG EAST SIDE OF BNSF.

The DEIR/DEIS is deficient in addressing the main natural gas pipeline serving the Corcoran community and the J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would eliminate access to this pipeline and require rerouting and redesign of the gas delivery system. For additional reference, this main high pressure natural gas line also supplies the J.G. Boswell Tomato Company processing plant with a tie in line just south of the agricultural processing facility. Significant utilities such as the Main High Pressure Natural Gas Line in Corcoran are potential high risk hazards that this Tier Two Environmental Review is required to identify; the DEIR/DEIS fails to do so even in light of the recent disaster that incurred in San Bruno.

2. GAS COMPANY PRESSURE REDUCING STATION IN THE NORTH-EAST CORNER OF THE J.G. BOSWELL WEST AGRICULTURAL PROCESSING FACILITY.

The DEIR/DEIS is deficient in addressing the natural gas reducing station serving the community and J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would eliminate this natural gas reducing station and require rerouting and redesign of the gas delivery system to the facility.

3. MEDIUM PRESSURE NATURAL GAS LINE UNDER SHERMAN AVENUE.

The DEIR/DEIS is deficient in addressing impacts to the medium pressure natural gas line serving the J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would eliminate this medium pressure natural gas pipeline and require rerouting and redesign of the gas delivery system to the facility.

4. 3" DIAMETER MEDIUM PRESSURE NATURAL GAS LINE INTO JGB WEST PROCESSING SITE.

The DEIR/DEIS is deficient in addressing impacts to the medium pressure natural gas line serving the J.G. Boswell Company agricultural processing facility west of the BNSF Alternative. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would eliminate this medium pressure natural gas line and require rerouting and redesign of the gas delivery system to the facility.

5. TELEPHONE COMPANY MAIN FIBER OPTIC CABLE INTO CORCORAN.

The DEIR/DEIS is deficient in failure to address the telephone company main fiber optic cable access point serving the community and the J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the fiber optic cable affecting the entire community and the J.G. Boswell Company agricultural processing facility.

6. CITY WATER LINE UNDER SHERMAN AVENUE.

The DEIR/DEIS is deficient in addressing the city water line under Sherman Avenue serving the community and J.G. Boswell Company's agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the city water line affecting the entire community and the J.G. Boswell Company agricultural processing facility. The interruption in water services, even for a short period, will force the shutdown of operations resulting in economic loss to the operation.

7. NORTH MAIN WATER SERVICE LINE TO JGB WEST PROCESSING SITE.

The DEIR/DEIS is deficient in addressing the city water north main service line from Sherman Avenue serving the J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the city water line affecting the J.G. Boswell Company agricultural processing facility. The interruption in water services, even for a short period, will force the shutdown of operations resulting in economic loss to the operation.

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8. PG&E OH-12kV LINE SOUTHERNLY ALONG EAST SIDE OF SANTA FE AVENUE.

The DEIR/DEIS is deficient in addressing the PG&E overhead 12KV electrical service line serving the community and the J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact PG&E overhead 12KV electrical service line thereby affecting the community and the J.G. Boswell Company agricultural processing facility. The interruption in electrical services, even for a short period, will force the shutdown of operations resulting in economic loss to the operation.

9. PG&E OH-12kV LINE EASTERLY ALONG NORTH SIDE OF SHERMAN AVENUE EXTENDED.

The DEIR/DEIS is deficient in addressing the PG&E overhead 12KV electrical service line serving the community and J.G. Boswell Company agricultural processing facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact PG&E overhead 12KV electrical service line thereby affecting the J.G. Boswell Company agricultural processing facility. The interruption in electrical services, even for a short period, will force the shutdown of operations resulting in economic loss to the operation.

10. FAILURE TO ADDRESS IMPACTS/POTENTIAL IMPACTS TO THE TRUCK STAGING AND TRAFFIC PATTERN AND ACCESS INTO THE CALIFORNIA STATE GRAIN GRADING STATION.

The DEIR/DEIS is deficient in addressing PG&E overhead 12KV electrical service line serving the community and J.G. Boswell Company Agricultural Processing Facility. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the PG&E overhead 12KV electrical service line thereby affecting J.G. Boswell Company's agricultural processing facility.

11. FAILURE TO ADDRESS IMPACTS/POTENTIAL IMPACTS TO THE JGB MAIN FIBER OPTIC COMMUNICATION CABLE BETWEEN WEST AND EAST SITES.

The DEIR/DEIS is deficient in addressing the J.G. Boswell fiber optic cable access point between the East and West agricultural processing sites. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the fiber optic cable affecting J.G. Boswell Company's agricultural processing facility.

12. FAILURE TO ADDRESS IMPACTS/POTENTIAL IMPACTS TO THE JGB MAIN FIBER OPTIC COMMUNICATION CABLE BETWEEN THE EAST SITE AND WAREHOUSE OFFICE.

The DEIR/DEIS is deficient in addressing the J.G. Boswell fiber optic cable access point between the East site and Whitley Avenue warehouse agricultural processing sites. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the fiber optic cable affecting J.G. Boswell Company's agricultural processing facility. Maintaining continuous communication is critical to operations and cannot be understated.

13. PUMPED SANITARY SEWER LINE, NORTHERLY OUT OF EAST SITE TO CITY SEWER LINE AT PICKERELL AVENUE.

The DEIR/DEIS is deficient in addressing the sanitary sewer system at impacted facilities. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing eliminate the pumped sanitary sewer line out of the east site to the city sewer line, affecting J.G. Boswell Company's agricultural processing facility. The elimination of this station will require a redesign of the sewer line system at the east site.

14. 8" DIAMETER CITY WATER SERVICE TO EAST PROCESSING SITE.

The DEIR/DEIS is deficient in addressing the 8" city water north main service line from Sherman Avenue serving the J.G. Boswell Company agricultural processing facilities on the east side of the BNSF. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the city water line affecting these facilities.

15. 8" DIAMETER REDUCED PRESSURE/BACK FLOW PREVENTER FOR EAST SITE.

The DEIR/DEIS is deficient in addressing 8" reduced pressure/backflow preventer for the east site of the processing facilities. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would impact the city water line affecting J.G. Boswell Company's agricultural processing facilities.

16. THERE IS NO RECOGNITION OF IMPACTS/POTENTIAL IMPACTS TO THE EAST SITE, NORTH END SURFACE WATER COLLECTION AND DRAINAGE STRUCTURE.

The DEIR/DEIS is deficient in addressing the stormwater regulatory impacts for impacted industrial sites. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing increase impervious serfaces, increase enhanced runoff, and add to the volume and velocity of drainage water to the surface water drainage system. They also encroach on existing systems. This

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modification will result in the necessity to completely redesign the site's grading to accommodate the altered drainage patterns, flows and amounts.

17. VEHICLE ACCESS TO NORTH END OF WAREHOUSES #2 AND #3, EAST SITE.

The DEIR/DEIS is deficient in addressing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to truck and vehicle access to the north end of the east facility warehouse #2 and #3. This is an unacceptable access restriction to the structures that impedes the delivery of commodities and creates a safety hazard. Significant modifications will be necessary to the reminder of the facility to address the change in traffic patterns. The replacement, redesign, and relocation of the vehicle access results in an adverse and significant impacts to truck and vehicle access to the north end of the east facility warehouse #2 and #3.

18. VEHICLE ACCESS TO NORTH ENTRANCE (EMERGENCY ACCESS) OF WEST PROCESSING SITE.

The DEIR/DEIS is deficient in addressing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to J.G. Boswell Company's agricultural processing facility. The BNSF Alternative will eliminate vehicle access to the north entrance (emergency access) of the west processing site. This is an adverse and significant impact to the security and safety of the facility.

19. VEHICLE ACCESS TO DEODERIZED OIL LOADOUT STATION.

The DEIR/DEIS is deficient in addressing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to J.G. Boswell Company's agricultural processing facility. The BNSF Alternative will eliminate vehicle access to the deodorized oil lead-out system, thereby effectively shutting down the deodorizer process.

20. ALTERS ESTABLISHED TRAFFIC FLOW PATTERNS OF THE ENTIRE PROCESSSING SITE.

The DEIR/DEIS is deficient in addressing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to J.G. Boswell Company's agricultural processing facility's traffic patterns. As discussed in DEIR/DEIS sections Transportation Section 3.2, and Air Quality and Global Climate Change Section 3.3, these are adverse and significant impacts.

21. BLOCKS WEST SITE, NORTH YARD SURFACE DRAINS AND SWALES.

The DEIR/DEIS is deficient in addressing the stormwater regulatory impacts for impacted industrial sites. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing

affects, and adds to the volume and velocity of drainage water to the surface water drainage system. This modification will result in the complete redesign of the grading to accommodate the drainage.

22. 3" DIAMETER MEDIUM PRESSURE NATURAL GAS LINE INTO JGB EAST PROCESSING SITE.

The DEIR/DEIS is deficient in addressing impacts to the medium pressure natural gas line serving the J.G. Boswell Company agricultural processing facility east of the BNSF Alternative. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing would eliminate this natural medium pressure natural gas line and require rerouting and redesign of the gas delivery system to the facility.

23. BLOCKS TRAFFIC PATTERN TO AND COVERS OIL MILL WHOLE SEED TANKS AND TRUCK UNLOADING PITS.

The BNSF Alternative will remove the oil mill whole seed tanks and truck unloading pits from the vegetable oil refining process, thereby effectively shutting down the plant when analyzed individually or in conjunction with items 24, 25, 26, 27, 28 and 31. The vegetable oil processing facility is a federal Title V permitted major source facility. The DEIR/DEIS fails to analyze the permitting burdens associated with a modification of this significance from both a regulatory and cost basis. The removal of the oil mill whole seed tanks and truck unloading pits from the vegetable oil refining facility results in an adverse and significant impact that cannot be overstated. The replacement, redesign, relocation of the vegetable oil refinery would be required at great cost and at a great impact to neighboring farming operations and to the developing bio diesel industry in the San Joaquin Valley.

24. REMOVES EXISTING OIL MILL BUILDING CONTAINING DECORTICATER, EXPELLER AND LINT REMOVAL ROOMS.

The BNSF Alternative will remove the oil mill decorticating, expeller, and lint removal processes from the vegetable oil refining process, thereby effectively shutting down the plant when analyzed individually or in conjunction with items 23, 25, 26, 27, 28 and 31. The vegetable oil processing facility is a federal Title V permitted major source facility. The DEIR/DEIS fails to analyze the permitting burdens associated with a modification of this significance from both a regulatory and cost basis. The removal of the decorticating, expeller, and lint removal processes from the vegetable oil refining facility results in an adverse and significant (NEPA/CEQA) impact that cannot be overstated. The replacement, redesign, relocation of the vegetable oil refinery would be required at great cost and at a great impact to neighboring farming operations and to the developing bio diesel industry in the San Joaquin Valley.

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25. REMOVES PARTS OF COTTONSEED SUPPLY (INPUT) SYSTEM OF OIL MILL.

The BNSF Alternative will remove parts of the cottonseed input system from the vegetable oil refining process, thereby effectively shutting down the plant when analyzed in conjunction with items 23, 24, 26, 27, 28 and 31. The vegetable oil processing facility is a federal Title V permitted major source facility. The DEIR/DEIS fails to analyze the permitting burdens associated with a modification of this significance from both a regulatory and cost basis. The removal of the cottonseed input system from the vegetable oil refining facility results in an adverse and significant impact that cannot be overstated. The replacement, redesign, relocation of the vegetable oil refinery would be required at great cost and at a great impact to neighboring farming operations and to the developing bio diesel industry in the San Joaquin Valley.

26. REMOVES COTTONSEED STORAGE HOUSE #6.

The BNSF Alternative will remove cottonseed storage house #6 from the vegetable oil refining process, thereby effectively shutting down the plant when analyzed in conjunction with items 23, 24, 25, 27, 28 and 31. The vegetable oil processing facility is a federal Title V permitted major source facility. The DEIR/DEIS fails to analyze the permitting burdens associated with a modification of this significance from both a regulatory and cost basis. The removal of cottonseed storage house #6 the from the vegetable oil refining facility is an adverse and significant impact that cannot be overstated. The replacement, redesign, and relocation of the vegetable oil refinery would be required at great cost and at a great impact to neighboring farming operations and to the developing bio diesel industry in the San Joaquin Valley. Furthermore there is no assurance that the facility could be relocated or that the permits for a relocated facility could be obtained.

27. THE BNSF ALTERNATIVE BLOCKS AND PREVENTS THE USE OF TWO RAIL SPURS OFF OF THE BNSF RAIL ROAD INTO THE WEST SITE.

The BNSF Alternative will remove the use of two rail spurs into the West Site. When analyzed in conjunction with items 23, 24, 25, 26, 28 and 31 this impact is adverse and significant. The vegetable oil processing facility is a federal Title V permitted major source facility. The removal of two rail spurs into the West Site from the vegetable oil refining facility and commodity operations is a adverse and significant impact that cannot be overstated. It is also an adverse and significant impact that is not recognized in the DEIR/DEIS and for which no mitigation is offered. The replacement, redesign, and relocation (if possible) of the vegetable oil refinery would be required at great cost and at a great impact to neighboring farming operations and to the developing bio diesel industry in the San Joaquin Valley.

28. THE BNSF ALTERNATIVE COVERS THE MAIN SURFACE WATER COLLECTION SUMP, PUMP STATION AND OUTFALL LINE FOR THE OIL MILL PAVED AREAS.

The DEIR/DEIS is deficient in addressing the stormwater regulatory impacts for impacted industrial sites, the Whitley Avenue overcrossing and Sherman Avenue private overcrossing affect, and add to the volume and velocity of drainage water to the surface water drainage system. This modification will necessitate the complete redesign of the grading to accommodate the drainage. When analyzed in conjunction with impacts 23, 24, 25, 26, 27 and 31 this impact is adverse and significant to the ability of the vegetable oil processing mill's ability to continue operation.

29. THE BNSF ALTERNATIVE PERMANTENTLY BLOCKS THE EAST ACCESS ROAD TO THE SOUTH MODULE YARDS.

The DEIR/DEIS is deficient in addressing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to the J.G. Boswell Company agricultural processing facilities. The BNSF Alternative will eliminate access to the south module yards of the west processing site. This is an adverse and significant impact to the security and safety of the facility affecting the entire traffic flow for the facility. This significant adverse impact is not dislosed and is unmitigated.

30. THE BNSF ALTERNATIVE ENCROACHES OVER, OR COVERS, THE SOUTH "EXCESS EQUIPMENT" STORAGE YARD.

The DEIR/DEIS is deficient in addressing the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing impacts to J.G. Boswell Company's agricultural processing facilities. The BNSF Alternative will eliminate the equipment storage yard at the south end of the west processing site necessitating the relocation and reconstruction of the facility. This is an adverse and significant impact to the security and safety of the facility affecting the entire traffic flow for the facility. This significant adverse impact is not dislosed and is unmitigated.

31. THE BNSF ALTERNATIVE ENCROACHES ON, OR COVERS THE "FINISHED OIL" RAIL CAR LOAD OUT FACILITIES.

The EIR/EIS is deficient in addressing the "finished oil" rail car load out facilities. The BNSF Alternative will eliminate the ability of the oil mill to load out vegetable oil by rail. When analyzed in conjunction with impacts 23, 24, 25, 26, 27 and 34 this impact is adverse and significant to the ability of the vegetable oil processing mill's ability to continue operation.

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

32. THE BNSF ALTERNATIVE ENCROACHES ON AND COVERS A 300 HP IRRIGATION WELL AT THE SOUTH END OF THE WEST SITE.

The DEIR/DEIS is deficient in addressing water resource impacts; the BNSF Alternative will eliminate an existing 300 hp deep well supplying irrigation water to the site. Due the need for developed water resources, and the cost and environmental impacts associated with the development of a new well, this is an adverse and significant impact which is not disclosed or mitigated.

33. THE BNSF ALTERNATIVE SIGNIFICANTLY REDUCES MODULE STORAGE DUE TO LAND COVERAGE AND INSURANCE COMPANY SET BACK REQUIREMENTS.

The DEIR/DEIS is deficient in analyzing the localized impacts of the Whitley Avenue overcrossing to the east facility cotton ginning operations and seed cleaning and storage operations. The DEIR/DEIS is silent in addressing the setback requirements for cotton module storage and other risk avoidance measures created by bisecting the cotton module storage yard. The overcrossing effectively eliminates the cotton module storage yard. The bisecting of the east facility cotton module storage and resulting elimination of cotton module storage forces the closure of the east facility cotton ginning operations. The closure of the cotton gin creates socioeconomic and environmental impacts (addressed later) that are not indentified in the DEIR/DEIS.

34. THE BNSF ALTERNATIVE REQUIRES A COMPLETE REDESIGN OF INPUT FACILITIES, TRAFFIC FLOW PATTERNS AND SITE DRAINAGE FOR THE OIL MILL AREA OF THE WEST AGRICULTURAL PROCESSING FACILITY SITE.

The DEIR/DEIS is deficient in addressing the stormwater regulatory impacts for impacted industrial sites. Both the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing affect, and add to the volume and velocity of drainage water to the surface water drainage system. This modification will result in the complete redesign of the grading to accommodate the increased volume and rate of flow drainage. When analyzed in conjunction with impacts 23, 24, 25, 26, 27, 28 and 31, this impact is adverse and significant to the ability of the vegetable oil processing mill's ability to continue operation.

35. THE BNSF ALTERNATIVE SIGNIFICANTLY INCREASES SURFACE WATER RUN OFF VOLUME.

The DEIR/DEIS is deficient in addressing the stormwater regulatory impacts for impacted industrial sites. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing affect, and add to the volume and velocity of drainage water to the surface water drainage system. This modification will result in the complete redesign of site grading to accommodate the increased quantity and velocity of drainage. This impact is adverse and significant to the ability of the

vegetable oil processing mill's ability to continue operation. This significant adverse impact is not disclosed or mitigated in the DEIR/DEIS.

36. THE BNSF ALTERNATIVE CREATES A "DEAD AIR" MICRO CLIMATE, JUST NORTH OF THE OIL MILL AND GRAIN WAREHOUSES.

The DEIR/DEIS is deficient in analyzing microscale climate impacts. The DEIR/DEIS analyzes microscale emission impacts, and the same could be said for the need to analyze microscale effects of potential dead air spaces in local areas, such as that potentially created by the Whitley Avenue overcrossing and the Sherman Avenue private overcrossing to the vegetable oil mill refining operations. The defined "Study Area" fails to take into consideration localized wind circulation changes that will occur from or be caused by the overcrossing structures. The Whitley Avenue overcrossing and the Sherman Avenue private overcrossing have the potential to affect the microclimate of the vegetable oil refinery since the prevailing winds are effectively blocked by the overcrossings. The NEPA Impacts Summary and CEQA Significance Conclusions described in Sections 3.3.7 and 3.3.8 are deficient due the absence of emissions studies specific to Corcoran and the affected processing sites.

37. SOLVENT STORAGE.

The DEIR/DEIS is deficient in failing to recognize that the vegetable oil refinery is a solvent extraction process and that a solvent extraction process is commonly used in the vegetable oil extraction industry throughout the world. The solvent utilized in the process is stored on site. The BNSF Alignment would encroach on the storage sites shown under key 37 on the map and would require the removal, relocation, and/or taking of these facilities. The alignment's impacts on these facilities is not disclosed or mitigated.

38. CLOSURE OF SANTE FE AVENUE.

The DEIR/DEIS is deficient because there is no detailed site specific analysis of the environmental impacts associated with the overcrossings at Whitley Avenue, Sherman Avenue, and the proposed closure of Sante Fe Avenue. In essence, the two overcrossing structures and the Sante Fe Avenue closure restrict movement of heavy duty diesel trucks and other vehicles transporting commodities from the field to the facilities located east of the BNSF Alternative. From J.G. Boswell Company's operational perspective the closure of Sante Fe Avenue effectively bars field commodities from being delivered via Sante Fe Avenue to the facilities east of the BNSF Alternative from the field and effectively results in the East industrial site being landlocked.

The above 38 points shows numerous undisclosed impacts of the BNSF Alternative that result in closure of the vegetable oil mill, the cotton gin and have many other negative impacts, as

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

noted. These are shown on the enclosed map, which is Enclosure #4 to this letter and keyed by number to the impact.

V. THE BNSF ALIGNMENT WILL CAUSE NEGATIVE IMPACTS TO A PROPOSED SOLAR FARM AT THE NEVADA AVENUE CROSSING BECAUSE THE DEIR/DEIS PROPOSES TO RE-ALIGN NEVADA AVENUE OVER A PORTION OF THE PROPOSED SOLAR FARM. SEE THE MAP ATTACHED AS ENCLOSURE #7.

The HST Project would use electric multiple unit (EMUs) trains, with the power distributed through the overhead contact system. The DEIR/DEIS discusses in 3.6, Public Utilities and Energy, that the State of California "projected deficits indicate the need for additional generation capacity." The DEIR/DEIS further states that the HSR will utilize electricity derived from renewable sources, including solar.

Volume III Section C – Roadway and Grade Separation Plans Part 1 of 2 identifies impacts to a projected solar generation site location at Highway 43 and Nevada Avenue. J.G. Boswell staff referenced alignment C1 grade separation layout drawing number CT11210 and CT11211, 15% design submission to ascertain the impacts of the proposed Nevada Avenue overcrossing on the proposed solar facility. J.G. Boswell Company staff created a rendition of the site which is attached displaying the impact to the solar site. The crossing will create the necessity to modify the proposed solar facility's layout and design and will result in decreased area for the solar panels. The Authority needs to reconsider the design and placement of the Nevada Avenue realignment, in particular placement of the facilities to the south of the existing Nevada Avenue alignment as feasible mitigation for impacts to the solar site under the proposed realignment of Nevada Avenue.

VI. CONCLUSION.

NEPA and CEQA are disclosure statutes. They are designed to inform the public and decision makers of the impacts of proposed actions before irretrievable commitments of resources are made. Here, these purposes are frustrated. The Authority has denied all interested parties due process and allowed only a legally inadequate time to review and comment on environmental documents for the biggest, most complex public work ever undetaken in the San Joaquin Valley, if not the State. This frustrates the legislative purpose of environmental disclosure statutes. And, as shown above, in many instances the DEIR/DEIS is not an adequate disclosure document, does not acknowledge and disclose significant adverse impacts to the environment, and fails to mitigate these unrecognized impacts.

Our analysis of the BNSF Alternative shows at least 38 impact areas not disclosed in the DEIR/DEIS. These impacts place the continued operation of facilities at risk including the vegetable oil processing mill, and other facilities. These undisclosed impacts of the BNSF Alternative are

shown on the enclosed map, ENCLOSURE #4, and number keyed to that map and are discussed in Part IV above beginning at page 15.

Similarly, the Corcoran Elevated Alternative includes at least 22 impact areas that are not disclosed in the DEIR/DEIS. These impacts are significant and adverse and could imperil the continued operation of the facilities noted. These undisclosed impacts of the Corcoran Elevated Alternative are shown on the enclosed map, ENCLOSURE #1, and number keyed to the map and are discussed in Part II above beginning at page 5.

The Authority's agenda is driven by commencing construction within the time to receive federal funds. In its October 6, 2011 letter denying J.G. Boswell Company's extension request, the Authority admitted: "We acknowledge that many individuals and entities have requested a comment period longer than the official 60-day review provided, however, the extension to October 13, 2011 strikes a balance between the requests for more time and the constraints associated with federal funding that require the Authority to keep the EIR/EIS process moving forward." This reasoning will not hold up because the Authority certified a Program EIR/EIS six years ago, but took almost another five years to issue a project specific DEIR/DEIS. The Authority's lack of diligence, or its need to meet federal time constraints, cannot take precedence over the rights of all interested parties to their rights to due process and inherent fairness in being afforded an adequate time to review and comment on the environmental documents. That adequate time period has not been allowed, and the ability to comment necessarily compromised and truncated. The only remedy is to reopen the comment period for a sufficient length of time to satisfy legal and due process requirements.

Very truly yours,

GRISWOLD, LaSALLE, COBB, DOWD & GIN, LLP

By: _____
RAYMOND L. CARLSON

cc: Federal Railroad Authority (via overnight delivery) (w/encl.)
Dennis Tristao (w/encl.)

ENCLOSURES

1. Drawing "Proposed High Speed Rail Elevated Alternative C-1 Conflicts and Concerns" dated 10/10/11
2. Drawing "High Speed Rail Proposed Alignment C-2 Airport Analysis" dated 10/7/11

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

3. Tartaglia Engineering Report "High Speed Rail Corcoran Bypass Alternative Alignment and Relation to Salyer Farms Airport" dated 10/7/11
4. Drawing "Proposed High Speed Rail at Grade Alternative C-3 Conflicts and Concerns" dated 10/07/11
5. Watson, Dr. J.G., Final Study Plan for Effectiveness Demonstration of Fugitive Dust Control Methods for Public Unpaved Roads and Unpaved Shoulders on Paved Streets. DRI Document No. 685-5200.1F2, prepared for San Joaquin Valley Unified Air Pollution Control District
6. San Joaquin Valley Air Pollution Control District 2011 Air Monitoring Network Plan dated June 30, 2011
7. Drawing "High Speed Rail & Solar Lease Agreement Property" dated 9/22/11
8. List of Preparers
9. Statement of Qualifications Tartaglia Engineering

ENCLOSURE 1

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

EASTSIDE ELEVATED OPTION:
ASSUMING SANTA FE AVE. IS RELOCATED

1. RELOCATION OF PG&E 12kV OH DISTRIBUTION LINE ALONG EASTSIDE OF SANTA FE AVE.
2. RELOCATION OF CONNECTION POINT OF PG&E 12kV OH DISTRIBUTION LINE EASTERLY ALONG NORTH SIDE OF SHERMAN AVE EXTENDED.
3. REVISION OF PG&E 12 kV OH DISTRIBUTION LINE FROM WEST SIDE OF PICKERELL AVE INTO N.E. CORNER OF JGB WEST SITE.
4. RELOCATION OF UG PULL/SPLICE BOX FOR JGB MAIN FIBER OPTIC COMMUNICATIONS CABLE BETWEEN WEST AND EAST SITES.
5. RELOCATION OF SAMPLING PLATFORM AT CALIFORNIA STATE GRADING STATION.
6. LOSS OF TRUCK PARKING AND TRAFFIC FLOW PATTERN AT THE GRAIN GRADING STATION.
7. RELOCATION OF JGB EAST SITE, MAIN NORTH SOUTH SURFACE RUNOFF COLLECTION SWALE/GUTTER.
8. RELOCATION OF JGB EAST SITE, WEST SIDE SURFACE RUNOFF COLLECTION SUMP AND PUMP STATION.
9. RELOCATION OF PUMPED OUTFLOW LINE ALONG EAST SIDE OF SANTA FE AVE.
10. RELOCATION OF 8" DIAMETER JGB WATER LINE ALONG EAST SIDE OF SANTA FE AVE.
11. RELOCATION OF 12kV SERVICE/METER POLE FOR JGB GIN#5.
12. POSSIBLE INTERFERENCE WITH RAILROAD SPURS INTO EAST SITE AT "D" TANKS.
13. LOSS OF TRUCK PARKING AND TRAFFIC FLOW PATTERN AT RANCH OFFICE (EAST) TRUCK SCALES.
14. LOSS OF RANCH OFFICE PARKING LOT AND TRAFFIC PATTERN.
15. ELEVATED EXPOSURE LEVELS OF NOISE AND VIBRATION TO RANCH OFFICE OCCUPANTS.
16. REDUCED ACCESS, LOSS OF PARKING (STAGING AREA) AND TRUCK TRAFFIC FLOW PATTERN AT WEST ELEVATOR/WEST SIDE LOAD OUTS AND SHANZER DRYER.
17. POSSIBLE REVISION/RELOCATION OF EAST SITE PUMPED SEWER LINE.
18. POSSIBLE LOSS OF ACCESS AND REDUCED TRAFFIC FLOW PATTERN AT JGB "D" TANKS WAREHOUSE.
19. COMPLETE LOSS OF JGB WAREHOUSE "B", TRUCK DOCK, AND RAILROAD SPUR.
20. LOSS OF SURFACE WATER DRAINAGE SYSTEM AT SOUTH END OF EAST SIDE.
21. REDUCED MODULE STORAGE YARD CAPACITIES.
22. POSSIBLE REVISION TO TELEPHONE COMPANIES MAIN FIBER OPTIC COMMUNICATIONS CABLE LOCATION AND COVER.

NOTE: IMAGE IS APPROXIMATE BASED ON INTERPRETATION OF AVAILABLE INFORMATION REGARDING ALIGNMENT AND LOCATION OF THE RAILROAD, ROADWAY, AND COMMUNICATION TOWERS

SCALE: 1"=400'

DATE	PROPOSED HIGH SPEED RAIL ELEVATED ALTERNATIVE C-1 CONFLICTS AND CONCERNS	FIGURE
10/10/2011	J. G. BOSWELL COMPANY	1-1

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

ENCLOSURE 2

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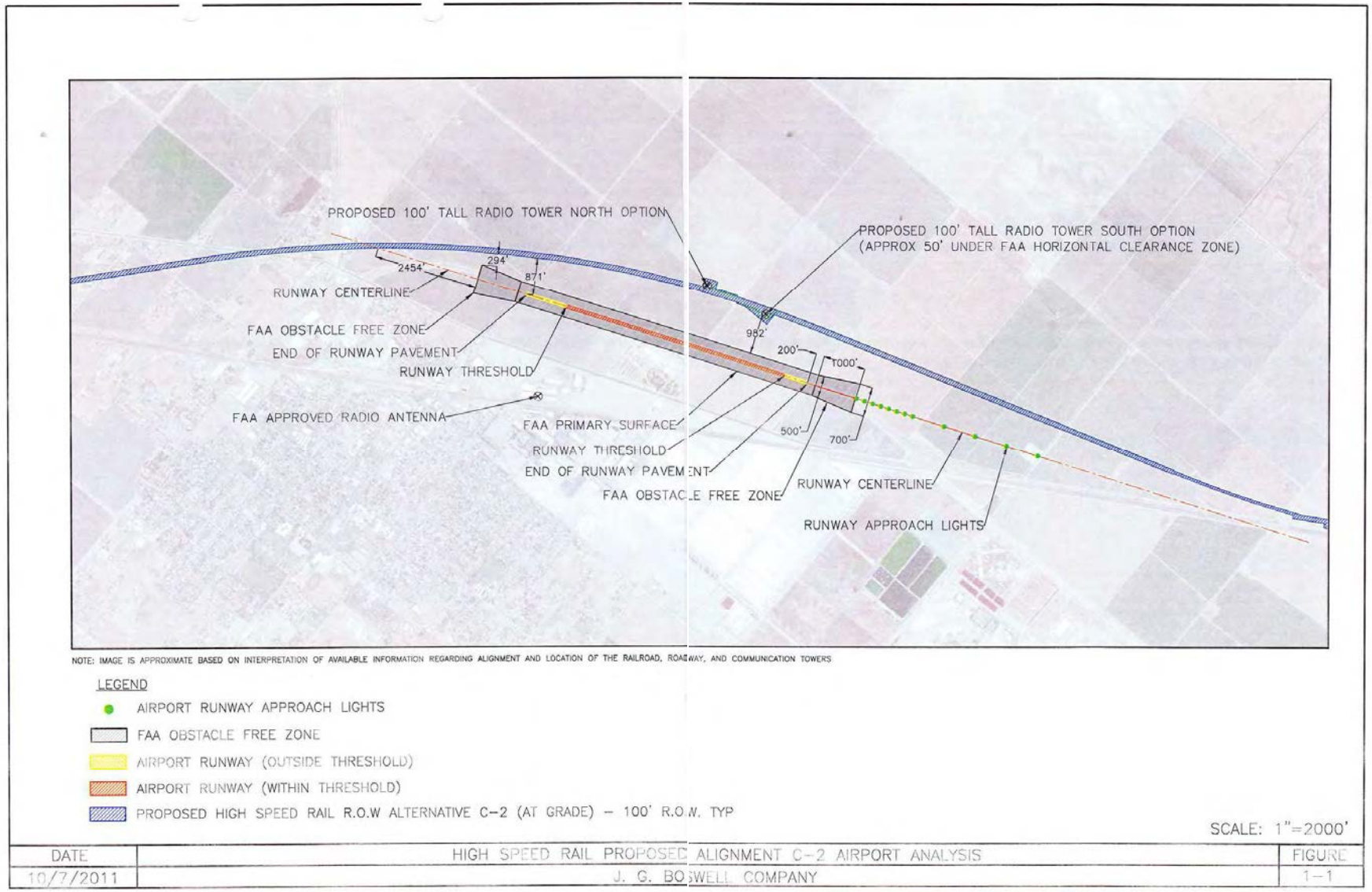
Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued



Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

ENCLOSURE 3

TE TARTAGLIA ENGINEERING
CIVIL ENGINEERS
7360 El Camino Real, Suite E • P. O. Box 1930
Atascadero, California 93423
E-mail: civilengineers@tartaglia-engineering.com
Phone (805) 466-5660 • Fax (805) 466-5471

October 7, 2011

Dennis C. Tristao
Environmental Services Manager
J.G. Boswell Company
P.O. Box 457
Corcoran, CA 93212

Subject: High Speed Rail Corcoran Bypass Alternative Alignment and relation to Salyer Farms Airport

Dear Mr. Tristao:

In accordance with your request, time has been spent reviewing portions of the draft California High-Speed Train Project Environmental Impact Report, Corcoran Bypass Subsection, Alignment C2, as it pertains and relates to the Salyer Farms Airport. Proposed improvements of interest include the elevated, double-track high-speed facility, and a communications tower with two possible locations identified. In performing our analysis, the following documents were reviewed:

A. California High-Speed Train Project EIR/EIS, Fresno to Bakersfield Section
B. FAA Advisory Circular, 150/5300-13, Change 10: Airport Design
C. Federal Aviation Regulations: Part 77, Objections Affecting Navigable Airspace

1. Existing Facilities:

Salyer Farms Airport is a private use facility located at the southwest corner of State Highways 137 and 43, adjacent to the community of Corcoran in Kings County, California.

Major airport facilities include a single asphalt paved runway, 75 feet wide, and three mid-field points of exiting to the adjacent ramp and aircraft storage hangars. The runway is aligned parallel to and approximately 150 feet west of Highway 43 (center to center spacing). The departure length for Runway 14-32 is approximately 6,818 feet. There is approximately 6,204 feet of runway available for a Runway 32 landing, and approximately 6,010 feet in place for landing Runway 14.

Runway markings are consistent with non-precision approach procedure requirements, including runway designation markings, threshold bar, threshold markings, centerline, and side stripes. A displaced threshold configuration exists at each end, and the far north end of the pavement is designated as a blast pad, assumed due to its close proximity to Highway 137.

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

The runway includes a pilot-controlled edge lighting system with a Visual Approach Slope Indicator (VASI) serving both approaches. The VASI serving Runway 32 is set at a standard 3 degree approach angle. In addition, Runway 32 is served with an approach lighting system similar to a Medium Intensity Approach Lighting System (MALS). The Runway 14 VASI is set at a steeper, 3.5 degree approach angle, intended to provide greater vertical clearance over Highway 137.

2. Critical Aircraft:

Company representatives have identified the Sabre 65 and the Citation XLS as the critical / design aircraft for the facility.

3. Airport Reference Code:

Based on the critical aircraft, the airport is designated as a B-II facility. The letter designation identifies the approach category for the design aircraft. The number designation identifies the airplane design group. These two parameters dictate or directly influence many runway / airport design parameters such as runway width, taxiway width, runway / taxiway separation, object free area dimensions, obstacle free zone dimensions, safety area widths, and runway protection zone dimensions.

Aircraft Approach Category B:	Aircraft with approach speeds of 91 knots or more but less than 121 knots.
Airplane Design Group II:	Aircraft with a wing span of 49 feet up to but not including 79 feet or a tail height from 20 up to but not including 30 feet.

The proximity of Highway 43 to the runway limits the approach category and the size of aircraft that can use the runway.

4. Approach Protection:

The Runway Protection Zone (RPZ) is the trapezoidal-shaped area off the end of each runway. The provision of the RPZ is to preclude the construction of obstructions potentially hazardous to aircraft and also to control building construction as a protection from nuisance and hazard to people on the ground. Guidelines are intended to keep these zones free of structures and incompatible objects such as fuel handling and storage facilities, misleading lights, smoke and dust generating facilities, items that create glare or attract wildlife, and any development which would create a place of public assembly.

Control of the land that making up the RPZ by the owner of the airport is strongly encouraged, either through easement or fee-title.

5. Runway Approaches:

A published GPS approach to Runway 32 is in place, with a minimum decision altitude of 560 feet (356 feet above the ground). The approach is non-precision, with visibility minimums greater than 3/4 mile (34:1) The approach to Runway 14 is visual only, not less than 1 mile visibility (20:1). RPZ dimensions for each runway are unique to each end, based on these two distinct approach designations. Each RPZ is dimensionally shown on the attached figures.

6. Runway Protection, Parameters of Concern:

Runway protection is provided by:

A. The Primary Surface. A horizontal imaginary surface, centered on the runway, at runway elevation. Primary surface dimensions are dictated by runway designation and use. With paved runways, the primary surface extends 200 feet beyond each runway end. For Salyer Airport, with a non precision approach (Rwy 32) and visibility minimums greater than 3/4 statute mile, the primary surface is 500 feet wide, centered.

B. The Horizontal Surface. A horizontal imaginary plane, centered on the runway, at an elevation 150 feet above the established airport elevation.

C. The Approach Surface. A surface longitudinally centered on the extended runway centerline, extending outward and upward from each end of the primary surface. Dimensions of the approach surface are related to specific approach parameters for each end of the runway. For Runway 32 (non-precision, instrument) the width of the surface is 500 feet at the end of the primary surface flaring to a width of 3,500 feet at a distance of 10,000 feet from the end of the primary surface. The surface slope is 34:1 (3 percent). For Runway 14, (visual) the width of the surface is 500 feet at the end of the primary surface flaring to a width of 1,500 feet at a distance of 5,000 feet from the end of the primary surface. The surface slope is 20:1 (5 percent).

D. The Transitional Surface. An imaginary surface extending upward and outward from the edge of the primary surface to the horizontal surface, at a rate of one foot vertical rise for every seven feet of horizontal projection (7:1).

Attachment to Submission BO049 (Raymond Carlson, J.G. Boswell Company (Atty. For) Griswold, LaSalle, Cobb, Dowd & Gin, LLP., October 19, 2012) - Carlson_Letter_Enclosures.pdf - Continued

E. The Runway Protection Zone (RPZ). The trapezoidal shaped area beyond each end of the runway, of the size and shape as previously defined, based on approach parameters specific to each end.

F. On-Airport Protection. Within the airport, the runway is protected by imaginary surfaces and areas including the Runway safety Area (RSA), the Obstacle Free Zone (OFZ), and the Runway Object Free Area (ROFA).

7. Proposed High-Speed Rail Improvements:

This analysis focused on three components:

A. The railroad itself. Alignment C2 swings in a large sweeping curve around the east side of the City of Corcoran and the Salyer Airport. It is a built-up or viaduct double-track improvement, approximately 800-1,000 feet east of the runway centerline. The analysis considers three points: its approximate parallel alignment east of the runway, its angle point with the northeast corner of the Runway 14 RPZ, and the point at which the rail alignment crosses the projected runway centerline north of the airport.

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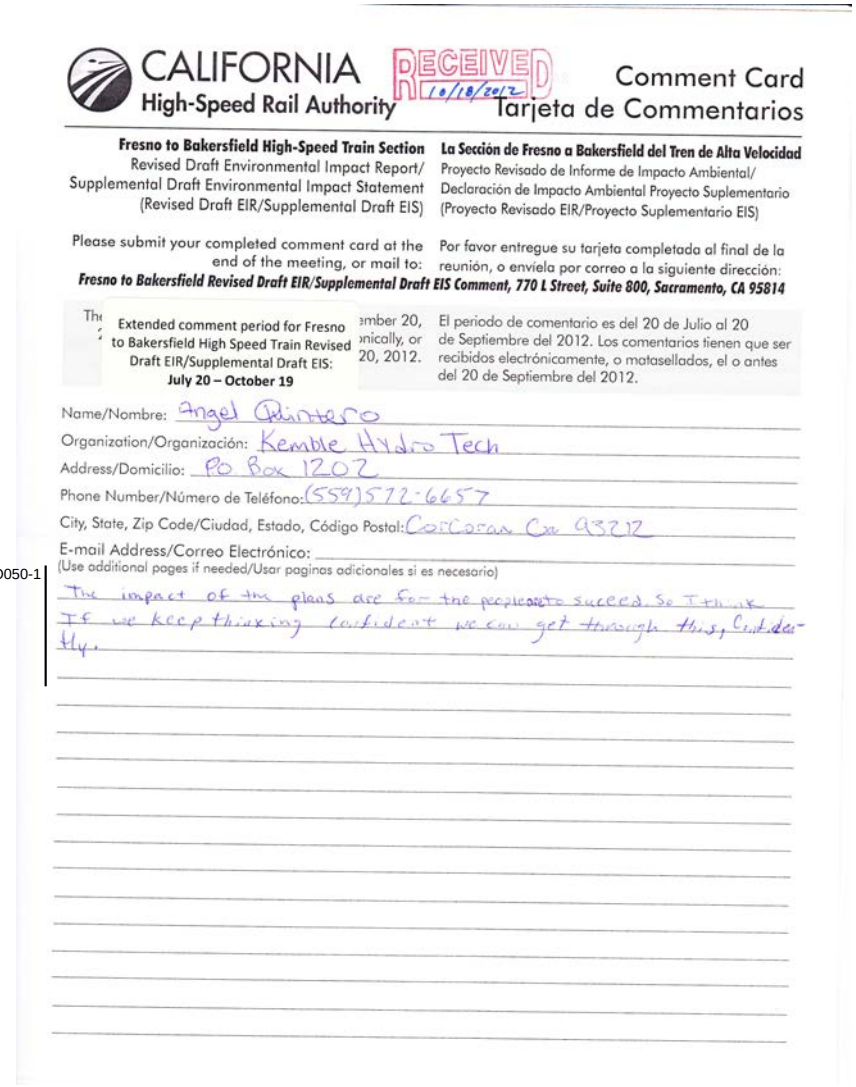
Submission BO050 (Angel Quintero, Kemble Hydro Tech, October 18, 2012)



CALIFORNIA High-Speed Rail Authority

RECEIVED 10/18/2012

Comment Card
Tarjeta de Commentarios

Fresno to Bakersfield High-Speed Train Section
Revised Draft Environmental Impact Report/ Supplemental Draft Environmental Impact Statement (Revised Draft EIR/Supplemental Draft EIS)

La Sección de Fresno a Bakersfield del Tren de Alta Velocidad
Proyecto Revisado de Informe de Impacto Ambiental/ Declaración de Impacto Ambiental Proyecto Suplementario (Proyecto Revisado EIR/Proyecto Suplementario EIS)

Please submit your completed comment card at the end of the meeting, or mail to:
Fresno to Bakersfield Revised Draft EIR/Supplemental Draft EIS Comment, 770 L Street, Suite 800, Sacramento, CA 95814

Por favor entregue su tarjeta completada al final de la reunión, o envíela por correo a la siguiente dirección:

Th… ember 20, …nically, or 20, 2012.

Extended comment period for Fresno to Bakersfield High Speed Train Revised Draft EIR/Supplemental Draft EIS: July 20 – October 19

El periodo de comentario es del 20 de Julio al 20 de Septiembre del 2012. Los comentarios tienen que ser recibidos electrónicamente, o matasellados, el o antes del 20 de Septiembre del 2012.

Name/Nombre: Angel Quintero
Organization/Organización: Kemble Hydro Tech
Address/Domicilio: Po Box 1202
Phone Number/Número de Teléfono: (559) 572-6657
City, State, Zip Code/Ciudad, Estado, Código Postal: Corcoran Ca 93212
E-mail Address/Correo Electrónico:
(Use additional pages if needed/Usar paginas adicionales si es necesario)

BO050-1 The impact of the plans are for the project to succeed. So I think if we keep thinking confident we can get through this, Cautiously.

Response to Submission BO050 (Angel Quintero, Kemble Hydro Tech, October 18, 2012)

BO050-1

Refer to Standard Response FB-Response-GENERAL-09.

Submission BO051 (Marvin Dean, Kern Supporter for High Speed Rail, October 19, 2012)

Kern Supporter for High Speed Rail
P.O. Box 2367, Bakersfield, Ca. 93303
PH # 661-747-1465

October 18, 2012

Bakersfield City Council Members
Mayor, City Manager, City Attorney, Staff

Cc: Fresno to Bakersfield Revised Draft EIR/
Supplemental Draft EIS Comment (2)
770 L Street, Suite 800, Sacramento, CA 95814

From: Marvin Dean, Coordinator
Kern Supporter for High Speed Rail

Re: **City staff report Agenda Item 12 a** – CHRSA Revised Draft EIR / EIS Comment

After reviewing City Staff report regarding California High Speed Rail Revised Draft EIR / EIS & Staff request authorizing initiation of litigation against CHSRA.

BO051-1

Kern Supporter for High Speed Rail written comment regarding staff report
We continue to support California High Speed Rail Fresno to Bakersfield project, but make no recommendation on route alignment one of the routes will affect my family property.

We believe it **not in the best interest of Bakersfield citizen** to **initiation litigation** against California High Speed Rail Authority they have agree to form a working group with the City of Bakersfield to address city staff concern.

In fairness at one time City of Bakersfield staff recommended high speed rail station is located downtown near Am track station that now affects the various properties mention in staff report.

But staff concern & comment raise will need to be address by CHSRA that mitigation of impacts lacking or deferred until later in revised draft EIR / EIS report.
We believe this can be address by City of Bakersfield & CHSRA working group in good faith.

BO051-2

"Hybrid" alternative route mention in staff report personally affects my family property located at 1330 E. Truxtun Ave, Bakersfield, **My position on selecting the route is the following**:
(1) It be base on engineer design to get require speed
(2) Select alignment that affects the least amount of residents & businesses, etc
(3) Pay affected property & business owner fairly make them hold for the taking

BO051-3

We agree with staff comment regarding the adoption of final environment document outline on page 2 of staff report, but **believe the city don't need the expense of a lawsuit** to continue raise these & other issue with CHSRA. Lastly staff mentions $4.6 million Fresno got if Bakersfield was more supported of the project we may have receive the same amount.

Kern Supporter for High Speed Rail
P.O. Box 2367, Bakersfield, Ca. 93303
PH # 661-747-1465

October 12, 2012

Fresno to Bakersfield Revised Draft EIR/
Supplemental Draft EIS Comment
770 L Street, Suite 800, Sacramento, CA 95814

Cc: Kern Cog Board Members
Ahron Hakimi, Executive Director
Kern Council of Governments
1401 19th Street 3rd Floor, Bakersfield, CA. 93301

Re: Revised Draft EIR / EIS - Public Comment (1) Period October 19, 2012

Comment Submitted by**:**
Marvin Dean, President
Kern Minority Contractors Assoication

KMCA & Kern Supporter for High Speed Rail - written comment regarding:
CHSRA - Fresno to Bakersfield Section of revised draft environmental impact reports / supplemental draft environmental impact statement and Kern Council of Government staff comment regarding CHSRA revise draft EIR/EIS alignment, station and environmental justice community impacts.

BO051-4

The propose route BNSF Alternative Hybrid B-3 Alignment (Bakersfield South)
Will **personal effect Kern Minority Contractors Assoication** & A. Phillip Randolph Community Development Corporation environmental justice residents & business training center location @ 1330 E. Truxtun Ave, Bakersfield, Ca. 93305. The propose route run through the middle of our property taking out several building.

The propose route South Alignment B-2
This route run along California Ave cutting through the heart of **Southeast Bakersfield** older Business district, the main drive through roadway to get downtown Bakersfield area is mostly **low income & minority neighborhood environmental justice community.**

BO051-5

After reviewing draft CHSRA EIR / EIS report & Kern Cog staff report our comment are:
We continue to support the propose CHSRA project Fresno to Bakersfield section
I **will not be recommending any of the propose alignment route** because one will affect us it would be unfair for me to propose that someone else be affected,
My thought on the **route alignment:**
(1) It be base on engineer design to get require speed
(2) Select alignment that affects the least about residents & businesses, etc
(3) Pay affected property & business owner fairly make them hold for the taking

Submission BO051 (Marvin Dean, Kern Supporter for High Speed Rail, October 19, 2012) - Continued

Page 2

BO051-6 I like to add our support to Kern Cog staff report comment regarding CHSRA EIR / EIS draft report. Our main concern CHSRA EIR / EIS draft report does not fully address impact to environmental justice community & spell out actual mitigation measure to be taken.

BO051-7 Chapter 3.12 Socioeconomics, Communities and Environmental Justice

We support Kern Cog staff comment items 1 - 8 page 11-13 (July 2012 – Version 3)

All propose route going South of propose station will **effect Southeast Bakersfield environmental justice community** mostly made up of minority low income un- skill residents & high school drop out we believe this project can provide them an opportunity to learn a job skill and provide employment future if the CHSRA address this concern of the people living in these environmental justice communities and address the impact this project will have on them.

We are requesting the CHSRA to **put in place an actual program to address impact** & **provide real mitigation effort** for resident living in environmental justice communities along route alignment get them **able & ready** to be **included with construction of this project.**

BO051-8 **We request CHSRA Mitigation effort include funding program that provide;**

1. Targeted environmental justice **outreach** to explain opportunity to residents & businesses
2. Targeted environmental justice residents **construction job readiness** & referral
3. Targeted environmental justice business owner **sub contractors projects readiness**
4. Targeted environmental justice residents & business **owner resource support center**
5. Assistance with program to **help remove barrier**; bonding, working capitol, etc

We believe if CHSRA don't address these issue now the project impact is not being mitigate In these environmental justice communities along the high speed rail route and their maybe a legal complaint in the future regarding lack of opportunity to be include in the project from environmental justice interest group. As supporter of this High Speed Rail project we want to help prevent this that why we are raising these concerns now.

Note

It's has come to our attend the City of Bakersfield will be filing their comment that include Staff recommendation to take legal action in opposition to CHSRA revised draft EIR / EIS After we review their comment I will be providing additional comment (2) regarding EIR / EIS

Cc: City of Bakersfield Staff & Council Members

Response to Submission BO051 (Marvin Dean, Kern Supporter for High Speed Rail, October 19, 2012)

BO051-1

Refer to Standard Response FB-Response-GENERAL-09, FB-Response-GENERAL-01.

Your support for the proposed project is noted.

BO051-2

Refer to Standard Response FB-Response-GENERAL-10, FB-Response-SO-01, FB-Response-SO-03.

BO051-3

Refer to Standard Response FB-Response-GENERAL-11.

BO051-4

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-07.

Section 3.12 of the EIR/EIS, Impact SO #18 outlines the environmental justice effects in Bakersfield communities. Mitigation Measures SO-2 and SO-3 propose mitigations for identified effects in Bakersfield communities. The project also includes specific mitigation measures that would minimize or avoid the impacts on the environmental justice populations. These include:I. Public Outreach

Refer to MM SO-6: Continue outreach to disproportionately and negatively impacted environmental justice communities of concern. The Authority will continue to conduct substantial environmental justice outreach activities in adversely affected neighborhoods to obtain resident feedback on potential impacts and suggestions for mitigation measures. Input from these communities will be used to refine the alternatives during ongoing design efforts.

In the Environmental Justice Effects Conclusion in Section 3.12, Impact SO#18, it explains that the Authority would also continue the existing activities like the workshops that have been held in the city of Fresno to discuss the HST project and collect community input. At meetings in September 2011 and February 2012, the Authority provided overviews on the relocation process and distributed the brochure “Your Property, Your High-Speed Train Project” and other brochures on the Relocation

BO051-4

Assistance Program. The Authority has also made information available on the right-of-way process (Appendix 3.12-A), with emphasis on property and business owners’ rights under federal and state laws and regulations. The overview consisted of a presentation followed by a question-and-answer period.

II. Memorandum of Understanding

The Authority and FRA along with the EPA, U.S. Department of Housing and Urban Development, and the Federal Transit Administration (FTA) have also entered into an Interagency Partnership and established a “Memorandum of Understanding (MOU) for Achieving an Environmentally Sustainable High-Speed Train System in California,” which includes a common goal of integrating HST station access and amenities into the fabric of surrounding neighborhoods. The principles for this partnership are to help improve access to affordable housing, increase transportation options, lower transportation costs, and protect the environment in communities nationwide.

The implementation of the MOU would be beneficial to all populations, but could help intensify project benefits in the areas most affected by project impacts, especially communities of concern. One example is that the Authority would establish a temporary relocation field office to help facilitate relocation efforts in areas with substantial relocation needs. Project relocation field offices would be open during convenient hours and evening hours if necessary. In addition to these services, the Authority is required to coordinate its relocation activities with other agencies causing displacements to ensure that all displaced persons receive fair and consistent relocation benefits available to all affected persons, including persons within communities of concern.

III. Community Benefits Policy

Jobs created by construction and operation of the project would likely be filled by workers in the region. To help offset any disproportionate effects, the Authority has approved a Community Benefits Policy that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. It helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business

Response to Submission BO051 (Marvin Dean, Kern Supporter for High Speed Rail, October 19, 2012) - Continued

BO051-4

enterprises, women-owned businesses, and microbusinesses that want to participate in building the high-speed rail system. Under the Authority's Community Benefits Policy, design-build construction contracts will be required to adhere to the National Targeted Hiring Initiative, which states a minimum of 30% of all project work hours shall be performed by national Targeted Workers and a minimum of 10% of National Targeted Workers hours shall be performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a GED or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or an apprentice with less than 15% of the required graduating apprenticeship hours in a program. The Community Benefits Policy will be on supplement the Authority's Small Business Program which has an aggressive 30% goal for small business participation, which includes goals of 10% for disadvantaged business enterprises and 3% for disabled veteran business enterprises.

IV. Title VI Plan

The Authority, as a federal grant recipient, is required by the Federal Railroad Administration to conform to Title VI of the Civil Rights Act of 1964 and related statutes. The Authority's sub-recipients and contractors are required to prevent discrimination and ensure non-discrimination in all of their programs, activities, and services. The Authority is committed to ensuring that no person in the state of California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and Related Statutes.

As permitted and authorized by Title VI, the Authority will administer a Title VI Program in accordance with the spirit and intent of the non-discrimination laws and regulations. The Authority has assembled a Title VI Project Team with a Coordinator and Technical and Policy Consultants who can be contacted via the Authority's website.

V. Project Benefits

BO051-4

According to EO 12898, the offsetting benefits associated with the project should be considered as part of the environmental justice analysis. The project would provide benefits that would accrue to all populations, including communities of concern. These benefits would include improved mobility within the region, improved traffic conditions on freeways as modes divert to HST, improvements in air quality within the region, and new employment opportunities during construction and operation.

Station construction and planned station area improvements in downtown Fresno and Bakersfield would improve the aesthetics and visual environment in both of these locations, benefiting the nearby minority and low-income communities. Other station-related benefits, including improved accessibility and property value increases, would benefit those who live and work closest to the new stations. In Fresno and Bakersfield, these benefits would be disproportionately incurred in minority and low-income communities.

BO051-5

Refer to Standard Response FB-Response-GENERAL-02, FB-Response-SO-01, FB-Response-SO-03.

BO051-6

Refer to Standard Response FB-Response-SO-07, FB-Response-GENERAL-01.

BO051-7

Jobs created by construction and operation of the project would likely be filled by workers in the region. To help offset any disproportionate effects, the Authority has approved a Community Benefits Policy that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. It helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the HST System. Under the Authority's Community Benefits Policy, design-build construction contracts will be required to adhere to the National Targeted Hiring

Response to Submission BO051 (Marvin Dean, Kern Supporter for High Speed Rail, October 19, 2012) - Continued

BO051-7

Initiative, which states a minimum of 30% of all project work hours shall be performed by national Targeted Workers and a minimum of 10% of National Targeted Workers hours shall be performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a GED or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or an apprentice with less than 15% of the required graduating apprenticeship hours in a program. The Community Benefits Policy will supplement the Authority's Small Business Program which has an aggressive 30% goal for small business participation, which includes goals of 10% for disadvantaged business enterprises and 3%for disabled veteran business enterprises.

BO051-8

Refer to Standard Response FB-Response-SO-07.

Jobs created by construction and operation of the project would likely be filled by workers in the region. To help offset any disproportionate effects, the Authority has approved a Community Benefits Policy that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. It helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the HST System. Under the Authority's Community Benefits Policy, design-build construction contracts will be required to adhere to the National Targeted Hiring Initiative, which states a minimum of 30% of all project work hours shall be performed by national Targeted Workers and a minimum of 10% of National Targeted Workers hours shall be performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a GED or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or an

BO051-8

apprentice with less than 15% of the required graduating apprenticeship hours in a program. The Community Benefits Policy will supplement the Authority's Small Business Program which has an aggressive 30% goal for small business participation, which includes goals of 10% for disadvantaged business enterprises and 3% for disabled veteran business enterprises.

Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012)

October 16, 2012

Federal Railroad Administration
Colleen Vaughn
Federal Preservation Officer
1200 New Jersey Avenue, SE
Washington, DC 20590

CA High-Speed Rail Authority
Dana McGowan
770 L Street, Suite 800
Sacramento, CA 95814

Dear National Environmental Protection Act Representative:

BO052-1

I am a signor on the petition against the Hi-Speed Rail; E California Ave; I am a resident/property owner, or business owner/operator.

The route as it leaves the downtown Bakersfield station will negatively impact over 500 individual properties of a low income marginalized community. Not only will more than 300 homes be demolished, and 100 small businesses, but over 100 properties will subsequently be impacted by excessive noise. In addition, we were notified by the Hi-Speed Rail Authority on October 9, 2012 that mitigation to reduce this noise will result in cement panels covering the raised platforms of the rail, causing our community to become divided as a 'Berlin Wall'. We were also advised the windows in our homes/businesses will be broken due to this excessive noise, and with mitigation will regularly replace them as they become shattered. Quite frankly, repeatedly replacing shattered windows is not acceptable.

Other facilities in our community that will be negatively impacted are 5 churches, a market conglomeration, a major Homeless Shelter, a mental health facility, a medical facility, a dental office opened in early spring 2012 for low income families/people, and a newly constructed low income senior citizen residential facility slated to be opened shortly.

The small businesses operating in our community, serve our community; they create local jobs, they meet our needs, and provide for us. To remove them will result in forcing us to travel outside of our community, and most likely pay higher prices for the same services, that we cannot afford, including the loss of local jobs.

Oftentimes, our community is already divided/prevented from entering North Bakersfield, and West Bakersfield by railroads- BNSF in times when they are changing 'cars', or 'parking' various 'cars' in short side railsways, thereby blocking main arteries for extended periods of time.

The High-Speed Rail will further marginalize us, cause severe blight, erect a 'Berlin Wall' type divider, and further reduce the quality of life of our residents/neighbors.

Our residents/neighbors are families working for minimum wage, seasonal workers, farm workers, low income senior citizens living on social security or public assistance, and children attending local schools. They do not want to leave their neighborhood, neither are they able to secure a loan for a new home on their small income. With our economy in the weak state it is in, can only question why families will be forced to lose their homes at such a difficult time.

The E. Bakersfield High-Speed Rail route will only cause severe devastation for our community and its residents. Consideration should have been given to avoid our southeast community in the outskirts of Bakersfield and possibly located the rail south of Freeway 58 where open land would have been more navigatable. On October 9, 2012, the Hi-Speed Rail Authority advised us consideration for a route south of 58 had never been considered. A High-Speed Rail Train Station could be built there, and a shuttle to the AMTRAC station would create new permanent jobs.

I am asking again, please do not support a High-Speed Rail from the downtown Bakersfield AMTRAC station east to California Ave, that would have devastating affects on our community, of low income and minorities, Black, Hispanic, Native American, and children. And please provide Spanish speaking interpreters for all future public meetings, workshops and presentations.

See attached petition - 9 pages

Del. Dominguez 115 Radio St, Bakersfield 93305

16 October 2012

Estimado Representativo del Acto para la Proteccion del Ambiente Nacional:

Yo soy firmante de la peticion contra el Carril de Alto Velocida, E. California Ave., Soy residente o proprietario.

La ruta que se tomara saliendo del centro de Bakersfield, impactara mas de 500 propiedades de una comunidad de bajos ingresos. Aparte de la demolicion de 300 viviendas y 100 lugares de negocio, mas de 100 propiedades seran impactadas por el ruido excesivo de ferrocarril. Ademas, la Autoridad del Carril de Alta Velocidad nos ha notificado el 9 Octubre 2012, que para reuducir este ruido, tendran que construir paredes de cemento para tapar las plataformas elevadas del carril, causando una division en nuestra cominidad, parecido a la Muralla de Berlin. Tambien nos avisaron que debido al ruido excesivo del ferrocarril, la Autoridad tendra que reemplazar los vidrios de nuestras ventanas regularmente. Francamente, esto no es acceptable.

Otros servicios que tambien seran impactadas negativamente de nuestra comunidad incluye: 5 iglesias y templos, un Mercado, un refugio para desamparados, una clinica de salud, una clinica de servicios consejeros, una oficina de dentista que ofrece servicios al pueblo de bajos ingresos, y una nueva facilidad residencial para ancianos.

Los comerciantes que operan en nuestra comunidad proveen servicios a la comunidad; crean trabajos locales, y satisfacen nuestras necesidades. Al desaparecerlos resultara en que los residentes tendrian que viajar mas lejos, afuera de la comunidad, y probablemente tendrian que pagar precios mas altos por los mismos servicios, algo que nos costea.

Muchas veces, los Ferrocarriles de BNSF impiden los caminos para salir de nuestra comunidad, cuando estacionan o cambian de carril, de este modo tapando las carreteras por temporadas extendidas.

El Carril de Alta Velocidad, a construir los paredes de cemento, dañara nuestra comunidad mas y reducira la calidad de vida de todos los residentes y vecinos.

Nosotros somos los residentes y vecinos de la comunidad, trabajamos por el salario minimo (minimum wage), somos campesinos, ancianos de bajos ingresos, familias recibiendo asistencia publica y nuestros hijos asisten las escuelas publicas locales. No quieren dejar su vecindario y no podran calificar por un prestamo debido a sus bajos ingresos. Con la economia todavia en un estado muy debil, solamente podremos peguntar por que estas familias estaran forzados a perder sus casas en una temporada tan dificil.

La ruta, East Bakersfield High Speed Rail, solamente causara devastacion a nuestra comunidad y ruina a los residentes. Deberian ver considerado otra ruta para no dañar nuestra comunidad en el sur-este de Bakersfield, posiblemente al sur de la Carretera 58 (Freeway 58) donde hay menos desarrollmiento y mas terrenos solos y sin viviendas. El 9 Octubre 2012, La Autoridad nos informo que nunca consideraron una ruta al sur del 58. Un estacion de ferrocarriles podrian ser construido alli y un camion/autobus al estacion de AMTRAK podria crear nuevos empleos permanentes.

Les pido, por favor no apoyan el Carril de Alto Velocidad del centro de Bakersfield Estacion de AMTRAK al este hacia California Ave, que destruira nuestra comunidad de personas Hispanos, Indigenas, Africano-Americanos, niños, y personas de bajos ingresos.

Por favor de proveer interpretes Español/English en todos los reunions, conferencias, y presentaciones.

Del. Dominguez 115 Radio St, Bakersfield 93305
see attached petition - 9 pages

Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012) - Continued

DECEMBER 2009
WE THE HOMEOWNERS AND RESIDENTS OF SOUTHEAST BAKERSFIED ARE OPPOSED TO HI-SPEED CALIFORNIA ALTERNATIVE WE BELIEVE THAT MANY HOMES, BUSINESSES AND RESIDENTS WILL BE DISLOCATED.

Pedro Chavez Jr. Chavez Mfg. 322-1129
Jeff Grossen Western Wholesale Cpt. 324 9471 1724 E. California
Chris Ruenzel 1700 E. Calif. 900-7123
David Gonzalez 1724 E. California 6380645
[signature] Western Floor Covering 324-9471 1724 E. California
Jose Chavez Chavez Mfg. 322-1192
Javier Mondanga on 116 Radiost
Valentino Mondragon 303-1732 116 Radio St, Bakersfield 93305
Esperanza Santino 119 Radio St 93305
[signature] 1217 Washington St 93305
[signature] Villegas Ramos Barber Shop 1729 E. Cal. Ave.
Evelia Gomez 1204 Ogden
[signature] 1211 Ogden St 93305
Rafael Duran 1225 Ogden St 93305
[signature] 1222 Ogden
[signature] Mejia 1210 Ogden
[signature] Perez 1217 Ogden
Jose L. Reyes 2516 California
Vero's Auto Repair 2504 California

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St. Bakersfield, CA 93305 661 637-1851

DECEMBER 2009
WE THE HOMEOWNERS AND RESIDENTS OF SOUTHEAST BAKERSFIED ARE OPPOSED TO HI-SPEED CALIFORNIA ALTERNATIVE WE BELIEVE THAT MANY HOMES, BUSINESSES AND RESIDENTS WILL BE DISLOCATED.

Karri Ruenzel 1700 E. Calif. 322-4776.
Roberto Morales 2504 Calif. E
[signature] Jimenez 2438 E California Av.
Jimenez Body Shop 2438 E California Av.
Jimenez, Maria de la luz 2437 E. California Ave
Jimenez Body Shop 2438 E. California
Jose A. Jimenez Jimenez Body shop 2438 E. California
Jimenez Amado Jimenez Body shop 2438 E. California
Jorge Trejo Jimenez Body shop 2438 E. California
[signature] 2432 E. California Av.
[signature] 2432 E Calif ave
Magali Olivera 2414 E California Av.
[signature] 2410 E. CALIFORNIA AVE
First Free Will Baptist Church 2036 E. California Ave Pastor [signature]
Jose Luiz Valencia, JV's Auto, 2208 E CALIFORNIA
Martin Perez Transmission Man 1004 Mt. Vernon Ave.
Rafael Reyes 2136 E California Ave Best Buy Auto Cent
Mike Saber a mexico 2112 E. California
Luis Lopez Alvarez
2106 E California PARTY SUPLYS

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St. Bakersfield, CA 93305 661 637-1851

Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012) - Continued

DECEMBER 2009

WE THE HOMEOWNERS AND RESIDENTS OF SOUTHEAST BAKERSFIED ARE OPPOSED TO HI-SPEED CALIFORNIA ALTERNATIVE WE BELIEVE THAT MANY HOMES, BUSINESSES AND RESIDENTS WILL BE DISLOCATED.

Juan Ramirez 1505 Kelly St Bakersfield CA 93304
Curtis McKnight 117 Radio St Bakersfield CA

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 661 637-1851

[redacted]

WE THE HOMEOWNERS, BUSINESSOWNERS & RESIDENTS OF EAST BAKERSFIELD ARE OPPOSED TO THE HI-SPEED TRAIN & RAIL PROPOSED FOR *CALIFORNIA AVE,* MORE THAN 500 HOMES, BUSINESSES AND RESIDENTS WILL BE DISPLACED, DEMORALIZED, AND UPROOTED.

Name	Address & Zip
Pedro Chavez Chavez Mfg.	1800 E. California Ave
Joanna Flores	2421 E. California Ave 93307
Emma Garcia	2421 E. California Ave 933
Victor Apri Diablitos Auto body	2421 E California Ave 93307
Rodrigo Monroy	1130 Vansite St. 93307
Victor Cordova Victory Lawnmower Shop	2407 E. California St 93307
Julio Rivas Victory Lawn Shop	2407 E. California St 93307
Adam Obaid	2211 E. California Ave Fiesta Market Citrus Ave Cottonwood
[illegible]	[illegible] Bakersfield 93307
Raquel Gonzalez	2229 E California St 93307
Richard Haro	2301 E. California Ave 93307
Raymond Gonzalez	2221 E California Ave 93307
Juanita Gonzalez	2221 E. California Ave 93307
Steve Hernandez	1128 Vansite St 93307

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 (661) 637-1851

Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012) - Continued

[redacted]

WE THE HOMEOWNERS, BUSINESSOWNERS & RESIDENTS OF EAST BAKERSFIELD ARE OPPOSED TO THE HI-SPEED TRAIN & RAIL PROPOSED FOR *CALIFORNIA AVE,* MORE THAN 500 HOMES, BUSINESSES AND RESIDENTS WILL BE DISPLACED, DEMORALIZED, AND UPROOTED.

Name	Address & Zip
Marta Meza	11-28 E. Santa Fe St 93307
Fernando Ayuiire	1201 E California ave Restaurant Sacramento
K&K Simmons	2106 E CALIFORNIA BAK 93307
Kathleen A. Simmons	8633 E Brundage Lane Sp. 1, 93307 1-661-246-5268
Violeta's beauty Salon	1201 Chester Ln (818) 340-0130
Gregorio G. Bravos	2030 E California Ave. Bakersfield Ca. 93307 (661) 703-4669
Genaro Leon	La Barata furniture 2117 E. California
Raul Mata	La Barata furniture 2117 E California
Renes Market	2121 E California Ave. Rafael Vargas
Sabi Cheema	2135 E. California Ave. 661-325-2220
Martha Buzo	1908 E California Ave (661) 323-2540
Victor Reyes	1908 E California Ave (661) 327-7704
Fidencio Zavala	1900½ E. Calif. Ave 661 325-1963
JASWINDER KAUR	1825 E. California Ave. Bakersfield 661-332417 Business

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 (661) 637-1851

[redacted]

WE THE HOMEOWNERS, BUSINESSOWNERS & RESIDENTS OF EAST BAKERSFIELD ARE OPPOSED TO THE HI-SPEED TRAIN & RAIL PROPOSED FOR *CALIFORNIA AVE,* MORE THAN 500 HOMES, BUSINESSES AND RESIDENTS WILL BE DISPLACED, DEMORALIZED, AND UPROOTED.

Name	Address & Zip
John Knauber	1901 E. California Ave, Bakersfield, CA 93307
	KEN & RAYS CABINETS LLC 1901 E CALIFORNIA AVE BAKERSFIELD CA 93307
Veronica L. Vargas	1917 E. California Ave Bak. 93307
My Wireless 2	1917 E. California Ave Bak. 93307.
Alfred's Produce & Party Supply	1923 E. California ave.
Carmelita's	1925 California Ave Bakersfield Ca 93305
CARLOS	121 RADIO ST BAKERSFIELD CA 93305
Maria Gonzalez	121 Radio St. Bakersfield Ca 93305
RONI MAYEN	1513 E CALIFORNIA Bakersfield ca 93305
LA Villa MEAT MARKET	
Tacos la Villa	Ramiro Nuñez
Normas Party Rental	1603 E California Ave. (Norma M.)
Jose Carlos Ramirez	1603 E. California AVE.

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 (661) 637-1851

Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012) - Continued

[redacted]

WE THE HOMEOWNERS, BUSINESSOWNERS & RESIDENTS OF EAST BAKERSFIELD ARE OPPOSED TO THE HI-SPEED TRAIN & RAIL PROPOSED FOR *CALIFORNIA AVE,* MORE THAN 500 HOMES, BUSINESSES AND RESIDENTS WILL BE DISPLACED, DEMORALIZED, AND UPROOTED.

Name	Address & Zip
Guadalupe Rodriguez	1612 E 11 th st 93307
[illegible]	1423 E California Ave 93307
Delia Medrano	1423 E California Ave 93307
Arturo Ortiz	1417 E California Ave 93307
Dominique Ragsdale	1415 E California Ave 93307
Rajoye Hawkins	1411, East " " 93307
[illegible]	1403 E California Ave 93307
DAVID ARELLANO	7000 College AVE 93706
Rafael Pantoja	6640 VIA DEL MAR 93307
Tony Rodriguez	627 William St 93307
Oscar Vargas	1430 E california av 93307
Maria E. Sanchez	1430 E. California Ave. 93307
[illegible]	1430 E CALIFORNIA AV 93307

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 (661) 637-1851

[redacted]

WE THE HOMEOWNERS, BUSINESSOWNERS & RESIDENTS OF EAST BAKERSFIELD ARE OPPOSED TO THE HI-SPEED TRAIN & RAIL PROPOSED FOR *CALIFORNIA AVE,* MORE THAN 500 HOMES, BUSINESSES AND RESIDENTS WILL BE DISPLACED, DEMORALIZED, AND UPROOTED.

Name	Address & Zip
[illegible]	[illegible]
Deshawn Wright	1304 E 11th
[illegible]	1304 E 11th
[illegible]	1304 E 11th
[illegible]	1304 E 11th
[illegible]	1304 E 11th
[illegible]	1304 E 11th
[illegible]	1300 Murdock
[illegible]	1306 V St
[illegible]	3322 Rio Vista
[illegible]	3304 Kate Rather
Alberta Briggs	1300 murdock
Dave Briggs	1300 murdock
[illegible]	3322 d-lores
[illegible]	1103 11th St

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 (661) 637-1851

Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012) - Continued

[redacted]

WE THE HOMEOWNERS, BUSINESSOWNERS & RESIDENTS OF EAST BAKERSFIELD ARE OPPOSED TO THE HI-SPEED TRAIN & RAIL PROPOSED FOR *CALIFORNIA AVE,* MORE THAN 500 HOMES, BUSINESSES AND RESIDENTS WILL BE DISPLACED, DEMORALIZED, AND UPROOTED.

Name	Address & Zip
DAVID VALENCIA	1222 E CALIFORNIA A.V
Aaron Rocha	1214 E California (Auto Shop)
Gerardo Mendez	1214 E Calif. Ave (Auto Shop)
"Kalifornia Wheels"	1132 Chester
Dorsh Sanders	822 E Calif. Ave. (Barber Shop)
Jeff Bassey	7507 Hidden Bridge Dr.
Catalina Mendez	814 California (Beauty Shop)
Angelina Castro	1209 Potomac Ave (Shoe Store)
Jessie Contreras	810 E California (Auto Sales)

KITANEMUK & YOWLUMNE TEJON INDIANS
D Dominguez, Chairwoman
115 Radio St, Bakersfield, CA 93305 (661) 637-1851

Response to Submission BO052 (Del Dominguez, Kitanemuk & Yowlumne Tejon Indians, October 16, 2012)

BO052-1

Refer to Standard Response FB-Response-GENERAL-14, FB-Response-SO-04, FB-Response-SO-06, FB-Response-SO-07, FB-Response-SO-01, FB-Response-GENERAL-02.

For information on the potential for disruption and division in Bakersfield, see the EIR/EIS, Volume I, Section 3.12, Impact SO #6. Also see Impact SO #9 and Impact SO #10 for displacement estimates in Bakersfield. Mitigation Measures SO-2 and SO-3 propose mitigations for identified effects in Bakersfield communities. Spanish interpreters and informational materials in Spanish were provided at all public hearings and meetings. For information on new job creation and the resulting impacts on the regional economy, see Volume I, Section 3.12, Impact SO #5 and SO #13.

Submission BO053 (Steve Corl, Koinonia Christian Fellowship, October 19, 2012)

Fresno - Bakersfield (July 2012+) - RECORD #376 DETAIL

Status :	Action Pending
Record Date :	10/19/2012
Response Requested :	No
Affiliation Type :	Local Agency
Interest As :	Local Agency
Submission Date :	10/19/2012
Submission Method :	Project Email
First Name :	Steve
Last Name :	Corl
Professional Title :	
Business/Organization :	Koinonia Christian Fellowship
Address :	
Apt./Suite No. :	
City :	
State :	CA
Zip Code :	00000
Telephone :	
Email :	scorl@kings.k12.ca.us
Email Subscription :	
Cell Phone :	
Add to Mailing List :	

Stakeholder Comments/Issues : Comments concerning Koinonia Christian Fellowship

BO053-1 The Church has the following comments concerning the current Revised DEIR/DEIS that impacts the Church. The Church has a master plan for entire property. It has invested over $3 million into the facilities. Any impacts to the size of the usable facility impacts the future use of the facility and could limit its use. We would hope that the Authority would have minimal impact to the facility so that future plans could be implemented.

BO053-2 Traffic flow is critical to the church and especially on Sundays with attendance over 1300. The current plan shows a drive approach. We are concerned that it is a safe approach with adequate turn and pull-out access. We would want to work with the Authority on any possible change to the drive approach and its impact to the entire campus traffic flow. It may require a different location and reroute of existing driveways. We would expect that the Authority would pay for any needed changes because of any changes to the drive approach.

BO053-3 The plan shows the food ministry building and storage would be in or near the footprint of the Hanford Armona Road overpass. This ministry is used to provide for the needy in Kings County. Currently, there is no other facility owed by the church that could house that ministry. We would need another facility to provide this ministry. We would expect the Authority to pay for any offset loss in property and buildings.

BO053-4 The plan also shows that along 198, property is needed that is currently used for the drainage pond that was required by the City of Hanford and a portion that is undeveloped. We wish to have as little impact to the property and that if the property is needed, an offsetting amount of property could be provided for the needed drainage pond and future facility needs.

BO053-5 The Church has started a preschool in a new building on the west side of the property. We would hope that the HSR would not create a negative impact to the preschool program.

Stephen Corl

EIR/EIS Comment : Yes

Submission BO053 (Steve Corl, Koinonia Christian Fellowship, October 19, 2012) - Continued

Official Comment Period : Yes
Attachments : 376_Corl_ProjectEmail_10192012_Original.pdf (7 kb)

Response to Submission BO053 (Steve Corl, Koinonia Christian Fellowship, October 19, 2012)

BO053-1

Refer to Standard Response FB-Response-SO-01.

Two alternatives are proposed in the vicinity of Hanford: the BNSF (Hanford East) Alternative and the Hanford West Bypass 1 and 2 alternatives. Each has its own set of impacts.

The Authority used the information in the Final EIR/EIS and input from the agencies and public to identify the Preferred Alternative. The decision included consideration of the project purpose, need, and objectives, as presented in Chapter 1, Project Purpose, Need, and Objectives; the objectives and criteria in the alternatives analysis; and the comparative potential for environmental impacts. The Preferred Alternative balances the least overall impact on the environment and local communities, cost, and the constructability constraints of the project alternatives evaluated. The Preferred Alternative is identified and discussed in the Final EIR/EIS.

BO053-2

The Authority will work with the landowner of the church on the design of the access to this property. There will be opportunities during final design and right-of-way to have specific input to property access.
In addition, property access impact mitigation measures are identified under Section 3.2.7 of the Revised DEIR/Supplemental DEIS. Transportation Mitigation Measure #1 (TR MM#1) states that if a proposed road closure restricts current access to a property, the project would provide alternative access via connections to existing roadways. If adjacent road access is not available, then feasible new road connections would be provided.

BO053-3

Refer to Standard Response FB-Response-SO-01.

BO053-4

Refer to Standard Response FB-Response-SO-01.

Two alternatives are proposed in the vicinity of Hanford: the BNSF (Hanford East) Alternative and the Hanford West Bypass 1 and 2 alternatives. Each alternative has its own set of impacts.

The Authority used the information in the Final EIR/EIS and input from the agencies and public to identify the Preferred Alternative. The decision included consideration of the project purpose, need, and objectives, as presented in Chapter 1, Project Purpose, Need, and Objectives; the objectives and criteria in the alternatives analysis; and the comparative potential for environmental impacts. The Preferred Alternative balances the least overall impact on the environment and local communities, cost, and the constructability constraints of the project alternatives evaluated. The Preferred Alternative is identified and discussed in the Final EIR/EIS.

BO053-5

Refer to Standard Response FB-Response-TR-01, FB-Response-N&V-02, FB-Response-N&V-03, FB-Response-HMW-01.

Neither the church nor the newly constructed preschool would be displaced by any of the Hanford West Bypass alternatives proposed near this location. The at-grade options would affect a portion of this property because of proposed road overcrossings. The Final EIR/EIS has been updated to include this church in Volume I, Section 3.12 Affected Environment, subsection 6.4, Communities and Neighborhoods.

For all project alternatives, construction impacts would include traffic congestion related to temporary road closures or detours, temporary increases in noise, and air quality and visual changes. (Refer to Section 3.2, Transportation; Section 3.4, Noise and Vibration; Section 3.3 Air Quality; and Section 3.16, Aesthetics and Visual Resources, for full discussion of these construction impacts).

See Section 3.2, Transportation, Mitigation Measure #1 for how access will be maintained for property owners within the construction area. If a proposed road closure restricts current access to a property, this mitigation measure would provide alternative access via connections to existing roadways. If adjacent road access is not available, then feasible new road connections would be provided.

Response to Submission BO053 (Steve Corl, Koinonia Christian Fellowship, October 19, 2012) - Continued

BO053-5

See Section 3.4, Noise and Vibration, for information about planned mitigation measures in this area. The specific type of mitigation will be selected during final design, and before operations begin. The ambient noise level of the church and preschool was calculated to be 76.6 dBA Ldn. The operational noise levels and contours of all Hanford West Bypass alternatives can be found in the Noise and Vibration Technical Report (Authority and FRA 2012j) in Tables 6-7, 6-8, 6-9, and 6-10. Refer to the sites LT-007, LT-008, and LT-009 where they are mentioned in the tables, as these are the closest to the church location. The report shows that at an approximate distance of 550 feet from the tracks, the church would experience moderate noise impacts under the Hanford West Bypass 1 and 2 at-grade alternatives and no noise impacts under the Hanford West Bypass 1 and 2 below-grade alternatives.

See Section 3.3, Air Quality, Mitigation Measure #3: Reduce the Potential Impact of Concrete Batch Plants, about how concrete batch plants will be sited at least 1,000 feet from sensitive receptors, including daycare centers, hospitals, senior care facilities, residences, parks, and other areas where people may congregate.

See Section 3.16, Aesthetics and Visual Resources, for information about temporary impacts related to new sources of light and glare during construction. The chapter explains that the impacts are of negligible intensity, and because their context would be localized, temporary, and with appropriate mitigation from AVR-MM #1a and #1b, minimally affected, they are therefore not significant under the National Environmental Policy Act
(NEPA) and would be reduced to less than significant levels under the California Environmental Quality Act (CEQA).

Community impacts in this area are described in Impact SO #1- Disruption to Community Cohesion or Division of Existing Communities from Project Construction. Although project construction would affect individuals and property owners, these impacts would be temporary and would not substantially affect community cohesion. Therefore, construction effects and impacts from the Hanford West Bypass 1 and 2 alternatives related to disruption or severance of community interactions or division of established communities would be of moderate intensity under NEPA, and less than significant under CEQA.

Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012)

Land Protection Partners
P.O. Box 24020, Los Angeles, CA 90024-0020
Telephone: (310) 247-9719

October 16, 2012

Fresno to Bakersfield Revised Draft EIR/Supplemental Draft EIS Comment
770 L Street, Suite 800
Sacramento, CA 95814

Dan Richard, Chair
Board of Directors
California High-Speed Rail Authority

Re: Revised Draft EIR/Supplemental Draft EIS Comment – Fresno to Bakersfield

Dear California High-Speed Rail Authority:

We submit with this letter our comments on the Revised Draft EIR/Supplemental Draft EIS for the Fresno to Bakersfield Section of the proposed California high-speed train system (RDEIR/SDEIS).

BO054-1

Based on our review of the RDEIR/SDEIS, and on a comparison of the RDEIR/SDEIS with both the scientific literature and other California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance documents, we conclude that the RDEIR/SDEIS is deficient in almost every respect pertaining to biological resources. Our conclusions are documented in the attached report and analysis.

We strongly urge the Authority to do the further work required to make the RDEIR/SDEIS into an adequate environmental review document, as required by both CEQA and NEPA. Major changes must be made. After those changes are made, the RDEIR/SDEIS must then be recirculated for further review and comment.

Thank you for taking our comments into account, and for complying with both CEQA and NEPA before proceeding with the proposed high-speed train project.

Sincerely,

Travis Longcore, Ph.D.

Catherine Rich, J.D., M.A.

Land Protection Partners
P.O. Box 24020, Los Angeles, CA 90024-0020
Telephone: (310) 247-9719

Review of Biological Resources Analysis in Environmental Assessment of Fresno to Bakersfield Segment of California High-Speed Rail Project

Travis Longcore, Ph.D.
Catherine Rich, J.D., M.A.

October 16, 2012

1 Introduction

California's proposed High-Speed Rail system is administered by the California High-Speed Rail Authority ("Authority"), which seeks to build a High-Speed Train ("HST") that connects cities from Sacramento to San Diego. A Statewide Program Environmental Impact Report/Environmental Impact Statement ("Program EIR/EIS") was adopted in 2005 and a second first-tier EIR/EIS was adopted in 2010 for the Bay Area to Central Valley portion of the proposed route. The Authority, along with the Federal Railroad Administration ("FRA") circulated a Draft EIR/EIS for the Fresno to Bakersfield portion of the route in late 2011. In response to comments received, the Authority added additional alternative routes and released a Revised Draft EIR/Supplemental Draft EIS ("RDEIR/SDEIS") in August 2012, with a deadline for comments of October 23, 2012.

This report is a review and analysis of the "California High-Speed Train Project Revised DEIR/Supplemental DEIS Fresno to Bakersfield Section," with a specific focus on impacts to biological resources. The expert qualifications of the authors, Travis Longcore, Ph.D. and Catherine Rich, J.D., M.A., are outlined below (Section 8). Both authors have experience in the ecology and natural history of the natural communities of California and are experienced in evaluating environmental review documents prepared in compliance with the California Environmental Quality Act ("CEQA"), National Environmental Policy Act ("NEPA"), and other environmental laws.

This review is based on facts, assumptions based on those facts, and expert opinion supported by those facts. The facts are established in part by the RDEIR/SDEIS released by the Authority and the FRA, and also by the published peer-reviewed scientific literature and other sources of reliable scientific information as cited herein.

BO054-2

Based on our review of the RDEIR/SDEIS and comparison with both the scientific literature and other CEQA/NEPA compliance documents, and based on our training and experience, we conclude that the RDEIR/SDEIS is deficient in almost every respect pertaining to biological resources. It fails to contain adequate baseline information about the existing environment, fails to provide results from adequate surveys for sensitive species, and does not use a scientifically defensible method of identifying biological impacts or any rational means of evaluating whether proposed mitigation measures would be adequate to offset such impacts. Furthermore, most of the project surveys for sensitive species are proposed to be deferred until after approval, as is the formulation of most of the mitigation measures. We have never seen this level of deferral of analysis and mitigation in nearly 15 years of reviewing environmental compliance documents. Finally, the document provides no evidence that the proposed compensatory mitigation measures, which have not yet been formulated, could even be feasibly implemented on the existing landscape. In short, the document completely fails to describe accurately the impacts to biological resources and provides no scientifically defensible analysis to evaluate the level of impact of the project.

BO054-3

It is shocking to see two government agencies (one state, one federal) so blatantly disregard the guidelines for resource assessment and environmental impact analysis that are required by CEQA and NEPA, particularly for a project that purports to be environmentally progressive.

BO054-4

2 Baseline Conditions Are Inadequately Defined

The proposed HST system is a massive undertaking, encompassing thousands of acres of land slicing through California. The first step to undertaking an environmental review for any project under CEQA and NEPA is to provide an accurate description of the baseline conditions. For this project, the description of these baseline conditions for biological resources is woefully inadequate. Rather than actually conducting surveys to determine presence of sensitive species at the level of accuracy and scale necessary for a project-level analysis, the RDEIR/SDEIS actually proposes to do surveys for these resources *as mitigation* for the project. This simply does not meet the legal standard for environmental review and deviates from accepted and well-established industry practice for CEQA and NEPA compliance. The process specified in the law *begins* with adequate resource surveys. Based on such surveys, the impact of the project can be measured and evaluated, and depending on the identified impacts, the law then requires that the project proponent propose and implement specific measures to eliminate or mitigate those identified impacts to the greatest degree possible. To suggest that doing the survey *is* the mitigation for project impacts is backwards, and is a clear violation of the law.

BO054-5

2.1 Surveys Are Inadequate

Project biologists did not survey 60% of the study areas defined for the proposed project (RDEIR/SDEIS, p. 3-7.10). Some of the areas not surveyed were viewed from adjacent rights-of-way and roads, but such off-site visual inspection does not allow surveyors to detect rare plants, see animal sign (e.g., tracks, scat), investigate soil conditions, or perform any number of essential functions associated with a biological assessment.

BO054-5

In lieu of conducting proper biological resource surveys, the preparers of the RDEIR/SDEIS instead rely on various approaches using aerial photographs and a great many assumptions. For example, they conduct an assessment of the possible presence of an endangered species (Fresno Kangaroo Rat) by attempting to recreate land use from the aerial photographs provided within Google Earth (Draft Fresno to Bakersfield Biological Assessment ("BA"), p. 4-2). Although such a method might be useful for targeting surveys, it is not a substitute for protocol-level surveys in appropriate habitat, which have to take place before preparation of the project-level EIR/EIS, not after.

The surveys for rare plants do not appear to have followed guidelines set forth by the California Department of Fish and Game ("CDFG") (2009). For example, the CDFG guidelines are provided to "meet California Environmental Quality Act (CEQA) requirements for adequate disclosure of potential impacts" and include many elements not adhered to in the preparation of the RDEIR/SDEIS:

> **SURVEY EXTENT**
> Surveys should be comprehensive over the entire site, including areas that will be directly or indirectly impacted by the project. Adjoining properties should also be surveyed where direct or indirect project effects, such as those from fuel modification or herbicide application, could potentially extend offsite. Pre-project surveys restricted to known CNDDB rare plant locations may not identify all special status plants and communities present and do not provide a sufficient level of information to determine potential impacts.
>
> **FIELD SURVEY METHOD**
> Conduct surveys using systematic field techniques in all habitats of the site to ensure thorough coverage of potential impact areas. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Conduct surveys by walking over the entire site to ensure thorough coverage, noting all plant taxa observed. The level of effort should be sufficient to provide comprehensive reporting. For example, one person-hour per eight acres per survey date is needed for a comprehensive field survey in grassland with medium diversity and moderate terrain, with additional time allocated for species identification.
>
> **TIMING AND NUMBER OF VISITS**
> Conduct surveys in the field at the time of year when species are both evident and identifiable. Usually this is during flowering or fruiting. Space visits throughout the growing season to accurately determine what plants exist on site. Many times this may involve multiple visits to the same site (e.g. in early, mid, and late-season for flowering plants) to capture the floristic diversity at a level necessary to determine if special status plants are present. The timing and number of visits are determined by geographic location, the natural communities present, and the weather patterns of the year(s) in which the surveys are conducted.
>
> **REFERENCE SITES**
> When special status plants are known to occur in the type(s) of habitat present in the project area, observe reference sites (nearby accessible occurrences of the plants) to

BO054-5

determine whether those species are identifiable at the time of the survey and to obtain a visual image of the target species, associated habitat, and associated natural community.

These guidelines were not followed. The RDEIR/SDEIS *de facto* admits that the survey extent guideline was not followed by acknowledging that only 40% of the survey area was accessed. No comprehensive species lists of plants by site are reported in the RDEIR/SDEIS, so it appears that the field survey methods were not followed. It would be difficult for the proper floristic surveys to have been conducted, because the surveys were often multi-purpose and included searches for other sensitive species besides plants. It is not clear from the description of methods in the RDEIR/SDEIS whether surveyors spent the appropriate amount of time on the surveys or whether they made the appropriate number of visits necessary to fully capture floristic diversity at the sites. The surveyors identified reference populations for rare plants, but did not visit them, rather calling colleagues to see if the plants were blooming (Biological Assessment, p. 4-33).

Focused, repeated surveys by a qualified and experienced biologist in suitable climatic conditions are necessary to locate rare plants. A single visit is inadequate and the RDEIR/SDEIS does not provide a schedule indicating when multiple visits were made to survey habitats with potential to support rare or endangered plant species. Multiple visits to all potential habitats during appropriate times of the year is the standard for environmental impact analysis. These surveys must follow the appropriate standards and have reference sites included that are in the vicinity of the area being surveyed and have the special status species present. The surveys for the current RDEIR/SDEIS did not include a reference site. It is utterly unacceptable for these surveys to be put off until a later phase in the project; this information is needed for analysis at the project EIR/EIS stage. For example, no early spring botanical surveys were done on the BNSF route, which poses a significant limitation to any subsequent analysis. The RDEIR/SDEIS even acknowledges that this is a significant issue near Cross Creek in the vicinity of Corcoran where natural lands along this route could not be accessed (Fresno to Bakersfield Biological Resources and Wetlands Technical Report, p. 3-47).

Protocol-level surveys for endangered species have not been done for all potentially present species and consequently the information needed for project-level impact assessment is not available. Protocol-level surveys should be done during the project EIR/EIS phase so that impacts can be assessed and possible mitigation measures considered. This RDEIR/SDEIS attempts to defer such surveys to a later point in project implementation, but at that point it would be impossible to change course or choose another route and any unmitigatable impacts could not be avoided.

BO054-6

Finally, although the RDEIR/SDEIS contains analysis based on maps of vegetation and land use for the entire project area, those maps are redacted from the publicly available files on the Authority's website. This deprives the general public from the opportunity to understand the baseline conditions.

BO054-7

2.2 Areas Surveyed or Not Surveyed Are Not Distinguished

Setting aside that all of the project area must be surveyed to conduct an adequate environmental review, the RDEIR/SDEIS does not even provide a map that shows what areas were and were

BO054-7

not surveyed. Even though this information can be found in the underlying GIS files and in various technical reports, the RDEIR/SDEIS itself should contain a clear set of maps that show which areas were surveyed in the field and which areas were not.

Uncertainty is inherent in mapping features from aerial photographs without surveying them. The RDEIR/SDEIS does not incorporate this uncertainty it the analysis of those maps. Without on-the-ground surveys it is not possible to have confidence in the areas mapped, especially for wetland delineations. This adds error to all of the analyses that is neither considered nor disclosed. It is important that such information be provided because it has significant implications for mitigation of loss of wetland and other habitats. Depending on the mitigation ratios for the habitat, a ¼-acre error might translate to a difference of 1 acre in mitigation lands. For example, areas with unsurveyed land and riparian resources include Cole Slough, Dutch John Cut, and others (BA, p. 4-68). Any impacts to these lands will need to be mitigated off-site and the accuracy of the mapping is therefore important. It is especially important in light of one of the other major defects of the RDEIR/SDEIS, which is that mitigation measures are not adequately developed (deferring the mitigation plan until later in the process); therefore it is impossible to assess whether it might be feasible to mitigate for various habitat impacts. The lack of accurate surveys compounds this defect, since it is impossible to know how much mitigation land is needed, even if the mitigation ratios for habitat loss were finalized.

BO054-8

2.3 Survey Study Areas Inappropriate

The surveys and subsequent analysis are based on a series of "study areas" that are defined supposedly to encompass the area in which impacts might result from construction of the proposed project. These are as follows:

Wetlands Study Area – project footprint plus a 250-ft buffer;
Special Status Plant Study Area – project footprint plus 100-ft buffer;
Habitat Study Area – project footprint plus 1,000-ft buffer, divided into:
Core Habitat Study Area – project footprint plus 250-ft buffer, which was surveyed;
Auxiliary Habitat Study Area – project footprint plus 1,000-ft buffer (aerial photos and "windshield" surveys);
Supplemental Habitat Study Area – project footprint plus up to 1.24-mile buffer, depending on target species.

In nearly all instances, these buffer zones are inadequate to map sensitive resources that could be adversely impacted by the proposed project, because the distance over which such a project could have impacts significantly exceedes these thresholds. It is furthermore particularly troubling that the RDEIR/SDEIS does not provide any citations or other scientific information to support the choice of these buffer widths.

The definition of the project footprint is problematic because an adequate environmental assessment should normally include the *entirety* of the parcels that are part of the project, even if portions of those parcels are not proposed to be directly impacted by construction activities. No justification is provided for radically narrowing the assessment area in the case of this RDEIR/SDEIS. In this project, the parcels and their boundaries are not identified in the

Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

BO054-8

biological assessments, in part because they have not yet been purchased/condemned by the Authority. A proper baseline analysis would include full surveys of all of the properties that are part of the project, plus scientifically supported buffers that encompass the true area of impacts of complex infrastructure like a high-speed train.

The RDEIR/SDEIS does not include any information about the electrical distribution system that would be needed to run an electric train in the footprints defined in the biological resources analysis. The additional electricity distribution infrastructure beyond the overhead contact system (OCS) poles should be described and included in the project description, project footprint, and associated buffers for biological surveys. It is not possible that the OCS could be energized without additional electricity distribution infrastructure, yet this infrastructure is not described in the RDEIR/SDEIS.

The Wetlands Study Area is inadequate because impacts to wetlands and associated species can occur over distances greater than 250 ft.

First, the 250-ft buffer does not account for the impacts to watersheds of wetlands. For example, a vernal pool may lie just outside the study area buffer and yet have 50% or more of its watershed within the buffer area or even within the project footprint. Impacts to watersheds of vernal pools and other wetlands can be just as significant as impacts to the wetland itself. The project could thereby have significant impacts on a wetland through impacts to its watershed and yet these impacts would not be disclosed in the RDEIR/SDEIS.

Second, wetland-dependent species move more than 250 ft around wetlands as part of their natural life cycles. For example, California Tiger Salamander were found to have moved up to 423 ft from pools in one study (Loredo et al. 1996) and 814 ft in another (Trenham 2001). Development within the area that species from a wetland currently use therefore would be an indirect impact on the wetland itself.

Third, as discussed in more detail below, the impacts of a 220-mph train and the maintenance practices for its infrastructure would have impacts that extend beyond 250 ft. The noise and startle impacts of a high-speed train would impact species in wetlands, and the management of the infrastructure would provide many other avenues for impacts, including use of rodenticides and herbicides that would run off and affect water quality, introduction of weed species, and production of dust and particulate matter, all of which could impact wetlands more than 250 ft from the footprint of the project itself.

The special status plant survey area is likewise too small. The impacts of development can and will extend beyond a 100-ft buffer around the project footprint. Through the mechanisms just discussed, including use of herbicides, dust generation, and the introduction and increased density of weeds, the proposed project could adversely impact plants more than 100 ft from the project footprint.

The Habitat Study Area is larger in some instances, but mostly is 250 ft from the project footprint. Because one major impact of the project is fragmentation of existing habitat and decreased landscape connectivity, the study area needs to be much larger than this. For example,

BO054-8

Tricolored Blackbirds are known to travel 3–5 miles or more daily to forage (Orians 1961) and the home ranges of the terrestrial species most likely to be impacted by the fragmenting impacts of the train have home ranges that are orders of magnitude larger than the 250-ft buffer. Because their home ranges are so much larger, on the order of square kilometers for American Badger (Lindzey 2003) and San Joaquin Kit Fox (Cypher 2003), much larger survey areas would be needed to detect the mammals that might use the project area as part of their home range.

BO054-9

2.4 Available Data on Avian Distributions Are Ignored

The project biologists appear not to have conducted any dedicated surveys for wildlife, but rather recorded incidental observations in the process of general habitat and plant surveys. Without specialized surveys for wildlife that are designed to detect particular sensitive species, the survey effort must be considered inadequate. Unfortunately, the results of the surveys are given as if they were exhaustive, such as the case with Figure 5-4 of the Biological Resources and Wetlands Technical Report, which purports to map "Special-status species (wildlife) within the Habitat Study Area." This is actually only the distribution of wildlife that biologists happened to observe while conducting general surveys, by no means does it indicate the true extent of habitat use by special status species within the survey area.

The preparers of the RDEIR/SDEIS overlooked significant data sources that might have allowed them to assess the presence of wildlife species in and around the proposed routes. In particular, the Cornell Lab of Ornithology maintains a website called eBird where volunteer citizen scientists enter sightings of birds. There are multiple checks on the quality of the data and the resulting database is of sufficient quality to support scientific publication of the results (Fitzpatrick et al. 2002; Sullivan et al. 2009). These data have been relied upon in top international scientific journals (e.g., Wood et al. 2011) and the eBird approach is recommended for scientific inquiry into environmental impacts on birds (Loss et al. 2012). These data certainly meet the standards for scientific information in the environmental review process and provide a significant supplement to the effort undertaken by project biologists.

The eBird data provide significantly more detailed and complete information than reviewed in the RDEIR/SDEIS with regard to the distribution of sensitive bird species, as discussed in further detail below. To be adequate, the Final EIR/EIS must include, at a minimum, a review of the eBird data and an evaluation of the relationship of the species distributions defined by those data and the project as proposed.

In short, the RDEIR/SDEIS is inadequate in describing the baseline conditions for special status species because of the failure to conduct focused surveys or to refer to or use available data sources. As discussed below, it is not a substitute to simply assert that habitat for sensitive species either exists or does not exist, and to only use records from the California Natural Diversity Database (CNDDB) to define species distributions. Searches of the CNDDB are meant to be a starting point for environmental analysis, not a substitute for proper surveys. Although our example here concentrates on birds, the same can be said for other special status wildlife species.

BO054-10

2.5 Key Data Not Provided

The RDEIR/SDEIS does not provide key data that were collected for the environmental analysis, or buries that information so deeply in the appendices as to be impossible for the reader to find. For example, surveyors collected information about the location of rare plant species. Specifically, the RDEIR/SDEIS states, "Federally listed plant species identified were mapped using a Trimble GeoXH GPS and recorded on CNPS Rare Plant Treasure Hunt Field Survey Forms" (BA, p. 4-33). These data do not appear anywhere in the main text of the RDEIR/SDEIS. Any reasonable description of baseline conditions would have included a map with these data so that the impacts of the various routes might be assessed. We obtained these data and others through a Public Records Act request, but the Authority should have provided information such as the location of sensitive species observations in the RDEIR/SDEIS because the general public is unlikely to know that they can request such data or to have the software needed to analyze it. The current RDEIR/SDEIS fails as an adequate informational document for this reason. The required information should be provided in a revised RDEIR/SDEIS and that document should then be circulated for further public review.

BO054-11

2.6 Assumption of Occupancy Undermines Purpose of Environmental Review

One of the fundamental decisions made in the preparation of the RDEIR/SDEIS was to assess impacts to sensitive species based on the presence of their habitats (p. 3.7-52). One might initially think that this is a conservative approach, assuming presence whenever appropriate habitat is found, and that impacts are therefore overestimated. This approach is flawed, however. By failing to distinguish habitat confirmed to be occupied by a sensitive species from that which might be occupied, the RDEIR/SDEIS undermines a core function of environmental impact analysis, which is to be able to be able to make informed comparisons between the impacts of different project alternatives. Because the RDEIR/SDEIS fails to distinguish between potential and occupied habitat, it is impossible to judge which of the alternative routes might be superior to another. Furthermore, assuming that all potential habitats are occupied precludes avoidance of impacts, which is the preferred and best mitigation measure available. Finally, assuming all potential habitats are occupied undermines the ability of the trustee agencies to set appropriate mitigation ratios for occupied versus potentially suitable habitats. By assuming that all potentially occupied habitats have the same value, the true value of those occupied areas is diminished and is neither properly assessed nor can impacts to occupied habitats be either calculated or mitigated. This is a grave flaw of the document that puts it far below the accepted practices of either CEQA or NEPA analysis.

BO054-12

2.7 Corridors Are Inappropriately Based on Large-Scale Assumptions, Not Wildlife Data

Throughout the RDEIR/SDEIS, the preparers base their assessment of impacts to wildlife connectivity on large-scale map-based estimates of where wildlife corridors might be, rather than on any data collected in the field. The reports upon which the RDEIR/SDEIS rely to define areas of wildlife connectivity were not prepared with the application to project-scale impacts in mind. These documents were (Fresno to Bakersfield Biological Resources and Wetlands Technical Report, p. 3-19):

BO054-12

- Missing Linkages: Restoring Connectivity to the California Landscape (Penrod et al. 2000)
- South Coast Missing Linkage: A Linkage Design for the Tehachapi Connection (Penrod et al. 2003)
- Recovery Plan for Upland Species of the San Joaquin Valley, California (Williams et al. 1998)
- San Joaquin Kit Fox (*Vulpes macrotis mutica*) 5-Year Review: Summary and Evaluation (U.S. Fish and Wildlife Service 2010)
- California Essential Habitat Connectivity Project (Spencer et al. 2010)

The Missing Linkages report (Penrod et al. 2000) was not based on field data. Rather it was designed to identify places where connectivity should be maintained, based on consultation with taxonomic experts in various regions. This broad-scale planning document is not adequate to define baseline conditions under CEQA, nor is it sufficiently detailed to aid in defining impacts to those baseline conditions.

The linkage design for the Tehachapi connection (Penrod et al. 2003) is similarly not adequate to describe existing conditions. The technical approach used in that report involved predicting the distribution of species based on their habitat associations, then using geographic techniques to define the most effective routes to connect two major areas. The report does not measure or describe existing wildlife use of the proposed project site. If anything, this report represents a conservation plan with which the proposed project might be inconsistent, but it is not a document that defines baseline conditions.

The recovery plan for upland species in the San Joaquin Valley (Williams et al. 1998) is not adequate to describe existing conditions for wildlife connectivity. The maps used by the RDEIR/SDEIS as wildlife corridors are described in the plan as, "general locations of areas targeted as Valley floor linkages between natural communities" (Williams et al. 1998: Figure 72). Although the recovery plan does discuss areas of movement and connectivity for various species, the maps do not thoroughly document those descriptions and should be seen as being the U.S. Fish and Wildlife Service's aspiration, not documentation, for connectivity in the region. Consequently, it is inadequate to describe baseline conditions at the detail necessary for a project-level environmental review.

The 5-year review for San Joaquin Kit Fox contains information only about this species, and does not address connectivity for any other species (U.S. Fish and Wildlife Service 2010). It could be used to focus surveys for kit fox movement in the project area, but does not contain the level of detail to be able to assess movement of this species within the project area that would be needed to conduct a project-level environmental review.

The California Essential Habitat Connectivity Project (Spencer et al. 2010) provides guidance about areas that provide habitat connectivity at the statewide scale. The maps produced by this project are not intended to take the place of local-level analysis, and in fact the connectivity routes are referred to as "placeholder polygons" and do not represent the needs of any particular target species (Spencer et al. 2010). This report also carefully warns users, "even areas outside of Natural Landscape Blocks and Essential Connectivity Areas support important ecological

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values that should not be 'written off' as lacking conservation value." So although this report would be useful in prioritizing areas for acquisition for a connectivity strategy, and for warning would-be developers about the potential impacts of development on connectivity in an area, it is not adequate to define wildlife use of a project site for the purpose of describing baseline conditions. In fact, the report does not contain any analysis at the species level, let alone any measurements of actual species movement on the project site.

So, as documented throughout the RDEIR/SDEIS (BA, p. 4-37, p. 4-79), the maps that purport to show wildlife corridors are not based on actual data for a range of wildlife species, but rather on a series of assumptions about wildlife movement at a large scale that were not intended to describe baseline conditions. The linkages mapped are not specific to any species and the only data collected on wildlife movement were incidental observations of tracks and other wildlife sign (e.g., burrows, nests, scat; BTR, p. 3-42).

The use of the statewide and regional plans to assess connectivity conditions is also flawed because that approach completely ignores local-scale movement that would not be described in these reports. Even if not part of a connectivity area of statewide significance, areas of the project site will be used by wildlife for local movement. Such local movement is important over the long term for the genetic health and overall viability of wildlife populations (Robinson et al. 2012).

The description of the methods for assessing wildlife connectivity in the RDEIR/SDEIS does not contain enough detail about the methods to be useful (Fresno to Bakersfield Biological Resources and Wetlands Technical Report, p. 3-42):

> The background review of wildlife movement/migration corridors was ground-truthed in the Habitat Study Area to ascertain the utility of identified movement corridors on both a local- and meta-population level. This field evaluation of potential movement corridors addressed their availability and suitability for migratory species, and identified changes in corridor quality on a rough landscape level. This evaluation was further augmented through a review of existing wildlife passages (such as culverts, washes, and automobile and train bridges) in the habitat survey area for signs of local wildlife movement. Potential migration barriers such as canals and roadways were also noted in the field.

This description contains a number of errors in basic biology and does not provide any of the information that would be needed to understand what was done. How were corridors "ground-truthed"? We know that the surveyors did not use any of the techniques necessary to quantify wildlife use (cameras, track pads, telemetry, etc.), so how was use of potential corridors assessed? What is the "rough landscape level"? What resolution is this? Was the analysis limited to only "migratory" species or did it extend to all native species as it should? What is a "review" of a wildlife passage? Simple enumeration? Documentation of dimensions? How could the usefulness of corridors "on a local- and meta-population level" be assessed if no quantitative data were collected about wildlife use? How was importance at the "local" level separated from the "meta-population" level? It is not clear here that the authors of the report even fully understand what a metapopulation is, let alone how one might figure out the importance to one of a movement corridor.

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In conclusion, building a specific project, as is proposed, without first obtaining specific information on key connectivity conditions and taking these specific conditions into account for the purpose of developing alternatives and mitigation measures virtually guarantees that there will be adverse impacts that could have been avoided with a proper project-level study. Empirical studies are necessary to identify wildlife movement locations properly. These should come before route selection and include track counts, trail monitoring with remotely triggered cameras, and incorporation of relevant information into detailed landscape models to predict animal movement. The methods described in the RDEIR/SDEIS might qualify at best as a first-pass reconnaissance survey that would allow for the formulation of the actual biological surveys that would be needed to describe baseline conditions of the project site.

BO054-13

3 Impact Analysis for Biological Resources

The impact analysis for the proposed project has many flaws, starting with the comparison of "alternatives." A true alternatives analysis would include another whole route (e.g., along SR 99) so that there would be at least one alternative to the BNSF right-of-way. Interestingly, a review of 10 years of data from eBird shows that an alignment along SR 99 would likely have far fewer impacts on sensitive bird species than the chosen alignment. Again, the eBird data should be consulted and analyzed in a revised RDEIR/SDEIS that is then recirculated for public review and comment.

Furthermore, the RDEIR/SDEIS does not present any alternatives to the BNSF right-of-way through approximately 50% of the segment length. The only places where alternative alignments are considered are Hanford, Corcoran, Allensworth, Wasco-Shafter, and through Bakersfield. Throughout much of the project extent there are no alternatives analyzed at all. Given that this document does not itself have adequate surveys for sensitive species and habitats, it is not possible that a previous EIR/EIS contained sufficient information to stand in for the analysis of a true alternative to the BNSF right-of-way. The analysis also does not allow for comparisons of various complete routes, of which the combinations number close to 200.

The RDEIR/SDEIS also piecemeals the analysis by doing impact assessment on each of the bypass routes separately, as if each of these bypass routes was its own project. The RDEIR/SDEIS does not assess whether impacts are significant for the whole project as it should, but rather makes separate assessments for different segments of the route and parts of the project. For example, in the analysis of protected trees, the RDEIR/SDEIS compares the Allensworth Bypass with the corresponding BNSF route through Allensworth. On the BNSF route five trees would be removed, while three protected trees would be removed on the bypass. The RDEIR/SDEIS concludes, "Due to the limited number of protected trees that would be affected, the Allensworth Bypass Alternative would result in only a slight change to existing biological conditions and little to no regional effects" (p. 3.7-144). This is completely improper, because the project being considered is not the Allensworth Bypass, but the whole route from Fresno to Bakersfield. The evaluation of whether the project has, or does not have, significant impacts has to be made on the basis of the entire route, not each subsection. If the entire route has significant impacts to protected trees, then loss of protected trees has to be mitigated along the entire route. Once it is determined that impacts to protected trees is significant, losses of trees are significant on all of the parts of the segment.

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BO054-14

3.1 Wetlands Analysis

Throughout the wetlands section, the preparers downplay the ecological value of certain wetland types. In particular, they argue that emergent wetlands have "poor to fair ecological value due to poor landscape position" and "offer few biological resources to plants and wildlife" (Fresno to Bakersfield Biological Resources and Wetlands Technical Report, p. 5-40). This blanket assessment reflects a misunderstanding of the role of such wetlands in the agricultural landscape of the Central Valley. In an agricultural landscape, an emergent wetland will be highly attractive to wildlife and used as a resource for both resident and migratory species. Without proper surveys it is not possible to conclude that such wetlands have "poor" or "fair" ecological value based on location alone.

The preparers also maintain that retention/detention basins are "in relatively poor ecological condition due to a disturbed environmental setting." They also recognize reservoirs as providing some ecological value for wading birds and wildfowl, but in general these are described as having "poor to fair ecological condition." Again, this is a mischaracterization of the value of wetland habitats in this landscape. These features are extremely important to birds in the Central Valley. To take one example, at the Alpaugh irrigation ponds, which would be impacted by the project regardless of the alternative, birders report 50-plus species (including identified sensitive species) in an hour and the site is designated as a birding hotspot on eBird. The proposed alternatives would be either constructed directly through this feature or immediately adjacent to it.

In addition to such simplistic characterization of wildlife use of wetlands in the Central Valley landscape, the RDEIR/SDEIS does not include the survey data necessary to assess impacts under the Clean Water Act as required by the U.S. Army Corps of Engineers as it implements that law.

BO054-15

3.2 Special Status Plants and Plant Communities

The RDEIR/SDEIS makes the assertion that special status plant communities cannot be found in urban areas (p. 3.7-89). This of course is not true; remnant native vegetation can be and is found in cities. The RDEIR/SDEIS furthermore, and more troublingly, makes the determination that any "developed" land use in the BNSF corridor is considered to be "urban" even if it is orchard or cropland (p. 3.7-17). This will lead to underestimation of biological impacts because orchard and cropland are used as habitat by some sensitive species, a point that the document as a whole does not adequately acknowledge.

All of the descriptions of impacts to special status plants are inadequate because the survey effort was inadequate (e.g., preparers did not follow required CDFG protocols, did not have access to all project sites, did not survey during wet years when plants might be observed, etc.). Because the impacts to special status plant species are not quantified through proper surveys, the impacts of the limited alternatives investigated cannot be compared.

The standards used in the RDEIR/SDEIS for evaluating the level of impact on sensitive plant communities under CEQA and NEPA are not clear. For example, the RDEIR/SDEIS indicates that the Kings/Tulare Regional Station – West could impact 18.59 acres of lands that might

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support sensitive plant communities (these lands were not surveyed). The RDEIR/SDEIS then states, "Due to the limited nature of these impacts, the [alternative] would result in only a slight change to existing biological conditions and little to no regional effects" (p. 3.7-154). The RDEIR/SDEIS does not provide any logic by which the conclusion that loss of 18.59 acres of sensitive habitat would not be a significant impact under CEQA and NEPA except to assert that it would be "limited" and to compare it to the region. This assertion is arbitrary, inconsistent, and without precedent. The revised EIR/EIS should actually analyze the impacts on sensitive plant communities that the current document dismisses as minor or "limited." At the very least, an adequate EIR/EIS must explain, based on facts and analysis presented in the document, why the Authority reaches the conclusion that there would be "limited" impacts.

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3.2.1 Alkali Desert Scrub

The assessment of impacts suggests that there can be "temporary" impacts to alkali desert scrub (Table 3.7-6). The available evidence, however, does not support that such habitats can be restored. In this regard, alkali desert scrub is similar to vernal pools, for which the RDEIR/SDEIS acknowledges impacts are never temporary, precisely because vernal pool hydrology and plant communities are essentially impossible to restore (p. 3.7-13). It is similarly difficult to restore scrub habitats to their previous biological diversity, especially since disturbance and construction activities promote the invasion of exotic insects such as Argentine Ants and earwigs (Longcore 2003). Any contemplated dust control measures (e.g., wetting soil, etc.) will create ideal conditions for the invasion of exotic arthropods into sensitive habitat such as alkali desert scrub. The adverse effect of Argentine Ants on native arthropods is well documented, with numerous studies reporting a decrease in arthropod diversity as Argentine Ant abundance increases (Cole et al. 1992; Erickson 1971; Holway 1998a; Human & Gordon 1996, 1997; Kennedy 1998). The project will promote the expansion of Argentine Ants by providing two conditions that increase invasion: a water source from dust control and other construction activities (Holway 1998b; Human et al. 1998), and increased disturbance (Human et al. 1998). More argentine Ants results in lower native arthropod diversity and has adverse consequences for native reptiles (Suarez et al. 2000) and the seed dispersal of native plants (Christian 2001). Argentine Ants invade far beyond the water sources and into surrounding undisturbed habitats, with increased abundance documented to a distance of up to 650 ft (Suarez et al. 1998). Suarez et al. show that Coast Horned Lizards (*Phrynosoma coronatum*), which are characteristic species of alkali desert scrub (p. 3.7-18) prefer native ants (*Pogonomyrmex* and *Messor* spp.) as their food source and suffer when invading Argentine Ants eliminate these native ant species (Suarez et al. 2000).

Since the RDEIR/SDEIS has not provided any evidence that alkali desert scrub can be restored to a pre-disturbance condition, any impacts to this habitat type should be considered permanent. Some alkali desert scrub has been enhanced as mitigation for sensitive species of the San Joaquin Valley, but effectiveness of this measure has not been documented.

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3.3 Wildlife Movement Corridors

The assessment of impacts to wildlife movement corridors is flawed from the start because empirical data about wildlife movement were not collected in a manner necessary to identify

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where and how wildlife currently moves across the project area (see discussion above). The methodology does not take into account fragmentation at the local scale for wildlife populations from introducing what for many species will be an impermeable barrier. The large-scale movement areas that the RDEIR/SDEIS analyzes are certainly important on a regional level, but so is the fragmentation of species home ranges along the entire route. Therefore wildlife movement impacts and mitigation measures should not be limited to those areas identified in the various large-scale plans referenced.

As summarized by the California Department of Fish and Game in a previous letter to the Authority:

> [T]he single biggest biological impact potentially arising from construction of the HST is the impact on regional movements of wildlife and connections between habitats. The HST has the potential to disrupt wildlife passages that are already hindered with existing obstacles, create long stretches of impediments, and further narrow areas of low or compromised permeability, which are already threatening the continued viability of many species. Construction of access controlled rail lines may create barriers to the movement of wildlife, thereby cutting them off from important food, shelter, or breeding areas. As the Department has stated in its numerous comment letters referenced above, the isolation of sub-populations limits the exchange of genetic materials and puts populations at risk of local extinctions through genetic and environmental factors. Barriers can prevent the re-colonization of suitable habitats following local extirpations, ultimately putting the species at risk of extinction.

Furthermore, the Authority's analysis seems to be inexplicably concentrated only on mammals, and in particular San Joaquin Kit Fox. But it is not only mammals that need connectivity. For example, invertebrate populations will be fragmented by the route, since small, terricolous species will not traverse larger barriers like a rail line (Mader et al. 1990). For example, carabid beetles may cross a narrow road, but not a wider road (Mader 1984). For any number of smaller organisms, the HST will present a complete landscape barrier (Forman 1995).

The RDEIR/SDEIS makes the claim that construction impacts from the project will be "small and non-linear" so wildlife should be able to move around the construction site (p. 3.7-93). This blanket assertion cannot be made without a site-level detailed analysis, which is lacking in the RDEIR/SDEIS. Furthermore, this assertion does not take into account the presence of night lighting at the construction site, which can impede wildlife movement (Beier 1995; Beier 2006). Most construction sites have lighting at night for security reasons, and if such lighting will not be used for the proposed project, this should be specified in the RDEIR/SDEIS. To be adequate, a revised RDEIR/SDEIS must analyze these impacts and then give the public the opportunity to review and comment.

The overall approach to assessing impacts on wildlife movement is flawed because it treats all animals as behaving identically. While the term "wildlife movement" makes sense intuitively, it does not have any real biological meaning without specifying which species or groups of animals are being considered. The assumption in the document seems to be that San Joaquin Kit Fox is the target species for wildlife movement (see BA, p. 3-12). Elevated tracks are proposed to reduce impediments to "wildlife movement," ignoring that elevated tracks could pose a greater

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impediment to certain sensitive bird species such as sandhill cranes, which are very susceptible to collisions with obstacles in their flight paths (Brown & Drewien 1995; Morkill & Anderson 1991; Windingstad 1988). This is a result of the failure to consider connectivity for species other than kit fox. Connectivity for wildlife is not a uniform parameter; it varies by species and consequently any assessment of the impacts to wildlife must also consider the different requirements for all species of concern.

The RDEIR/SDEIS does not contain a statement of what might constitute a barrier or be needed to maintain connectivity for each of the sensitive species. This is essential information to conduct the analysis that would determine whether there are significant impacts to each of these species. Such information is conspicuously missing for American Badger, Ringtail, Blunt-nosed Leopard Lizard, and California Tiger Salamander, all of which species are likely to be impacted by the project as currently proposed.

The wildlife corridor impact analysis also falsely claims that the proposed noise barriers would have no additional impact on wildlife permeability because they would be in urban areas. San Joaquin Kit Fox thrives in some urban areas (Cypher 2010) and therefore connectivity for this species could be adversely impacted by noise barriers.

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3.4 Night Lighting

The RDEIR/SDEIS does not adequately describe the impacts that would result from artificial night lighting nor does it mitigate those impacts. In addition to stations, the project description reveals that maintenance areas would be illuminated at night: "Typically, exterior lights would be mounted on tall masts, towers, or poles and illuminate the area with sodium- or mercury-vapor light" (BA, p. 2-58). The project would also include intermittent lighting from the lengthy period of construction (p. 3.16-65). The mitigations for these impacts are only that lights would be shielded, with no reference to the many other ways in which lighting impacts might be reduced (p. 3.16-140).

Artificial night lighting has adverse impacts on wildlife, which have been documented at length (see, for example, Eisenbeis & Hänel 2009; Kempenaers et al. 2010; Longcore & Rich 2004; Perry et al. 2008; Rich & Longcore 2006). These impacts include disruptions of foraging and reproductive behavior, altered circadian rhythms, disrupted predator-prey dynamics, and direct mortality. In particular, lights can increase predation risk for small animals such as kangaroo rats, by giving predators a visual advantage (Longcore & Rich 2004).

It is surprising that the project description suggests the use of high-pressure mercury vapor lights. These lights are known to produce ultraviolet light, which causes insect attraction far more than light in the visible spectrum (Eisenbeis 2006; Eisenbeis & Hassel 2000; Frank 2006), and significant amounts of blue light, which is the most physiologically active wavelength (Falchi et al. 2011; Pauley 2004). In short, the RDEIR/SDEIS is woefully deficient in its failure to discuss and analyze issues related to night lighting. A revised RDEIR/SDEIS must be prepared that fully discusses these impacts and is recirculated for public review and comment.

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3.5 Noise

The RDEIR/SDEIS sets a threshold of significance for noise impacts as, "Potential indirect impacts, both temporary and permanent, from excessive noise that elicits a negative response and avoidance behavior" (p. 3.7-15). Later, the biological assessment establishes 100 dBA SEL (Sound Exposure Level) as the threshold for noise impacts (p. 3.7-155). This number is cited back to a 2005 Federal Railroad Administration report on noise and vibration impacts from high-speed trains (p. 3.4-9). It bears noting that the 2005 FRA report was not peer reviewed and none of the conclusions therein are published in the peer-reviewed scientific literature. As illustrated below, the 100 dBA SEL impact threshold has no basis in science and will radically underestimate the noise, vibration, and startle impacts from the proposed project.

The 2005 FRA report is flawed on many levels and does not represent the best available scientific information (it is not peer-reviewed and is out-of-date).

First, it adopts the Sound Exposure Level (SEL) only as a measurement for wildlife impacts. SEL is a cumulative noise exposure from a single event, as if all of the noise from the event were compressed into a 1-second interval. Most research on wildlife disturbance from noise reports sound levels as L_{max} (the maximum noise level during an event) or as L_{eq} (equivalent sound over a specified time period of an hour or a day). Either SEL or L_{max} might be used to assess acute impacts from noise events (e.g., startle, flight), but it cannot be used to assess the known chronic impacts of elevated noise levels on wildlife. A longer-term measurement such as the 24 h L_{eq} is needed in addition to a measurement for acute disturbance.

Second, the 2005 FRA report uses A-weighted decibels, which weight the sound in a manner that matches human hearing, even though different species have hearing that is more or less responsive in different parts of the spectrum (low or high frequencies). Current science supports analysis that takes into account differences in animal hearing (Bowles & Pater 2000; Pater et al. 2009).

Third, the 2005 FRA report does not contain a scientific basis for setting 100 dBA SEL as the impact threshold for both domestic and wild birds and mammals. The entire bibliography presented to support this threshold was five technical reports on airplane overflights, the most recent of which was published in 2002. The FRA (2005) did not consider any of the extensive literature on the effects of chronic noise on wildlife that was available at the time (e.g, Forman & Deblinger 2000; Peris & Pescador 2004; Reijnen & Foppen 1994; Reijnen et al. 1996; Reijnen et al. 1997). In fact, nowhere in the FRA report does it state on what basis exactly the 100 dBA SEL impact threshold was determined.

Fourth, the scientific literature on the effects of noise on wildlife has grown substantially since the 2005 FRA report and the current RDEIR/SDEIS must consider this new literature. This literature contradicts the 2005 FRA statement that "long-term effects [on wildlife] continue to be a matter of speculation" (p. A-22), with, for example, researchers finding significant decrease in abundance of a sensitive bird species in response to an experiment replicating noise from gas drilling and extraction (Blickley et al. 2012). Other researchers have similarly confirmed impacts from chronically elevated noise levels (Barber et al. 2010). The impacts go far beyond

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those recognized by the FRA (and by extension those considered in the RDEIR/SDEIS) to include disruption of a variety of species, including breeding birds (Bayne et al. 2008; Francis et al. 2009; Halfwerk et al. 2011), mammals (Benítez-López et al. 2010), and amphibians (Eigenbrod et al. 2009). Many reviews (Barber et al. 2010; Patricelli & Blickley 2006; Slabbekoorn & Ripmeester 2008; Warren et al. 2006) were available to the Authority that might have been consulted to include this information in the RDEIR/SDEIS.

Researchers have moved beyond the approach cited by the 2005 FRA report, which is that impacts occur when an animal exhibits an acute response, such as taking flight (Barber et al. 2011), to assessing impacts from chronic exposure as well. But even for the acute responses, the 2005 FRA report and RDEIR/SDEIS have out-of-date information. The thresholds for acute responses from airplane overflights (which are similar to a train going by at 220 mph) range from 75–133 dBA for ungulates (Efroymson & Suter 2001), which are the frequent subject of acute noise studies. The more relevant number is the effect distance for disturbances such as roads and indeed a high-speed train. Because few experiments have been done with high-speed trains, we have to look at the literature from roads to give a sense of how wildlife will respond to the noise from the high-speed train.

As a start, an adequate analysis would consider the acute impacts, which could be estimated from the SEL or L_{max} values from the train. The RDEIR/SDEIS comes to the conclusion that no wildlife would be disturbed more than 100 ft from the train, which is where it calculates where the 100 dBA SEL threshold would be met. This 100-ft effect distance is scientifically indefensible. Meta-analysis of road disturbance shows effect distances from roads of 1 km (3,280 ft) for birds and 5 km (16,404 ft) for mammals (Benítez-López et al. 2010). For acute effects from airplane overflights, the distances reported from the literature include 340 m (1,115 ft) for raptors, 15 km (49,212 ft) for waterfowl, and 420 m (1,378 ft) for ungulates (Efroymson & Suter 2001). A high-speed train would have a somewhat lesser effect than an aircraft, but its noise impacts will extend at least an order of magnitude farther than the 100 ft suggested by the RDEIR/SDEIS.

Road noise, which is several orders of magnitude quieter than aircraft noise, has been documented to exert an adverse impact on breeding birds. Of 45 bird species investigated in woodlands in The Netherlands, 33 showed significantly depressed breeding density in response to increased noise levels near roads. All species in the small passerine families Sylviidae, Fringillidae, and Emberizidae were affected by noise (Reijnen et al. 1997). Empirical measurement of the threshold value triggering decreased density in woodlands shows that for all bird species combined the threshold value is 42–52 dB(A), with individual species exhibiting thresholds as low as 36 dB(A) and as high as 58 dB(A) (Reijnen & Foppen 1995; Reijnen et al. 1996; Reijnen et al. 1995; Reijnen et al. 1997). Furthermore, years with overall low population densities showed lower threshold levels. Similar research has been conducted for grasslands. Overall, this research shows that breeding bird habitat is degraded at noise levels as low as 36 dB(A) (Reijnen et al. 1996; Reijnen et al. 1997).

Mammals are likewise vulnerable to impacts from chronic noise (Manci et al. 1988):

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Only a few studies of the physiological effects of noise on rodents have involved wild animals. A field study by Chesser et al. (1975) involved two populations of house mice near the end of a runway at Memphis International Airport. Adult mice also were collected from a rural field 2.0 km from the airport field. Background noise levels at both fields were 80–85 dB. Noise levels of incoming and outgoing aircraft at the airport field averaged 110 dB, with the highest reading reaching 120 dB. Total body weights and adrenal gland weights of mice from the fields were measured. Additional mice were captured from the rural field, placed in the laboratory, and exposed to 1 minute of 105-dB recorded jet aircraft noise every 6 minutes to determine if noise was the causative factor. Control mice were not subjected to noise. After 2 weeks, the adrenals were removed and weighed. Adrenal gland weights of male and female mice from the airport field were significantly greater than those of mice from the rural field. The noise-exposed mice in the laboratory study had significantly greater adrenal gland weights than the control mice. After ruling out stress factors, such as population density, Chesser et al. (1975) concluded that noise was the dominant stressful factor causing the adrenal weight differences between the two feral populations.

Chronic noise, even at low levels, is associated with elevated stress hormone levels, higher blood pressure, faster heart rates, and other physiological effects (Manci et al. 1988). As a result, birds, mammals, and other vertebrates may show anatomical differences indicative of stress (e.g., smaller body size, enlarged adrenal glands) from prolonged exposure to noise.

Impacts to wildlife from chronic noise exposure from the proposed project are not assessed in the RDEIR/SDEIS even though chronic noise exposure levels (24 h L_{eq} estimates) were calculated for impacts to humans. This is a gross oversight.

Neither the FRA nor the RDEIR/SDEIS adequately take into account the auditory capabilities of reptiles and their susceptibility to disturbance. Although vision is generally more important for arid-land reptiles, some species are sensitive to sound. A close relative of the Blunt-nosed Leopard Lizard (in the same genus) is known to be sensitive to sound, and in fact exhibits a high sensitivity at lower frequencies (300–700 Hz) (Manley 1970; Wever et al. 1966). Leopard lizards are also known to vocalize in the range of 2,000–3,000 Hz, apparently as a defense against predators (Crowley & Pietruszka 1983). Assessment of impacts to such species requires analysis that takes into account the auditory sensitivity of the species as described by Wever et al. (1966). The current analysis essentially applies the standards developed for startling of ungulates in response to aircraft overflights to the chronic exposure of a reptile species to noise and vibrations to which it is sensitive. There is simply no scientific logic to support the implicit conclusion in the RDEIR/SDEIS that lizards will behave like elk (ungulates) in response to noise.

The RDEIR/SDEIS fails to provide a spatially explicit sound analysis that would allow for an actual assessment of the impacts of noise and vibration from the train. The Noise and Vibration Technical Report claims that, “generalized [noise] contours were developed and analyzed with respect to existing electronic land use maps along the project alignment” (p. 6-2), but does not describe how these contours were developed or whether they incorporated a three-dimensional model of the affected environment. In any case, the maps of these noise contours were not provided to the public so they cannot be used to assess impacts to wildlife.

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Well-established technology allows for production of a map that shows sound level contours throughout a project site, and allows comparison of pre- and post-development sound levels. A professional sound engineer employing commercially available, widely used sound level prediction software that takes into account site topography, building shape and size, and location of noise sources could perform this analysis. Several software packages are available, including NoiseMap (http://www.noisemap.ltd.uk/), CadnaA (http://www.datakustik.com/), LimA (http://www.softnoise.com/), and SoundPLAN (http://www.soundplan.eu/), all of which incorporate three-dimensional georeferenced site plans with automated sound propagation calculations to produce maps of sound levels (Figure 1).

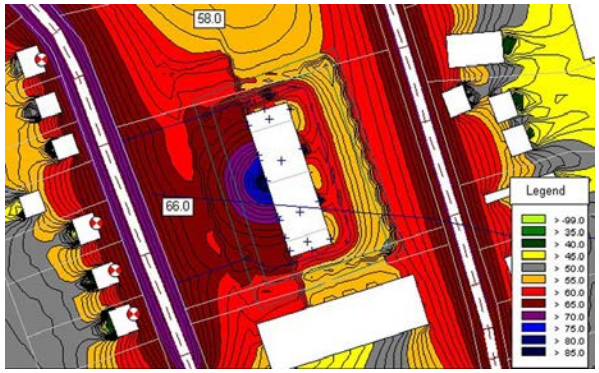

Figure 1. Sample map of noise levels from multiple sources, calculated from three-dimensional topographic and building data, multiple sound generation sources, and sound propagation laws by the software package CadnaA.

Computer-aided analysis is the current standard necessary to perform an adequate assessment of noise impacts from a project of this magnitude, and is especially necessary for the current project for three important reasons. First, compliance with the quantified noise standards requires an analysis that considers all noise sources, including their cumulative effects. The RDEIR/SDEIS does not allow for analysis of the cumulative impacts of multiple sound sources. Second, the project will drastically alter noise levels in sensitive wildlife habitat. Third, the current report is incomplete because it fails to provide maps of the pre- and post-development sound levels across the entire site and in adjacent sensitive receptor areas, including wildlife habitat. In conclusion, the level of specificity in the RDEIR/SDEIS is not sufficient to inform decisionmakers and the public about the project.

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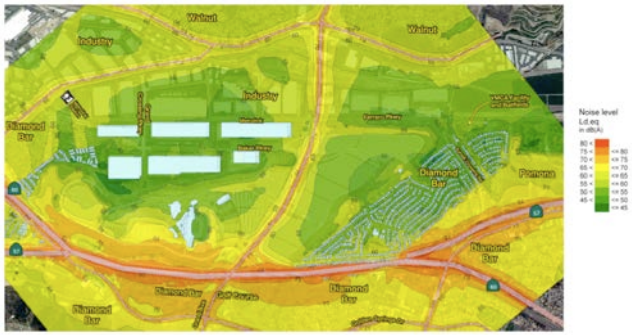

Figure 2. Example of spatially explicit noise analysis (of the baseline condition) characteristic of a project-level environmental impact report (prepared for the proposed NFL football stadium in the City of Industry before that project was exempted from CEQA review by legislative action). No similar maps are provided for the HST project.

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3.6 Rodent Control Measures

The RDEIR/SDEIS biological assessment does not adequately describe either the proposed rodent control program (see p. 3.7-55) or the impacts of such a program. The RDEIR/SDEIS acknowledges that chemical rodenticides will be used, but the likely extent of such poisoning programs is not disclosed and the needs of farmers of adjacent agricultural lands to keep the train right-of-way rodent-free to prevent damage to their crops do not appear to have been contemplated. So the RDEIR/SDEIS does not adequately describe the extent of the rodent control programs and is dramatically underestimating the severity of its impacts. Rodent control must be considered as a direct impact to native species that are a target of such programs and on non-target species, which include impacts through reduction of prey populations (mentioned only in passing in the RDEIR/SDEIS, p. 3.7-55) and through poisoning of predators and scavengers. This will include impacts to raptors (Albert et al. 2010) and a wide range of mammals (Albert et al. 2010; Riley et al. 2007; Stone et al. 1999; U.S. Environmental Protection Agency 2008; Uzal et al. 2007; Way et al. 2006), including San Joaquin Kit Fox (*Vulpes macrotis*; Cypher 2010). Indirect impacts from control of ground squirrels on other species must be considered as well (e.g., Burrowing Owls use burrows constructed by ground squirrels).

A study tracking coyote and bobcat populations in an urban interface zone found that anticoagulant rodenticide was the second leading cause of death for all coyotes after deaths from vehicle collisions, and the leading cause of death for juveniles (Sauvajot et al. 1998). Research from agricultural regions also shows lower badger (*Taxidea taxus*) density in areas with intensive

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rodent poisoning programs (Proulx & MacKenzie 2012) so badgers should also be considered as impacted by any chemical-based rodent control program.

Use of persistent second-generation anticoagulant rodenticides has significant and widespread impacts on predators and scavengers (U.S. Environmental Protection Agency 2008), so the type and nature of the proposed rodent control program must be fully disclosed, analyzed, and mitigated.

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3.7 Collision Risk

The RDEIR/SDEIS does not adequately assess the risk of birds colliding with the power lines, overhead structures, and fences associated with the proposed project. First of all, the project description does not contain any details about the power line infrastructure that will be necessary to energize the train system. This infrastructure is an integral part of the project and should be described and evaluated for environmental impacts along with the rest of the infrastructure. Assessment of the impacts of this infrastructure is especially important because birds, including many of the sensitive bird species found on or near the alignments, are known to collide with power lines and other linear structures such as fences (Allen & Ramirez 1990). Guidance for identifying and mitigating impacts from collisions is available (APLIC 1994), but the RDEIR/SDEIS neither describes this integral infrastructure nor acknowledges its impacts. Collisions with the overhead power delivery system and even the fences associated with the proposed project are also likely.

Avian collisions with power lines can be reduced through tower design and siting decisions, but such collisions cannot be eliminated (Alonso et al. 1994; Brown & Drewien 1995; Janss & Ferrer 1998). Even a single tower can kill many birds in a single night under adverse conditions, as was shown by a 100-ft unlighted communication tower on a ridge in West Virginia that killed 75 birds in a single night (Wylie 1977). This type of blind collision can occur during the day as well (Bevanger 1998; Emerson 1904; Janss 2000). Avian collisions will continue to occur with power lines, even after following all possible mitigation measures currently available. For this reason, site planning is critically important to minimize impacts of new power line routes. As summarized by Janss (2000), "Because mitigation measures only reduce collision mortality, but do not solve it, adequate route planning of power lines is especially important."

The RDEIR/SDEIS contains no assessment of the collision risk posed to sensitive species, even for groups of species known to be particularly vulnerable. Ornithologists have identified characteristics that make certain bird species especially vulnerable to collisions (Bevanger 1994, 1998; Janss 2000; Savereno et al. 1996). Rails, coots, and cranes (Gruiformes) are the birds most frequently recorded killed at power lines (Bevanger 1998). Other groups at risk include other waterbirds and diving birds, such as ducks (Anseriformes) and loons (Gaviformes), which also have high "wing loading," which means that their wings are small relative to their weight (Bevanger 1998). These species are unable to maneuver to avoid power lines, especially in low visibility conditions. Many shorebirds (Scolopacidae) are collision victims, partially because they encounter many lines in their long migratory routes (Bevanger 1998). Aerial predators, such as swifts, many raptors, and even gulls, are at risk because they spend so much time in flight that they have an increased probability of colliding with wires compared with other species

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that fly less (Bevanger 1998; Janss 2000).

Collision mortality is of particular concern for species that are in decline (Bevanger 1998; Janss 2000). For those bird species identified as sensitive in the RDEIR/SDEIS, many fall into groups that are susceptible to collision with power lines. These include the raptors (Cooper's Hawk, Golden Eagle, White-tailed Kite, Peregrine Falcon, Short-eared Owl, Swainson's Hawk, Northern Harrier, White-tailed Kite, Prairie Falcon, Bald Eagle), Redhead, Greater and Lesser Sandhill Crane, Mountain Plover, Black Tern, Fulvous Whistling-Duck, Long-billed Curlew, and Least Bittern. A subset of these species has been recorded being killed in collisions with barbed-wire fences, including Sandhill Crane, Golden Eagle, and Short-eared Owl (Allen & Ramirez 1990), so collision with the taller HST infrastructure can be expected, especially in the dense tule fog characteristic of the San Joaquin Valley.

Collision with power lines is the principal cause of death for Greater Sandhill Cranes in California (California Department of Fish and Game 1994). Collisions occur during migration and when birds encounter power lines that are located in feeding areas (Krapu et al. 1984; Windingstad 1988). The proposed project would bisect Sandhill Crane wintering habitat, regardless of which route is taken through Allensworth, with eBird records showing Sandhill Cranes foraging on either side of the proposed route. Addition of the HST will inevitably result in direct mortality of Sandhill Cranes, which are found within the project area. In short, the RDEIR/SDEIS is totally deficient in this area of required analysis.

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4 RDEIR/SDEIS Lacks Information to Support Conclusions About Mitigation Effectiveness

The proposed mitigation measures contained in the RDEIR/SDEIS, as discussed below, are totally unspecific and inadequate. To be effective, a mitigation measure must be tailored specifically to reduce an identified adverse impact. In virtually every case, the so-called mitigation measures outlined in the RDEIR/SDEIS are highly general, not based on any identified performance standard, and are not tied, directly, to the identified adverse impact that they are supposed to help reduce or eliminate.

Bio-MM#1. Designate Project Biologist(s), Contractor's Biologist(s), and Project Biological Monitor(s).

This mitigation measure is not sufficiently tied to any particular outcome as to be considered effective mitigation for anything.

Bio-MM#2. Regulatory Agency Access.

This should be done anyway and is not a mitigation measure for any impact.

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Bio-MM#3. Prepare and Implement a Worker Environmental Awareness Program.

It is the contractor's responsibility to comply with mitigation measures even without such a measure, so this mitigation measure should not be considered to provide additional reduction of impacts beyond that specified in the other mitigation measures themselves.

Bio-MM#4. Prepare and Implement a Weed Control Plan.

If reducing the impact of weeds introduced and promoted by the project is the goal, the mitigation measure must contain some level of detail to measure its effectiveness. What performance criteria will the plan have? Without any measurable and enforceable performance criteria, this mitigation measure cannot be relied upon to have any effect whatsoever on the level of impacts.

Bio-MM#5. Prepare and Implement a Biological Resources Management Plan.

This biological resources plan should, in large part, be presented as part of the RDEIR/SDEIS. To put off the essential elements of the mitigation strategy, e.g., where and how impacts will be mitigated, is impermissible in the environmental review process. The mitigation measures must be explained in the RDEIR/SDEIS in sufficient detail for the public to be able to conclude whether they might be effective. The promise of a plan to be written in the future does not fulfill this obligation.

Bio-MM#6. Prepare and Implement a Restoration and Revegetation Plan.

The RDEIR/SDEIS cannot leave all of the details of a restoration and revegetation plan to be done "later." The document must at a minimum identify the locations and types of restoration to be implemented, the general approach, and the performance criteria for success of the restorations. This is critically important, because the RDEIR/SDEIS essentially and wrongly asserts that restored habitats, such as coastal sage scrub, are equal in value to natural habitats. Specifically, the RDEIR/SDEIS states, with regard to temporary impacts, "Subsequent mitigation would restore the land to an appropriate previous state" (p. 3.7-43). Also, "adjacent vegetation requiring removal to accommodate construction operations (i.e., access and laydown area) would be restored after construction activities are completed" (p. 3.7-73). This logic provides the underpinning for the whole concept of "temporary impacts" in RDEIR/SDEIS.

This assumption that sensitive habitats can be restored to their previous state is not supported by the scientific literature (see Longcore 2003). Ecological restoration is difficult at best and many projects fail for many reasons in recreating whole communities (not just habitat for single target species) (Longcore et al. 2000). Research from coastal sage scrub showed that in the case of three restoration projects, native arthropod diversity was significantly lower at restoration sites (even up to 10 years old) than at comparable reference sites (Longcore 2003). Arthropods are important to mitigation because they are excellent indicators of habitat quality, they constitute a significant proportion of site biodiversity, and they play a range of ecological roles as prey, predators, decomposers, and herbivores (Bolger et al. 2000; Kremen 1992; Longcore 2003; McGeoch 1998). Another study using arthropods to evaluate restored riparian woodland in

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California found significantly lower numbers of predaceous and parasitic arthropods at restored sites (Williams 1993, 1997). While revegetation projects can be implemented that are successful in providing habitat for some bird species (Farley et al. 1994; Kus 1998), the overall biodiversity of the created habitat is generally far lower than native habitats and does not serve to mitigate the loss of sensitive vegetation. It is therefore appropriate to mitigate temporary habitat losses at greater than a 1:1 ratio because the quality of the resulting "restored" habitat is invariably lower than native habitat.

Restoration is also an ineffective method to mitigate for wetland losses. For example, in an analysis of the hydrology, biogeochemistry, and biology of 256 acres of riparian mitigation in Orange County, it was found that none of the sites met minimal levels of wetland functions (Sudol & Ambrose 2002). A separate review of wetland mitigation projects in California found that even though permittees generally followed their permit conditions, the resulting wetlands are not similar to natural wetlands (Ambrose et al. 2006). This means that from the standpoint of environmental assessment it is inappropriate to rely on the mitigation plans approved by the resource agencies to ensure that restoration projects provide similar functions, values, and species diversity as the natural habitats they replace.

Desert ecosystems are especially hard to restore because of the low rate of vegetative growth. Desert soils are often dominated by cryptobiotic crusts that are made of mosses, cyanobacteria, fungi, blue-green algae, and bacteria (Belnap 1993; St. Clair & Johansen 1993). Once disturbed, these crusts are exceedingly difficult to restore (Bowker 2007). Natural rates of regeneration are slow and even with restoration efforts recovery of disturbed sites may take decades to hundreds of years (Belnap 1993; Bowker 2007). These crusts are important because they provide nutrients to plants (Harper & Pendleton 1993) and reduce soil erosion (Belnap & Gardner 1993), and they may inhibit the spread of invasive exotic plant species (Mattoni et al. 1997). Because of the slow growth of plants and the difficulty of restoring soil crust communities, scientists consider that for desert ecosystem restoration, "the probability for long-term success is low to moderate" (Lovich & Bainbridge 1999).

It is therefore insufficient to simply assert that restoration and revegetation will occur without providing the information necessary to evaluate whether the performance criteria set by the restoration/revegetation plan will be effective in mitigating the impacts to sensitive species and habitats.

Bio-MM#7. Delineate Environmentally Sensitive Areas and Environmentally Restricted Areas (on plans and in-field).

This is not a mitigation measure, because those areas that would be avoided are not included in the tally of impacts for the project. The benefits of this measure are already assumed in the impact analysis itself.

Bio-MM#8. Wildlife Exclusion Fencing.

This measure will not be effective in keeping sensitive species outside of the construction zone. It is essentially impossible to keep species like Blunt-nosed Leopard Lizard and California Tiger

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Salamander excluded from an area with a fence. The RDEIR/SDEIS provides no evidence that the proposed fence is a proven technique that can be effective. In a similar situation, a landfill operator proposed to construct a fence to keep endangered Arroyo Toads out of operations areas and off of roads where they could be killed. Experts commenting on that project noted that there was no practical way to install and maintain a fence of this size and magnitude because zoogeomorphologic forces (e.g., burrowing mammals) would quickly compromise the integrity of the fence. UC Santa Barbara Professor Samuel Sweet wrote a letter to the lead agency (County of San Diego) and offered this expert comment:

> Exclusion fencing has never been documented to be effective in keeping arroyo toads out of a large area; it cannot be installed or maintained in a manner that will exclude toads, especially when the fences are to cross flowing streams. Toads will bypass such a fence by using the stream channel, and the integrity of the fence will be impossible to maintain against runoff events (Dr. Sam Sweet, UC Santa Barbara, Letter to County of San Diego Department of Planning and Land Use, March 28, 1999).

There is no reason to believe that the wildlife fencing proposed in the RDEIR/SDEIS will be any more effective. In short, such a fence may reduce wildlife access to the construction sites but it cannot be relied upon to reduce impacts to a less than significant level.

Bio-MM#9. Equipment Staging Areas.
Bio-MM#10. Mono-Filament Netting.
Bio-MM#11. Vehicle Traffic.

These are not mitigation measures, but elements of the project description that are implicit in the analysis. If equipment were to be staged on sensitive habitats or the contractor were to drive off-road at the construction sites, those impacts would need to be included in the impact analysis. There is no additional mitigation benefit derived from not doing something that the analysis has already assumed will not be done.

Bio-MM#12. Entrapment Prevention.

Conceivably this could be seen as a mitigation measure, but it should probably be included in the project description as a best management practice.

Bio-MM#13. Work Stoppage.

The contractor would need to stop work if special status species were in the work area to avoid violating various laws anyway, so it cannot be seen as a mitigation measure.

Bio-MM#14. "Take" Notification and Reporting.

This is simply following the law, and confers no mitigation benefit relative to any impact on biological resources.

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Bio-MM#15. Post-Construction Compliance Reports.

Again, a mitigation monitoring report is required under state law for CEQA, so this would be done anyway, and it should not be listed as a mitigation measure.

Bio-MM#16. Conduct Preconstruction Surveys for Special-Status Plant Species and Special-Status Plant Communities.

Adequate plant surveys following the required protocols should have been done as part of the preparation of the RDEIR/SDEIS. Doing such surveys after the fact is not a mitigation for any impacts. Furthermore the promise to "avoid" sensitive plants confers no additional mitigation because the level of impacts on sensitive species should have been assessed already in the RDEIR/SDEIS. The responsibility of the Authority is to have assessed where sensitive plant species are and what the impacts on them will be as part of the RDEIR/SDEIS, not to survey for them later and then decide whether they can be avoided.

Bio-MM#17. Prepare and Implement Plan for Salvage, Relocation and/or Propagation of Special-Status Plant Species.

The RDEIR/SDEIS should already include surveys done with the detail necessary to know what sensitive plants will be impacted and whether they will need to be salvaged or relocated. The vague promise to "salvage" or "relocate" cannot be assessed for its effectiveness without additional detail about each of the plant species that would be affected. How will plants be salvaged that are known to be present but not growing because rainfall levels are too low? Which of the sensitive plant species are amenable to relocation ("salvage")? What is the known success rate of "salvage" for these species? Many of the details that would be included in the salvage and relocation plan, including the performance criteria, should be included in a revised RDEIR/SDEIS so that a rational basis is provided to assess whether implementation of the plan would reduce impacts to a less than significant level. Without the plan, no conclusion can be drawn about the effectiveness of the mitigation measure.

Bio-MM#18. Conduct Preconstruction Sampling and Assessment for Vernal Pool Fauna.

All vernal pools should already have been surveyed as part of the preparation of the RDEIR/SDEIS. Surveying them before construction does not reduce impacts on them.

Bio-MM#19. Seasonal Vernal Pool Work Restriction.

Limiting work within 250 ft of vernal pools during the wet season may partially reduce impacts, but it would be insufficient to eliminate impacts to such pools. Work should be limited within the watershed of any vernal pool. If water can drain from a construction area to the pool, the pool and its sensitive species can be adversely impacted. The RDEIR/SDEIS should have mapped the watersheds of any vernal pool that construction activities will impact, regardless of its distance to the construction site.

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The mitigation measure does not provide an enforceable set of dates because it provides for alternative arrangements to be made with U.S. Fish and Wildlife Service (USFWS) or U.S. Army Corps of Engineers (USACE). The CEQA/NEPA process is independent from the subsequent compliance with USFWS or USACE restrictions and requires enforceable mitigation measures not subject to subsequent alteration without public review and comment.

Bio-MM#20. Implement and Monitor Vernal Pool Protection.

This measure proposes use of "exclusion fencing" to protect vernal pools in temporary impact zones. As discussed above (Bio-MM#8), "exclusion fencing" is ineffective at keeping wildlife in or out of areas, particularly for small species.

Bio-MM#21. Implement Conservation Guidelines for the Valley Elderberry Longhorn Beetle.

The surveys for Valley Elderberry Longhorn Beetle should already have been conducted. The Authority will not be able to obtain the necessary permits from USFWS until such surveys are conducted, so the results of those surveys should have been included in the RDEIR/SDEIS. Part of the environmental review process (CEQA/NEPA) is demonstrating compliance with other environmental laws, so the results of this permitting process, or at least the protocol-level surveys necessary to start such a permitting process, should be provided in the EIR/EIS.

Bio-MM#22. Conduct Preconstruction Surveys for Special-Status Reptile and Amphibian Species.

Such surveys should already have been done as part of the preparation of the RDEIR/SDEIS.

Bio-MM#23. Conduct Special-Status Reptile and Amphibian Monitoring, Avoidance, and Relocation.

Relocation of individuals has negligible, if any, benefits to the conservation of sensitive species. Relocated individuals may survive but the habitat that supported them will be gone and density will equilibrate with the available area and resources. The degree to which this measure is effective in decreasing any identified impact is not established and would be extremely low.

Bio-MM#24. Conduct Preconstruction Surveys for California Tiger Salamander.

Protocol-level surveys for California Tiger Salamander should already have been conducted and the results reported as part of preparation of the RDEIR/SDEIS.

Bio-MM#25. Implement Avoidance and Minimization Measures for California Tiger Salamander.

See comments above (Bio-MM#8) on fencing effectiveness for small special status species.

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Bio-MM#26. Conduct Protocol-Level Surveys for Blunt-Nosed Leopard Lizard.

Protocol-level surveys for Blunt-nosed Leopard Lizard should already have been conducted.

Bio-MM#27. Conduct Preconstruction Surveys for Blunt-Nosed Leopard Lizard.
Bio-MM#28. Blunt-Nosed Leopard Lizard Avoidance.

Although these actions will probably be required by any subsequent permit from USFWS, they will not, in the long run, appreciably decrease the impacts of habitat loss for any occupied sites in the construction footprint. Measures to identify and remove endangered species prior to site development are frequently required by the Service but have little practical conservation value (Longcore et al. 2005), especially if the habitat itself is lost or the relocation is not to a carefully chosen recipient site that is both suitable habitat for the species AND not already occupied by it.

Bio-MM#29. Conduct Preconstruction Surveys and Delineate Active Nest Exclusion Areas for Other Breeding Birds.

This is required by the Migratory Bird Treaty Act.

Bio-MM#30. Conduct Preconstruction Surveys and Monitoring for Raptors.

The RDEIR/SDEIS describes the creation of a 300-ft buffer for any raptor nests and a 0.5-mile buffer for any fully protected species. These and other geographic restrictions raise a question of how the site will be accessed for the purpose of construction. A revised RDEIR/SDEIS should have a construction plan that shows the exclusion areas from various mitigation measures and describes the schedule on which the construction would be completed while still avoiding those areas restricted by the mitigation measures.

Bio-MM#31. Raptor Protection on Power Lines.

This is appropriate to avoid violation of the MBTA. However, the RDEIR/SDEIS does not include description of the whole power system necessary for the project in addition to the catenary and mast system over the track. The new power lines necessary to bring electricity to the project must also be described, impacts analyzed, and mitigation measures developed for significant impacts (see Section 3.7 above).

Bio-MM#32. Conduct Preconstruction Surveys for Swainson's Hawks.
Bio-MM#33. Swainson's Hawk Nest Avoidance and Monitoring.
Bio-MM#34. Monitor Removal of Nest Trees for Swainson's Hawks.

The mitigation measures for Swainson's Hawk consist of things that should already have been done (surveys), things already required by law (avoid nests), and a promise to undergo a required regulatory process (get an incidental take permit for removal of nests). The RDEIR/SDEIS does not, however, contain an assessment of the level of impact that will be suffered by Swainson's Hawk and a plan to mitigate those impacts that can be reviewed by the public as part of the CEQA/NEPA process. A promise of future compliance with regulations does not illustrate that

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mitigation for any losses is even feasible or aid in determining the level of impact after mitigation.

Bio-MM#35. Conduct Protocol Surveys for Burrowing Owls.
Bio-MM#36. Burrowing Owl Avoidance and Minimization.

It is evident from the eBird data on Burrowing Owls that the proposed project will significantly impact a large region occupied by this species, and indeed the survey data provided in the RDEIR/SDEIS confirm this fact. But the mitigation measures proposed in the RDEIR/SDEIS fail to meet the standard required for a project-level analysis. First, protocol-level surveys for Burrowing Owls should already have been conducted and the results reported as part of the CEQA/NEPA process. The project proponent and the public have no idea what number of owls and burrows would be destroyed by the project. Without this knowledge it is impossible to assess what mitigation measures are needed, let alone whether they would be effective. Future compliance with State regulations does not substitute for analysis of the magnitude of impacts and disclosure of the mitigation approach so that the public can comment.

In this instance it is especially important that the number and general location of nesting sites along the route is provided, since these sites would influence the dates and locations where work can be undertaken. This information must be incorporated into a master schedule that shows that construction of the project and compliance with the various exclusion zones to protect sensitive species can actually be achieved on the timeline proposed.

Bio-MM#37. Conduct Preconstruction Surveys for Nelson's Antelope Squirrel, Tipton Kangaroo Rat, Dulzura Pocket Mouse, and Tulare Grasshopper Mouse.

These surveys should already have been conducted and the results reported. Information about the distribution of special status species is central to the process of impact analysis and especially in determining whether mitigation of any impacts will be feasible.

Bio-MM#38. Implement Avoidance and Minimization Measures for Nelson's Antelope Squirrel, Tipton Kangaroo Rat, Dulzura Pocket Mouse, and Tulare Grasshopper Mouse.
Bio-MM#39. Implement Avoidance and Minimization Measures for Fresno Kangaroo Rat.

These measures involve reliance on exclusion fences. Exclusion fences for small mammals are not effective (see discussion of Bio-MM#8). It is difficult to create a barrier that is not easily undermined by burrowing species or does not contain holes small enough for small mammals to enter. It is not clear how this measure would have any long-term conservation benefits for the species, assuming the habitat in question will be destroyed. Certainly, the RDEIR/SDEIS provides no analysis that connects the impacts to these species with the effectiveness of the mitigation measures, since the document does not even contain adequate surveys to describe the impacts.

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Bio-MM#40. Conduct Preconstruction Surveys for Special-Status Bat Species.

The RDEIR/SDEIS should already contain survey results for special status bat species. And unlike the apparent assumption in the RDEIR/SDEIS that destruction of hibernation roosts or active nurseries are the only potential impacts to these species, the impact analysis and mitigation measures should evaluate the impacts of artificial night lighting on bats from the construction phase through to operations (especially the Heavy Maintenance Facilities). Research conclusively shows that artificial night lighting can have an adverse impact on the foraging behavior of bat species, and exclude certain species from foraging routes or areas (Polak et al. 2011; Stone et al. 2009). Furthermore, one day and one evening is inadequate survey time to characterize the bat fauna of any area, especially given that some bat species are migratory (Arnett et al. 2008). The project should contain a mitigation measure to minimize the impacts of the project on bat species from use of artificial night lighting.

Bio-MM#41. Bat Avoidance and Relocation.

The RDEIR/SDEIS should already contain sufficient survey information and project design to be able to assess whether bat roosts can be avoided, and if not, provide a detailed plan for their eviction. It is insufficient to point to a future "Bat Roost Relocation Plan" without providing the scope, approach, and details of such a plan.

Bio-MM#42. Bat Exclusion and Deterrence.

The RDEIR/SDEIS provides no explanation of what impacts this measure will mitigate or how the scope of the impact relates to the mitigation measure.

Bio-MM#43. Conduct Preconstruction Surveys for American Badger and Ringtail.

The project biological surveys should already have included remotely triggered camera surveys for sensitive species of mammals such as American Badger and Ringtail. Pre-construction surveys will be simply too late to establish the impact of the project on landscape connectivity for these two sensitive species. Both species are vulnerable to fragmentation and genetic isolation by the project and yet no data about their distribution or movements across the project area have been provided in the RDEIR/SDEIS. For example, juvenile badgers can disperse 50 km (31 miles) across the landscape (Lindzey 2003). Lack of survey data on use of the project site during dispersal, foraging, or reproduction of these species is a significant failing of the document and cannot remedied by pre-construction surveys.

Bio-MM#44. American Badger and Ringtail Avoidance.

Both of these species are sensitive to human disturbance and the proposed 50-ft buffer for occupied dens and 100-ft buffer around natal dens is insufficient. Other projects in California require a 500-ft buffer around badger dens (AECOM 2012).

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Bio-MM#45. Conduct Preconstruction Surveys for San Joaquin Kit Fox.

Protocol-level surveys should already have been conducted for San Joaquin Kit Fox, both for habitat use for foraging and reproduction and for dispersal. Such surveys cannot wait until after the project-level environmental review stage.

Bio-MM#46. Minimize Impacts on San Joaquin Kit Fox.

The RDEIR/SDEIS should describe the USFWS guidance for mitigation to minimize impacts on this species, describe the impacts to the species accurately and completely (which it has not yet done), and then identify the specific mitigation measures that will be implemented, how they will be implemented, and where they will be implemented. Without such an analysis, it is impossible to draw any conclusion about the extent of the impacts, the feasibility of the mitigations, or the level of impact after mitigation. This is especially important with regard to habitat connectivity and the alleged effectiveness of the culvert system intended to serve as mitigation for fragmentation of the species' range.

Bio-MM#47. Restore Temporary Riparian Impacts.

This mitigation measure appears to imply that temporary impacts to riparian habitats can be completely offset by revegetation (through the use of "appropriate plants and seed mixes"). This may not be true and performance measures that incorporate all elements of the riparian community (including invertebrates) (Williams 1993, 1997) must be used to confirm that native diversity is restored at the sites following disturbance or other compensatory mitigation must be required to make up for the difference in habitat quality before and after project implementation. Simple recovery of the dominant plant species (a usual, but flawed, criterion for restoration) does not indicate that the whole biological community has been restored (Longcore 2003).

Bio-MM#48. Restore Temporary Impacts on Jurisdictional Waters.

The RDEIR/SDEIS should recognize that impacts to wetlands are never temporary. Comprehensive worldwide comparison of constructed and native wetlands shows that constructed (i.e., "restored") wetlands do not provide the same ecosystem services as natural wetlands, even after long periods of slow recovery (Moreno-Mateos et al. 2012). The RDEIR/SDEIS cannot therefore make the assumption that temporary impacts to natural wetlands will be fully mitigated by "restoration."

Bio-MM#49. Monitor Construction Activities within Jurisdictional Waters.

Monitoring construction activities is not a mitigation measure unto itself; this mitigation should be incorporated into the mitigation monitoring plan as a means to track compliance with actual mitigation measures.

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Bio-MM#50. Mitigation and Monitoring of Protected Trees.

This is not a mitigation measure, but rather belongs in the mitigation monitoring plan, with the exception of protection of trees during construction.

Bio-MM#51. Install Wildlife Fencing.

This is not a well-formulated mitigation measure. First, as already noted, "wildlife movement corridors" have not been defined based on any empirical data in the RDEIR/SDEIS. The Authority has very little firsthand information about where wildlife is moving. Second, the measure is vague about what it means by "mammals." All mammals? Small mammals? Burrowing mammals? Third, the idea that mammals are targeted by this measure confirms that the Authority believes that no other groups of organisms might use wildlife movement corridors and by extension, that connectivity is only a concern for mammals. Nothing could be further from the truth (Forman 1995; Samways 1990).

Bio-MM#52. Construction in Wildlife Movement Corridors.

It is worthwhile to avoid temporary impacts to any wildlife corridors that are actually documented in the project area. However, the mitigation measure is not sufficiently connected to any specific impact to assess its effectiveness. The specification that night lighting be shielded to avoid lights from "spilling" onto wildlife corridors is insufficient to mitigate impacts on wildlife usage. The existence of the lights themselves, shielded or not, is sufficient to influence wildlife movement (Beier 1995; Beier 2006). This phenomenon was illustrated by a radio telemetry study of young mountain lions in Orange County (Beier 1995):

> All travel in corridors and habitat peninsulas occurred at night. During overnight monitoring, the disperser usually avoided artificial lights when in the corridor or peninsula. For example, M12 [a juvenile mountain lion] consistently used dark areas as he rapidly (<4 hr) traveled the grassy ridge (6.0 X 1.5 km) separating San Juan Capistrano from San Clemente (Fig. 1). Also M12 seemed to use light cues when he negotiated the tightest part of the Pechanga Corridor; his consistent movements in the direction of the darkest horizon caused him to miss the only bridged undercrossing of I-15.
>
> Overnight monitoring showed that dispersers especially avoided night-lights in conjunction with open terrain. On M12's initial encounter with a well-lit sand factory and adjacent sand pits, he took 2 hours and 4 attempts to select a route that skirted the facility, after which he rested on a ridgetop for 2 hours. During 2 nights in the Arroyo Trabuco, M8 explored several small side canyons lacking woody vegetation. He followed each canyon to the ridgetop, where city lights were visible 300–800 m west. He stopped at each canyon ridgetop for 15–60 minutes before returning to the arroyo, without moving >100 m into the grasslands west of the ridgeline in view of the city lights.

Although the current study area does not support mountain lions, this research illustrates that the presence of lights alone is sufficient to affect wildlife movement.

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Bio-MM#53. Compensate for Impacts on Special-Status Plant Species.

This measure improperly defers the details of the compensatory mitigation program to a later date. The RDEIR/SDEIS does not contain adequate information to determine if the mitigation ratio is appropriate (1:1 may or may not be adequate to offset impacts) or feasible (there may not be adequate mitigation bank lands or potential restoration sites to implement restoration in the same watershed as the impacts). The term "watershed" is also vague because watersheds are nested within each other and the RDEIR/SDEIS gives no guidance what stream order of watershed is intended.

Bio-MM#54. Compensate for Impacts on Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp.
Bio-MM#55. Implement Conservation Guidelines During Project Operation for Valley Elderberry Longhorn Beetle.
Bio-MM#56. Compensate for Impacts on California Tiger Salamander.
Bio-MM#57. Compensate for Impacts on Blunt-Nosed Leopard Lizard, Tipton Kangaroo Rat, and Nelson's Antelope Squirrel.

These mitigation measures simply promise compliance with the law. This would have to be done anyway. The RDEIR/SDEIS does not provide adequate details of the impacts or the mitigations to be able to assess whether they would be either effective or feasible. The nature of the mitigation programs, the location of mitigation lands, and the mitigation ratios must be disclosed to the public for comment as part of the environmental review process. These mitigation measures simply list possible mitigation approaches that might be pursued, which is inadequate for the reader to assess whether the standards of CEQA/NEPA will be met.

Bio-MM#58. Compensate for Loss of Swainson's Hawk Nesting Trees.

This measure promises that 150 acres of natural habitat will be preserved per active nest tree removed or abandoned as a result of construction. The RDEIR/SDEIS does not contain citations to sources that would provide support for the assertion that 150 acres would be adequate mitigation. It also does not contain performance criteria or triggers for remediation if the mitigation measure does not result in Swainson's Hawk nesting and reproduction. The mitigation for loss of an active nest should be a new and protected nest site that is occupied. The mitigation measure does not ensure this.

Bio-MM#59. Compensate for Loss of Burrowing Owl Active Burrows and Habitat.

CEQA and NEPA require disclosure of the magnitude and location of project impacts so that a judgment can be made whether mitigation measures are feasible and effective. The RDEIR/SDEIS completely lacks the information necessary to determine if implementing the CDFG guidelines for impacts to Burrowing Owl (as specified in this mitigation measure) would be feasible and contains no analysis meeting the standard required under CEQA and NEPA that those mitigation measures would be effective for the current project. The RDEIR/SDEIS should establish separate, enforceable standards for mitigation for this species that clearly describe where Burrowing Owl habitat and burrows will be lost, describe where and how those impacts

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will be mitigated, and establish triggers for remedial action if the mitigation measures are not effective.

Bio-MM#60. Compensate for Destruction of Natal Dens [San Joaquin Kit Fox].

This mitigation measure defers all details of the habitat purchase to CDFG and USFWS and fails to provide any analysis of how it will effectively offset the described impacts. In fact, this would be impossible without conducting further surveys, since the location of natal dens and the associated habitat for San Joaquin Kit Fox is not provided in the RDEIR/SDEIS.

Bio-MM#61. Compensate for Permanent Riparian Impacts.

As described above for temporary riparian impacts (Bio-MM#5), the mitigation measure should not rely on "restoration" to provide the same habitat functions, values, and diversity as natural habitat unless performance criteria are included that extend beyond simple plant establishment. The RDEIR/SDEIS provides no rationale for the 2:1 mitigation ratio or any description of where the mitigation might be undertaken. It is also possible that impacts might not be mitigatable, such as creating breaks in riparian vegetation at a river crossing structure. Simply acquiring or restoring habitat elsewhere does not mitigate for the fragmentation caused by bridges (Málnás et al. 2011).

Bio-MM#62. Prepare and Implement a Habitat Mitigation and Monitoring Plan.

All of the elements of the proposed mitigation and monitoring plan for wetlands should have been disclosed and included as part of the RDEIR/SDEIS.

The proposed success criteria for wetlands are insufficient because they do not explicitly include measurement of the whole natural community (in addition to plant cover) or performance of the biological functions of natural wetlands (Moreno-Mateos et al. 2012).

Furthermore, it is impossible to judge whether the proposed mitigation plan will offset the impacts of the project because the plan has not yet been formulated and no analysis explicitly connects the project impacts with the features of the mitigation plan in a manner that would support any conclusion.

Bio-MM#63. Compensate for Permanent and Temporary Impacts on Jurisdictional Waters.

This measure proposes various compensatory mitigation approaches for impacts to vernal pools and other wetlands. It does not provide any logical connection between the location and quality of the habitats to be mitigated and the mitigation ratios proposed. The mitigation ratios appear to be arbitrary, at least as described in the RDEIR/SDEIS. Nor does it illustrate that sufficient locations and/or mitigation bank lands are available to implement the mitigation.

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Bio-MM#64. Compensate for Impacts to Protected Trees.

The RDEIR/SDEIS proposes transplanting affected trees. Transplanting individual trees, such as oaks, is an enormous waste of money and not effective (Dagit 2000; Fahselt 2007). Any mitigation for specimen trees should be through planting new trees. Furthermore, it is unclear where the RDEIR/SDEIS complies with SB 1334, the Oak Woodlands Conservation Act, which requires mitigation for oak woodlands as a whole community and not just as individual trees.

Bio-MM#65. Offsite Habitat Restoration, Enhancement, and Preservation.

This appears to be targeted to the implementation of mitigation measures offsite to ensure that they do not have adverse impacts on sensitive resources. Such analysis should be incorporated into the design of each of the mitigation measures so that the facts of such instances can be understood and analyzed as part of the RDEIR/SDEIS. This measure is designed to reduce impacts that have not been identified from actions that have not been fully described in places that have not yet been chosen. It is therefore impossible to assess whether such measures will be effective.

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4.1 Wildlife Underpasses

It is curious that no mitigation measure is proposed for wildlife movement, especially since fragmentation of wildlife populations and landscape connectivity is such an important impact from such an extensive piece of linear infrastructure (Mader 1984; Robinson et al. 2012; Trombulak & Frissell 2000). Impacts can be felt across geographic scales, from the home range of individual animals to genetic isolation within a large landscape (Robinson et al. 2012).

The only project feature purporting to mitigate the significant adverse impacts on connectivity is the design of the culverts along the HRS system, which are included in specific areas assumed to be used for wildlife movement. For purposes of the RDEIR/SDEIS, wildlife is apparently defined as medium-sized mammals, since no effort appears to be made to reduce fragmentation for terricolous invertebrates, large mammals, or even flying vertebrates such as birds that may be influenced by fences and overhead superstructure associated with the train. The RDEIR/SDEIS describes these culverts (called "wildlife crossing structures") as follows:

> The preliminary wildlife crossing structure design consists of modified culverts in the embankment that would support the HST tracks (Figures 2-10a and 2-10b). From end to end, the typical culvert would be 73 feet long (crossing structure length), would span a width of approximately 10 feet (crossing structure width), and provide 3 feet of vertical clearance (crossing structure height). These dimensions would yield a calculated openness factor (Bremner-Harrison et al. 2007) of 0.41.
>
> Additional wildlife crossing structure designs could include circular or elliptical pipe culverts, and larger (longer) culverts with crossing structure distances of up to 100 feet. However, any changes to the design of wildlife crossing structures must meet the following constraints: the design must have a minimum of 3 feet of vertical clearance (crossing structure height), depressed no more than 1.5 feet below grade (half of the vertical clearance), and must meet or exceed the minimum 0.41 openness factor.

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Although the Biological Assessment draft (p. 5-28) claims that crossing structures will be included for Blunt-nosed Leopard Lizard, we were unable to find a description of anything other than these generic culvert crossings.

The question is whether an underpass 3 ft tall, 10 ft wide, and 73 ft long is adequate to provide connectivity for sensitive species in the area. The RDEIR/SDEIS provides no data to support the assertion that it is adequate, with the exception of reference to an unpublished report (Bremner-Harrison et al. 2007) that applies only to San Joaquin Kit Fox. The RDEIR/SDEIS does not include any of the peer-reviewed scientific literature that investigates the effectiveness of underpasses and culverts for a range of species groups. This literature demonstrates that species vary greatly in their use of different design of underpasses and overpasses provided as crossing structures for wildlife. In particular it is noteworthy that European Badgers (*Meles meles*) and Red Fox (*Vulpes vulpes*) do not use culverts that are only 6 ft tall nearly as much as open span underpasses (Mata et al. 2008). Furthermore, the increased underpass openness (which is used as a design criterion in the RDEIR/SDEIS) is associated with additional wildlife use in certain groups, but not in small mammals and lizards (two groups that are represented by sensitive species in the project area) (Mata et al. 2008). And although a study showed that San Joaquin Kit Fox can use culverts to cross linear barriers, the number of crossings was insufficient to make predictions about the effect of different design types on crossing behavior or to compare it with the absence of the barrier (Bremner-Harrison et al. 2007).

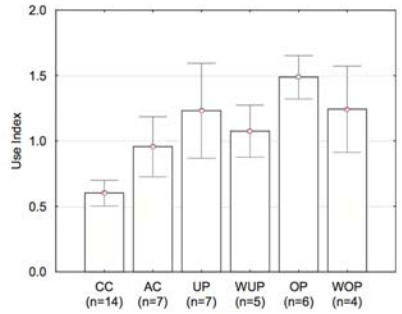

Fig. 3. Use index (mean + SE) recorded in the six types of crossing structures differentiated in the study. CC: circular culverts, AC: adapted culverts, U: underpasses; WU, wildlife underpasses, O: overpasses, and WOP: wildlife overpasses. *n*: number of monitored structures.

Figure 3. Figure and caption from Mata et al. (2008) showing overall wildlife use by different crossing structures. The proposed culverts for the HST route are substantially shorter (3 ft) than any of the crossing structures evaluated in this study (> 5.5 ft) and have a lower openness index than the structures performing the best (0.41 vs. 0.5–2).

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The available research indicates that use of a culvert undercrossing will still reduce the amount of larger wildlife movement compared with other design options (Figure 3) and with the no project alternative (Mata et al. 2005, 2008). Put another way, a mitigation strategy for wildlife connectivity must contain many different kinds of underpasses (and even overpasses) to maximize wildlife permeability (Mata et al. 2005, 2008), but even then the new high-speed train will represent a new barrier to wildlife movement along a large proportion of the proposed route.

In conclusion, even after incorporating the design features intended to reduce fragmentation, the proposed project will interrupt or reduce connectivity for a wide range of species, including many sensitive species.

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5 Proposed Route Does Not Meet Standard of Proposition 1A

The project reviewed in the RDEIR/SDEIS is being partially funded with monies made available through Proposition 1A (2008), a measure enacted by the voters, and that specifies that:

> 2704.09. The high-speed train system to be constructed pursuant to this chapter shall be designed to achieve the following characteristics:
> …
> (i) The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment.
> (j) Preserving wildlife corridors and mitigating impacts to wildlife movement, where feasible as determined by the authority, in order to limit the extent to which the system may present an additional barrier to wildlife's natural movement.

The RDEIR/SDEIS does not even collect any data to identify wildlife corridors, let along preserve them as required by Proposition 1A. The Fresno to Bakersfield route itself violates the intent of Proposition 1A, which requires that the system be designed to minimize urban sprawl and impacts on the natural environment. The choice of the BNSF/SR 43 alignment over an alignment following SR 99 or Interstate 5 itself ensures that the project will not minimize urban sprawl and impacts on the natural environment. Of all the possible routes through the Central Valley, even a cursory review of the distribution of sensitive species and lands would lead to the conclusion that the proposed Fresno to Bakersfield route along the BNSF right-of-way will be the most damaging to the natural environment. A review of all of the distributions of the sensitive bird species (from eBird maps, not included in this submission) shows this, as does a review of the natural habitat and protected lands that must be traversed. The standard of Proposition 1A is higher than that required by CEQA and NEPA, and the CEQA and NEPA analysis should evaluate compliance with Proposition 1A as part of the EIR/EIS process.

We conclude, based on the data presented here and in our possession, that the proposed route does not preserve wildlife corridors (see section 4.1) or minimize impacts to the natural environment compared with other possible routes through the San Joaquin Valley. Even though the choice of routes supposedly reflects choices that have been made after previous environmental reviews, compliance with 2008 Proposition 1A is not optional, so even if previous environmental clearances were obtained, the current RDEIR/SDEIS should address such compliance with respect to biological resources. It does not do this. Anyone with knowledge of the ecology of the San Joaquin Valley would recognize that building the high-speed train along

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the perimeter of the historic Lake Tulare (see maps in The Bay Institute 2003) would be the most, not the least, damaging to biological resources.

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6 Cumulative Impacts Analysis

The cumulative impacts analysis for biological resources in the RDEIR/SDEIS consists mainly of asserting that the project impacts are cumulatively significant or insignificant without any quantitative analysis. Because the analysis is not rigorous — really it is just a series of assertions — the basis for claims about mitigation is lacking a rational foundation. While the conclusion that the entire HST would have a significant adverse impact on wildlife appears to be correct, the analytical detail necessary to reach that conclusion is lacking in the RDEIR/SDEIS as a whole.

The RDEIR/SDEIS acknowledges that several solar power projects are planned for the project study area (p. 3.19-18). These projects would convert farmland to solar installations. Solar farms have far less wildlife value than farmland, especially where croplands are managed to promote sensitive species, such as is done with the timing of harvest of crops to benefit Tricolored Blackbird (NRCS 2012). Swainson's Hawk forages extensively on commercial agricultural fields. The cumulative impacts analysis for this farmland-to-solar conversion is only mentioned with regard to energy supply, not for its impacts on wildlife. Such impacts on wildlife should be considered as part of the cumulative impacts analysis, in terms of lost habitat for wildlife to provide energy needs and in terms of potential ongoing avian mortality at solar sites. Solar installations are known to incinerate birds flying in the path of the focused mirrors at solar thermal projects and to cause collision mortality at reflective surfaces (McCrary et al. 1986).

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7 Ecological Benefits From "Green" Energy Are Overstated

The RDEIR/SDEIS appears to rest part of the notion that the project will have environmentally beneficial effects on the commitment that the project will use "renewable energy sources." As can be seen from the already significant adverse consequences from the development of industrial-scale wind and solar energy facilities in California, such reliance on renewable sources will have a far greater impact on biological resources than is disclosed, and probably will hurt rather than help the resilience of California ecosystems to climate change. The RDEIR/SDEIS does not even consider this possibility and passes off "renewable" energy as 100% beneficial. The RDEIR/SDEIS states:

> The HST alternatives incorporate, to the extent possible, design measures, such as state-of-the-art, energy-efficient equipment and renewable energy sources, to minimize potential air pollution impacts associated with power used by the HST system (p. 3.3-1).
> …
> The HST system, including the propulsion of the trains and the operations of the stations and maintenance facilities, would be powered by the state's electricity grid. Because no dedicated generating facilities are proposed for this project, no source facilities can be identified. Therefore, emission changes from power generation were predicted on a statewide level. In addition, because of the state requirement that an increasing fraction (33% by 2020) of electricity generated for the state's power portfolio must come from renewable energy sources, the emissions generated for the HST system are expected to be

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> lower in the future as compared to emissions estimated for this analysis, which are based on the state's current power portfolio. In addition, the Authority has adopted a goal to purchase the HST system's power from renewable energy providers (p. 3.3-17).
> …
> The state's electrical grid would power the HST system, and therefore no one generation source for the electrical power requirements can be identified. The estimated emission changes for power plants are considered to be conservative because they are based on the current electric generation profile of the state. As previously discussed, the state requires an increasing fraction (33%) of electricity generated for the state's power portfolio to come from renewable energy sources and **the Authority has a policy goal to use 100% renewable energy to power the HST**. As such, the GHG emissions generated for powering the HST system are expected to be lower in the future compared to emission estimates used in this analysis (p. 3.3-62).

Given that the RDEIR/SDEIS is basing its analysis of emissions on the purchase of renewable energy (up to 100% of project needs), the adverse impacts of such a decision on biological resources must also be evaluated. To be adequate, the RDEIR/SDEIS must outline the kind of energy development projects that the Authority contemplates will be utilized to generate necessary electric power, and then analyze the expected environmental impacts of these energy development projects.

The impacts of industrial-scale wind and solar energy development are far from benign. Projects that have already been built or are in the construction phase have had significant adverse impacts on endangered species, e.g., Desert Tortoise at the Ivanpah Valley site developed by BrightSource (Cart 2012). The California Desert Renewable Energy Conservation Plan (DRECP) is intended to guide development of energy resources in a way that minimizes (but cannot eliminate) significant adverse impacts on ecosystems, but the Independent Science Panel for the effort concluded that "DRECP is unlikely to produce a scientifically defensible plan without making immediate and significant course corrections" (Schwarzbach et al. 2012).

The assessments of the lifecycle environmental impacts of alternative energy production are usually focused only on carbon emissions and wrongly do not consider impacts to wildlife and sensitive lands (Lund & Biswas 2008; Varun & Prakash 2009; Wang & Sun 2012). Such considerations would include impacts at the location of construction and also the significant adverse lifecycle impacts from, for example, mining of the rare earth minerals that are required for parts that make up renewable energy systems (Bradsher 2009).

Wind power has significant lifecycle impacts on wildlife, including mining of rare earth minerals for the magnets in the turbines, loss of habitat for construction (Pearce-Higgens et al. 2012), and direct impacts through mortality for birds (Carrete et al. 2009; de Lucas et al. 2008; Smallwood et al. 2010; Smallwood & Thelander 2008) and bats (Arnett et al. 2008; Barclay et al. 2007; Kunz et al. 2007). These impacts are not well predicted by pre-construction impact studies (Ferrer et al. 2012), so impacts are not avoided or properly mitigated. This occurred with the Los Angeles Department of Water and Power Pine Tree Wind project which was challenged by conservationists because it would likely kill birds, was built anyway, and now has one of California's highest avian mortality rates and has killed several Golden Eagles (Sahagun 2012).

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Those analyses that attempt to incorporate wildlife impacts into lifecycle assessments of alternative energy are crude at best and fail to distinguish between different types of wildlife, let alone individual species of birds (Environmental Bioindicators Foundation & Pandion Systems 2009; Jacobson 2009; Sobin 2007; Sovacool 2013). Knowing which species are being affected is essential to impact analysis (Longcore et al. 2012a, b), as is illustrated by the significant adverse impacts predicted for long-lived raptor species from wind development in Spain (Carrete et al. 2009).

The impacts of industrial-scale solar development on desert ecosystems have not been adequately assessed either (Lovich & Ennen 2011). Utility-scale solar development, along with wind energy and other alternative energy sources, is resulting in what has been termed "energy sprawl" across North American habitats, affecting far greater areas of natural habitat than the energy sources they are attempting to replace (McDonald et al. 2009). Concentrating solar plants, which require large amounts of water, will rapidly deplete local groundwater aquifers and adversely impact desert ecosystems dependent on them (Glennon 2009; Schwartz 2011).

Finally, development of wildland-consuming alternative energy facilities, which is what would be involved under current policies for the production of energy for the HST, is not consistent with the best scientific advice for actions to mitigate and adapt to the coming changes in climate. First, it should be recognized that land use, not climate change, is still the major influence on the status of wildlife populations, as shown by recent research on birds in the United Kingdom (Eglington & Pearce-Higgens 2012). Second, conservation scientists recognize that climate change is happening and therefore steps must be taken to allow ecosystems to adapt to such change as it happens (Groves et al. 2012). Third, the core advice for conserving natural diversity under climate change scenarios — conserving a range of geophysical units, protecting climatic refugia, enhancing regional connectivity, and sustaining ecosystem processes and functions — are each undermined by wildland development of alternative energy facilities like wind and solar plants. For example, solar development in the Ivanpah Valley threatens to eliminate regional genetic connectivity for the Desert Tortoise (Ironwood Consulting 2012). It is for these reasons that MacDonald et al. (2009) conclude that the development of alternative energy is coming at the expense of greater habitat impacts.

So if the RDEIR/SDEIS is going to incorporate the alleged benefits of the purchase of renewable energy, it must also review and acknowledge the significant and irreversible adverse impacts to wildlife and habitat that would result from the shift to these energy sources to meet the needs of the HST system. Alternative energy sources are not "green" when they result in the widespread destruction and disturbance of natural lands.

8 Qualifications

Dr. Travis Longcore and Catherine Rich are the principals of Land Protection Partners. Dr. Travis Longcore is Associate Professor (Research) at the USC Spatial Sciences Institute and Associate Adjunct Professor at the UCLA Institute of the Environment and Sustainability where he has taught, among other courses, Bioresource Management, Environmental Impact Analysis, Field Ecology, and the Environmental Science Practicum. He was graduated *summa cum laude* from the University of Delaware with an Honors B.A. in Geography, and holds an M.A. and a

Ph.D. in Geography from UCLA, and is professionally certified as a Senior Ecologist by the Ecological Society of America. Catherine Rich holds an A.B. with honors from the University of California, Berkeley, a J.D. from the UCLA School of Law, and an M.A. in Geography from UCLA. She is Executive Officer of The Urban Wildlands Group and lead editor of *Ecological Consequences of Artificial Night Lighting* (Island Press, 2006) with Dr. Longcore. Longcore and Rich have authored or co-authored over 25 scientific papers in top peer-reviewed journals such as *Conservation Biology*, *Biological Conservation*, *Current Biology*, *Environmental Management*, and *Frontiers in Ecology and the Environment*. Land Protection Partners has provided scientific review of environmental compliance documents and analysis of complex environmental issues for local, regional, and national clients for 14 years.

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Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012)

BO054-1

As indicated in the responses to specific comments included in this letter, no evidence has been provided to indicate that the biological analysis is deficient. Clarification has been provided in the Final EIR/EIS in response to some of the comments in this letter. However, none of those changes alter the conclusions of the biological analysis presented in the Revised DEIR/Supplemental DEIS.

BO054-2

Refer to Standard Response FB-Response-BIO-03, FB-Response-BIO-02.

Contrary to the comment, the Revised DEIR/Supplemental DEIS adequately provides information in Section 3.7.3, Methods for Evaluating Impacts, which presents the study areas, background research, field surveys, and impact analysis. Furthermore, Section 3.7.4 describes the Affected Environment, including descriptions of the regional setting, plant communities and land cover types (terrestrial and aquatic communities), native fauna assemblage, special-status species (Tables 3.7-3 and 3.7-4 and Appendix 3.7-A), habitats of concern (e.g., special-status plant communities, jurisdictional waters, critical habitat, essential fish habitats, conservation areas, and protected trees), and wildlife movement corridors. The method used to analyze impacts is based on the construction and project footprints. Biological resources present or identified suitable habitats present inside the footprints are identified as direct impacts; indirect impacts would occur to resources present outside the footprint extending out to the study area. This method for analyzing impacts is widely used and accepted in the state of California and is consistent with CEQA requirements.

Prospective offsite compensation locations will be identified in coordination with resource agencies during the preparation of a Compensatory Mitigation Plan that identifies land parcels that appear to retain natural habitat and/or jurisdictional water features for preservation, or land where the restoration of land and/or water features would contribute an ecological lift to the landscape. Preparation of the plan is part of the NEPA/404/408 Memorandum of Understanding with the U.S. EPA and of a requirement of Checkpoint C (Identification of the Least Environmentally Damaging Practicable Alternative). Furthermore, the Final EIR/EIS contains additional information regarding the potential mitigation sites identified to date that could be used to meet the compensatory mitigation obligation. The additional information includes descriptions of

BO054-2

the locations and size of the properties, biological resources present, types of activities (preservation, restoration, enhancement) that may be used to offset the construction, and project impacts.

BO054-3

Refer to Standard Response FB-Response-GENERAL-01.

The Authority and FRA have complied with CEQA, NEPA, and related regulatory guidance throughout the process. This is illustrated by the previous Program EIR/EISs and project EIR/EIS prepared for various components of the HST System. As indicated in the responses to comments provided below, this submission does not provide substantive evidence that the environmental impact analysis presented in the EIR/EIS does not meet the requirements of CEQA and NEPA.

BO054-4

Refer to Standard Response FB-Response-BIO-03.

The baseline conditions identified in Section 3.7, Biological Resources and Wetlands, and the associated impact analysis provides a sufficient level of information required by CEQA. Contrary to the comment, baseline conditions are described over the course of 26 pages in Section 3.7.4, Affected Environment, including descriptions of the regional setting, plant communities and land cover types (terrestrial and aquatic communities), native fauna assemblage, special-status species (Tables 3.7-3 and 3.7-4 and Appendix 3.7-A), habitats of concern (e.g., special-status plant communities, jurisdictional waters, critical habitat, essential fish habitats, conservation areas, and protected trees), and wildlife movement corridors. Impacts on biological resources are discussed over the course or 118 pages and include full descriptions of the type of impacts that are anticipated to occur and the mechanisms by which these would occur for each of the HST alternatives and the associated biological resources.

The baseline conditions and impact analysis was conducted through the assimilation of numerous data sources. These data sources include a tremendous amount of existing information found with the California Natural Diversity Database and California Wildlife Habitat Relationship System. Contrary to statements made in the comment, this

Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

BO054-4

information was supplemented with extensive field surveys that were conducted where permission to enter was granted. These surveys included wetland delineations, special-status plants surveys, and wildlife habitat mapping surveys. While access to all properties was not granted, public access to much of the footprint and adjacent areas (where permission to enter was not granted) was available and windshield surveys were conducted to verify aerial signatures and map suitable habitats for special-status species, jurisdictional waters, and other biological resources (i.e., protected trees). Lastly, the impact analysis takes the conservative approach of assuming that special-status species are present within their range where suitable habitat exists. This impact analysis provides a worst-case scenario for analyzing impacts and maximizes compensatory mitigation requirements. In order to avoid and minimize impacts on a number of biological resources, preconstruction surveys are proposed as mitigation.

BO054-5

Refer to Standard Response FB-Response-BIO-03.

BO054-6

None of the information regarding location of special-status species, habitats of concern (including wetlands), or wildlife movement was redacted from the Revised DEIR/Supplemental DEIS. The information presented in the Revised DEIR/Supplemental DEIS was adequate for the public to understand biological conditions in the project area. The only information redacted was from the Biological Resource and Wetlands Technical Report. The location of certain occurrences, such as special-status plant and wildlife species, was redacted to protect these resources and avoid public disclosure of the resources on private property. This technical information was only released to technical professionals who requested the information.

BO054-7

Refer to Standard Response FB-Response-BIO-03.

As stated in Section 3.7.3.3, Field Surveys, of the Final EIR/EIS, field surveys were not and could not be performed in areas where permission to enter (access) was not granted. These areas will be surveyed before construction, as required by various

BO054-7

mitigation measures presented in Section 3.7.7, Mitigation Measures, of the Final EIR/EIS. The jurisdictional wetlands and waters within the study area are pending verification by the U.S. Army Corps of Engineers (USACE), which will make the final determination as to the amount, locations, and types of waters present within the study area. The results of the Preliminary Wetland Determination will be included as part of the Final EIR/EIS.

Because the HST alternatives have changed over time, a single map representing where access was granted or denied for all biological surveys would mislead the public. In some instances, biological surveys for some resources were complete, but other resource surveys were not. For example, access to lands granted in the fall of 2011 resulted in the completion of some surveys (jurisdictional delineation, habitat mapping), but surveys for special-status plant species where not conducted because the timing of the surveys coincided with an inappropriate bloom period for target species. For these reasons, a map showing the locations with permission to enter is not included in the Final EIR/EIS.

BO054-8

To address regulatory requirements and assess potential impacts on biological resources, the *Central Valley Biological Resources and Wetlands Survey Plan* (Authority and FRA [2009] 2011) was prepared and provided to the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service (USFWS), and California Department Fish and Game (CDFG) in September 2009 for review and comment. Therein, the varying biological resource study areas were identified for wetlands and special-status plants and wildlife species. The reasoning behind the different buffer distances for each resource is provided in Section 3.7.3.1, Study Areas, of the Final EIR/EIS.

The basis for the 250-foot buffer for the Wetland Study Area is consistent with the guidance in the U.S. Fish and Wildlife Service's 1996 "Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California (Programmatic BO)" (USFWS 1996). The basis for the wildlife core (250 feet), auxiliary (750 feet), and supplemental (1.24 miles) habitat study areas was "to evaluate direct and indirect impacts on habitats and the special-

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status wildlife species that use them" beyond the proposed construction (project) footprint. In the specific case of sensitive species, such as the California tiger salamander, the supplemental Habitat Study Area of up to 1.24 miles beyond the construction (project) footprint was based on the dispersal range of the California tiger salamander from potential breeding pools, in accordance with the USFWS and CDFG's 2003 *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (USFWS and CDFG 2003). The basis for the 100-foot Special-Status Plant Study Area buffer beyond the construction (project) footprint was to allow for indirect impacts on special-status plant species and their habitats and is in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009), which prescribes that "[botanical] surveys should be comprehensive over the entire site, including areas that will be directly or indirectly impacted."

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Figure 5-4 of the draft Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report depicts only those special-status wildlife species observed during the 2010 and 2011 field surveys (Authority and FRA 2012g). The reported distribution of special-status species in the region is reported on Figure 3-2a, CNDDB special-status wildlife species and critical habitat: invertebrates, fish, amphibians, reptiles, and birds, and on Figure 3-2b, CNDDB special-status wildlife species: mammals.

As depicted in Appendix 3.7-A, Special-Status Species and Observed Habitats, in Attachment 3 (Figure A3-1a–1n, Observed Habitats within the Habitat Study Area), the extent of habitat use by these species is presented through the California Wildlife Habitat Relationship (CWHR) System habitat types mapped for the entire Habitat Study Area, which includes the construction (project) footprint plus a 1,000-foot buffer around project elements. Together, Figure A3-1a–1n and Appendix 3.7-B, Comparison of Impacts on Biological Resources by Alternative, Attachment 2, provide a detailed breakdown of the location and extent of impacts on special-status species and suitable habitat for these species. The field survey methodology described in Section 3.7.3.3, Field Surveys, in the Revised DEIR/Supplemental DEIS states that "field surveys were conducted to identify potentially suitable wildlife habitat for special-status wildlife

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species" and "focused surveys were not conducted."

To identify the locations of wetlands and other waters of the U.S., state and federally listed plant or wildlife species, wildlife movement areas, and migration corridors, the *Central Valley Biological Resources and Wetlands Survey Plan* (Authority and FRA [2009] 2011) was prepared and provided to the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) in September 2009 for review and comment. Therein, industry-standard data sources, such as the USFWS Sacramento field office website, California Natural Diversity Database (CNDDB)/RareFind, California Native Plant Society Online Inventory of Rare and Endangered Plants of California, CWHR System, USFWS recovery plans, USFWS Birds of Conservation Concern (BCC) for Region 8 (California and Nevada), and agency communications were proposed to identify all reported occurrences within 10 miles of the alternative alignments or potentially within the various U.S. Geological Survey 7.5-minute quadrangles (quads) that overlap the alternative alignments and their eight surrounding quads.

As stated under the Terms and Conditions of eBird, the Cornell Lab of Ornithology, and the Avian Knowledge Network, "Reproduction of any eBird data or any products derived from it, either whole or in part, for commercial purposes is prohibited without prior written permission of the Cornell Lab of Ornithology." Permission from Cornell Lab of Ornithology was not requested because the information would not have likely provided significantly different results or new information that was not already available through species lists or occurrence data from regulatory agencies that govern these resources. Within the state of California, CNDDB is the primary resource for tracking special-status species occurrences throughout the state. During project initiation and before conducting field surveys, the *Central Valley Biological Resources and Wetland Survey Plan* (Authority and FRA 2009 [2011]) was prepared and reviewed by regulatory agencies. The survey plan did not include eBird as a source of information that would be used to supplement survey efforts. Furthermore, eBird is not considered a scientifically rigorous dataset and could therefore contain erroneous reports. Use of eBird as baseline data in environmental documents, such as an EIR/EIS, is uncommon for these reasons.

To identify the locations of state and federally listed plant or wildlife species, the *Central*

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Valley Biological Resources and Wetlands Survey Plan (Authority and FRA [2009] 2011) was prepared and provided to the U.S. Army Corps of Engineers, USFWS, and CDFW in September 2009 for review and comments. Due to the constraints associated with obtaining permission to enter private property, access to the proposed Habitat Study Area was limited, making protocol-level survey impracticable. After consultation with USFWS and CDFW, the Authority will assume the presence of special-status wildlife species where suitable habitat is present, and will perform botanical surveys (Mitigation Measure BIO-MM#16) as described in Section 3.7.7.2, Construction Period Mitigation Measures, of the Revised DEIR/Supplemental DEIS, in all unsurveyed areas where suitable habitat for special-status plants is present.

Preconstruction surveys will be conducted for special-status bird species, including state and federally listed species, as described Section 5.6.3, Avoidance and Minimization Measures, of the draft Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report (Authority and FRA 2012g), and Section 3.7, Table 3.7-21, Biological Resources and Wetlands, of the Revised DEIR/Supplemental DEIS, which includes the following measures: Mitigation Measure BIO-MM#29, Conduct Preconstruction Surveys and Delineate Active Nest Exclusion Areas for Other Breeding Birds; Mitigation Measure BIO-MM#30, Conduct Preconstruction Surveys and Monitoring for Raptors; Mitigation Measure BIO-MM#32, Conduct Preconstruction Surveys for Swainson's Hawks; and Mitigation Measure BIO-MM#35, Conduct Protocol Surveys for Burrowing Owls.

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Due to the breadth and scope of the Revised DEIR/Supplemental DEIS and the logistics and costs involved in publishing and distributing this report for public review and comment, not all of the details from the individual technical reports could be incorporated into the main document. This additional information was made available to the public through release of the technical reports, including the draft Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report (Authority and FRA 2012g). The location of certain occurrences, such as special-status plant and wildlife species, was redacted to protect these resources and avoid public disclosure of these resources on private property.

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To identify the locations of state and federally listed plant or wildlife species, the *Central Valley Biological Resources and Wetlands Survey Plan* (Authority and FRA [2009] 2011) was prepared and provided to the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW) in September 2009 for review and comments.

Due to the a number of constraints, and primarily because of limitations associated with permission to enter private property, access to the proposed Habitat Study Area was limited, making protocol-level surveys of the vast majority of the project footprint impractical. Through consultation with USFWS and CDFW, the Authority will assume special-status plant and wildlife species' presence in areas where the species have been scientifically documented and where they are reasonably expected to occur (i.e., where suitable habitat is present and within the species' known ranges).

Contrary to the comment, the Authority will perform and complete a number of protocol-level surveys within the project area before implementation of ground disturbance. These protocol-level surveys are described in Section 3.7.7.2, Construction Period Mitigation Measures, in Section 3.7, Biological Resources and Wetlands, of the Revised DEIR/Supplemental DEIS. Furthermore, once protocol-level surveys are complete, additional mitigation measures would be implemented to avoid, minimize, and rectify or compensate for construction and project impacts.

This approach is consistent across all alternatives and provides the same level of information and environmental data to compare construction and project period impacts across the identified HST alternatives. Contrary to the commenter's suggestion, the approach does not preclude avoidance of impacts. As an example, both the Corcoran Bypass and Allensworth Bypass alternatives were revised through the environmental process to avoid impacts to biological resources. This approach is a conservative approach, where impacts to suitable habitat are used as a basis for calculation of compensatory mitigation requirements. In contrast, if protocol-level surveys were conducted across the entire project area and found the species to be absent, no compensatory mitigation would be required. As such, more mitigation and benefit to

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biological resources will be realized by the project than through the commenter's suggested approach, which is impracticable for the Authority to implement.

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Refer to Standard Response FB-Response-BIO-01.

As described in Section 3.4.7: Wildlife Movement Corridors, in the draft *Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report* (Authority and FRA 2012), wildlife movement/migration corridors were ground-truthed during field surveys through a boots-on-the-ground a visual inspection of the wildlife movement corridor, typically a riparian corridors and/or associated bridge crossing and the immediate up- and down-stream vicinity of the crossing , to document any native special-status or common wildlife species observed through observation or sign at the time of the site visit. The review was limited to previously identified wildlife movement corridors on a landscape level across the valley floor, rather than on a species-by-species or parcel-by-parcel basis. California Wildlife Habitat Relationship System habitat types were also mapped throughout the Habitat Study Area, which includes the construction (project) footprint, plus a 1,000-foot buffer around project elements, as depicted in Appendix 3.7-A, Special-Status Species and Observed Habitats, Attachment 3, (Figure A3-1a–1n: Observed habitats within the Habitat Study Area). As stated, no focus surveys were performed. The field review was limited to the wildlife movement corridor's availability (presence/absence), type (bridge, culvert), and suitability (rough size, dimensions, obstructions). This information was paired with the published wildlife corridor technical reports and information available from the regulatory agencies, described above, to address wildlife movement on a local and metapopulation level, as in the case of the core and satellite populations of the San Joaquin kit fox. Given the "rough landscape level" of the review, no differentiation or "importance" was assigned to local versus metapopulations; instead, wildlife movement was considered on both a micro and macroscale.

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Refer to Standard Response FB-Response-GENERAL-01, FB-Response-GENERAL-02.

The Revised DEIR/Supplemental DEIS used habitat as a proxy for identification of

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impacts on special-status bird species. The use of eBird as part of the impact evaluation is not a valid because the data are only as good as the locations that birders (both amateur and professional) frequent. Given that the alternatives are closer to public lands (e.g., Pixley National Wildlife Refuge, Kern National Wildlife Refuge, and Allensworth Ecological Reserve), more eBird data would be expected. Furthermore, as stated under the Terms and Conditions of eBird, the Cornell Lab of Ornithology, and the Avian Knowledge Network, "Reproduction of any eBird data or any products derived from it, either whole or in part, for commercial purposes is prohibited without prior written permission of the Cornell Lab of Ornithology."

To identify the locations of wetlands and other waters of the U.S., state and federally listed plant or wildlife species, and wildlife movement areas and migration corridors, the *Central Valley Biological Resources and Wetlands Survey Plan* (Authority and FRA [2009] 2011) was prepared and provided to the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife in September 2009 for review and comment. Therein, industry-standard data sources, such as the USFWS Sacramento field office website, California Natural Diversity Database (CNDDB)/RareFind, California Native Plant Society Online Inventory of Rare and Endangered Plants of California, California Wildlife Habitat Relationship (CWHR) System, USFWS recovery plans, USFWS Birds of Conservation Concern (BCC) for Region 8 (California and Nevada), and agency communications were proposed to identify all reported occurrences within 10 miles of the alternative alignments or potentially within the various U.S. Geological Survey 7.5-minute quadrangles (quads) that overlap with the alternative alignments and their eight surrounding quads.

The baseline conditions identified in Section 3.7, Biological Resources and Wetlands, of the Revised DEIR/Supplemental DEIS and the associated impact analysis provide a sufficient level of information required by the California Environmental Quality Act (CEQA). Contrary to the comment, baseline conditions are described over the course of 26 pages in Section 3.7.4, Affected Environment, including descriptions of the regional setting, plant communities and land cover types (terrestrial and aquatic communities), native fauna assemblage, special-status species (Tables 3.7-3 and 3.7-4 and Appendix 3.7-A), habitats of concern (e.g., special-status plant communities, jurisdictional waters, critical habitat, essential fish habitats, conservation areas, protected trees), and wildlife

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movement corridors. Impacts on biological resources are discussed over the course of 118 pages and include full descriptions of the type of impacts that are anticipated to occur and the mechanisms by which these would occur for each of the HST alternatives and their associated biological resources.

The data sources, mentioned above, include a tremendous amount of existing information found with the CNDDB and CWHR System. Contrary to statements made in the comment, this information was supplemented with extensive field surveys that were conducted where permission to enter was granted. These surveys included wetland delineations, special-status plant surveys, and wildlife habitat-mapping surveys. Although access was not granted to all properties, public access to much of the footprint and to adjacent areas was available, and windshield surveys were conducted (where permission to enter was not granted) to verify aerial signatures and to map suitable habitats for special-status species, jurisdictional waters, and other biological resources (e.g., protected trees). Also, the impact analysis takes the conservative approach of assuming that special-status species are present within their range where suitable habitat exists. This impact analysis provides a worst-case scenario for analyzing impacts and maximizes compensatory mitigation requirements. To avoid and minimize impacts on a number of biological resources, preconstruction surveys are proposed as mitigation.

With the various alternative alignments considered for the project, there are 72 alternative ways for a single alignment to run from Fresno to Bakersfield. Providing an individual analysis of all 72 alternatives would have made the document unreadable. To provide information to compare alternatives in as concise a format as possible, the impacts of a single alternative from Fresno to Bakersfield, termed the BNSF Alternative, were described first. This description was followed by a description of the impacts of each individual alternative segment (e.g., Hanford West Bypass 1, Allensworth Bypass) and a comparison of the difference in impacts between that alternative segment and the corresponding segment of the BNSF Alternative. In this way, a reader can quickly understand the implications of choosing either the BNSF Alternative or one of the alternative segments for the particular environmental topic being evaluated.

Sections 3.7.7, Mitigation Measures, and 3.7.8, NEPA Impacts Summary, provide

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National Environmental Policy Act (NEPA) and CEQA summary determinations for each biological resource and each alternative. Where differences arise in the potential alternative, the conclusions have been identified. For most impacts, the biological resource impacts are the same within a given comparison area. The addition of the remaining portions of the BNSF Alternative in some instances increases the intensity of a given impact. For this information, please refer to analysis provided for the BNSF Alternative. Tables 3.7-18 through Table 3.7-21 are provided to facilitate the review of summary determinations. Furthermore, for a complete comparison of impact conclusions associated with the 72 route variations, please refer to Table S-2 in the Executive Summary.

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As described in Section 3.7.4.5, Habitats of Concern, in the Revised DEIR/Supplemental DEIS, the characterization of ecological condition was based in part on a combination of landscape position, manipulation of the hydrological regime, biological resources available to plants and wildlife, physical manipulation/engineering, and the physical and biological characteristics of the substrate. Manipulated features include all jurisdictional water features except vernal pools and swales, and some riverine areas. Although manipulated features can and do provide ecological values for wildlife and waterfowl, these values are comparatively poorer than those values inherent in natural water features such as vernal pools, vernal swales, and riverine.

Retention/detention basins and reservoirs were similarly characterized based on the landscape position, manipulation of the hydrological regime, biological resources available to plants and wildlife, physical manipulation/engineering, and the physical and biological characteristics of the substrate. Retention/detention basins are “square, rectangular, round, or triangular in shape; often found with constructed earthen walls; and devoid of vegetation”; are “closely associated with agriculture activities, and in most instances are used as water storage (or retention) facilities”; and “In urban areas, retention/detention basins are used to retain urban stormwater runoff.” Likewise, reservoirs are “large, steep-sided, man-made impoundments that may contain either drinking water or irrigation water storage”; have “a highly manipulated hydrological regime”; and “are physically engineered to the extent that they are devoid of natural characteristics.”

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Mitigation for wetlands will be based on a U.S. Army Corp of Engineers Standard Operating Procedure (SOP) for mitigation compensation, which requires an evaluation and characterization of wetlands based on a California Rapid Assessment Method (CRAM) or CRAM-like analysis to quantify the ecological loss resulting from project impacts and the ecological lift expected in future wetland restoration, enhancement, establishment, and preservation. The characterization of wetlands described in the Revised DEIR/Supplemental DEIS and draft Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report (Authority and FRA 2012g) is consistent with the USACE's SOP.

In accordance with CEQA guidelines, Section 15147, TECHNICAL DETAIL, all "highly technical and specialized analysis and data" were provided through "inclusion of supporting information and analyses as appendices to the main body of the EIR" and were made "readily available for public examination."

As part of the NEPA/404/408 Integration Memorandum of Understanding (MOU) between the FRA, Authority, USACE and U.S. EPA, the Authority conducted, as required under Checkpoint C, a rapid condition assessment of aquatic resources in the study area. As background, the MOU established three checkpoints on which the signatory agencies work through the NEPA/404 and 408 process. Checkpoint A established the project's purpose and need; Checkpoint B identifies the range of alternatives to be studies in the EIR/EIS; and Checkpoint C identified the preliminary Least Environmentally Damaging Practicable Alternative (LEDPA). Checkpoint C requires a substantial amount of information to evaluate the projects impacts. Specifically, Checkpoint C looks closely at both the quantity and quality of aquatic resources and the project's associated impacts. This information is presented in detail in the Watershed Evaluation Report, which relies on existing desktop information as well as a condition assessment conducted in the field.

The condition assessment used the CRAM resulting in a numeric score and was conducted on aquatic resources where permission to enter was granted. Based on the results of the CRAM assessment, wetland scientist extrapolated the CRAM results to all aquatic resources in the study area and assigned a relative condition (e.g., excellent,

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good, fair, poor). The information provided in the Revised DEIR/Supplemental DEIS is based on the CRAM and relative-condition class extrapolation. The Authority has prepared a number of reports related to Checkpoint C that substantiate the conditions described in the Revised DEIR/Supplemental DEIS and discuss at length the condition of aquatic resources in the study area. These documents are publicly available as part of the administrative record on the Authority's website and titled Summary Report, Watershed Evaluation Report, and Evaluation of Wetland Condition Using the California Rapid Assessment Method (CRAM).

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To identify the locations of state and federally listed plant species and vegetation communities, the *Central Valley Biological Resources and Wetlands Survey Plan* (Authority and FRA [2009] 2011) was prepared and provided to the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife in September 2009 for review and comments. Because it was anticipated that much of the Central Valley HST project sections would be in areas of cultivated row crops, recently tilled land, and urban environments that were not expected to support special-status plant species, native vegetation, or sensitive natural communities, the survey plan proposed that all areas would be visually accessed, but that detailed pedestrian surveys would not be performed where habitat is unsuitable. Best professional judgment was used to determine whether an agricultural or urban area could support special-status plant species. Any patches of native vegetation within a given agricultural or urban area were surveyed, depending on whether permission to enter was granted.

Land within the BNSF corridor represents the BNSF's legal right-of-way; therefore, any encroachment or other unauthorized land use within the BNSF's right-of-way may be subject at any time to removal, maintenance, rodenticide or herbicide treatment, or other disturbances at the discretion of the BNSF. As stated in Section 3.7.4.2, Plant Communities and Land Cover Types, in the Revised DEIR/Supplemental DEIS, "All areas of developed habitats or agricultural lands (e.g., crop, urban) in the right-of-way are controlled by the BNSF Railway, which retains the right to modify land use (e.g., remove orchard trees or structures)." However, "All riverine, canal, and natural upland habitats (i.e., annual grassland, alkali desert scrub, and valley foothill riparian) in the BNSF Railway right-of-way were mapped as such and not as BNSF Urban" to address

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key natural habitat where special-status species are most likely to be present. At best, agricultural lands provide, on occasion, marginal dispersal and foraging habitat, but are not expected to provide the key natural habitat components (i.e., vegetation, soil types, prey base, forage, microhabitats, refugia) necessary to support special-status species denning, refugia, reproduction, and so on.

Due to the constraints associated with obtaining permission to enter private property, access to the proposed Habitat Study Area was limited, making protocol-level survey impracticable. Through consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, the Authority will perform botanical and vegetation community surveys (Mitigation Measure Bio-16), as described in Section 3.7.7.2, Construction Period Mitigation Measures, in Biological Resources and Wetlands, of the Revised DEIR/Supplemental DEIS, in all unsurveyed areas where suitable habitat for special-status plants and plant communities is present.

The 18.59 acres listed describes the maximum acreage of unsurveyed land where special-status plant communities may be detected at this station location. As described above, all unsurveyed areas will be surveyed prior to construction, and mitigation will be provided as outlined in Mitigation Measure Bio-16, Conduct Preconstruction Surveys for Special-Status Plant Species and Special-Status Plant Communities.

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Evidence that temporary impacts to alkali desert scrub can be restored can be found in the San Joaquin Valley at such locations as the protected Allensworth Ecological Reserve and surrounding properties, where evidence of past land disturbances can been seen in aerial imagery in the way of historic canals and ditches for water diversion, and signs of past light discing for agricultural purposes (see below). These disturbances were temporary or low-intensity in nature, and avoided effects to soil chemistry, underlying hard-pan layers, seed banks, and water table to an extent that the microtopography, vegetation communities, and plant and wildlife species were able to reform and recolonize these locations. Please see the image below where evidence of past land disturbances can been seen in aerial imagery in the way of historic canals and ditches for water diversion, and signs of past light discing for agricultural purposes.

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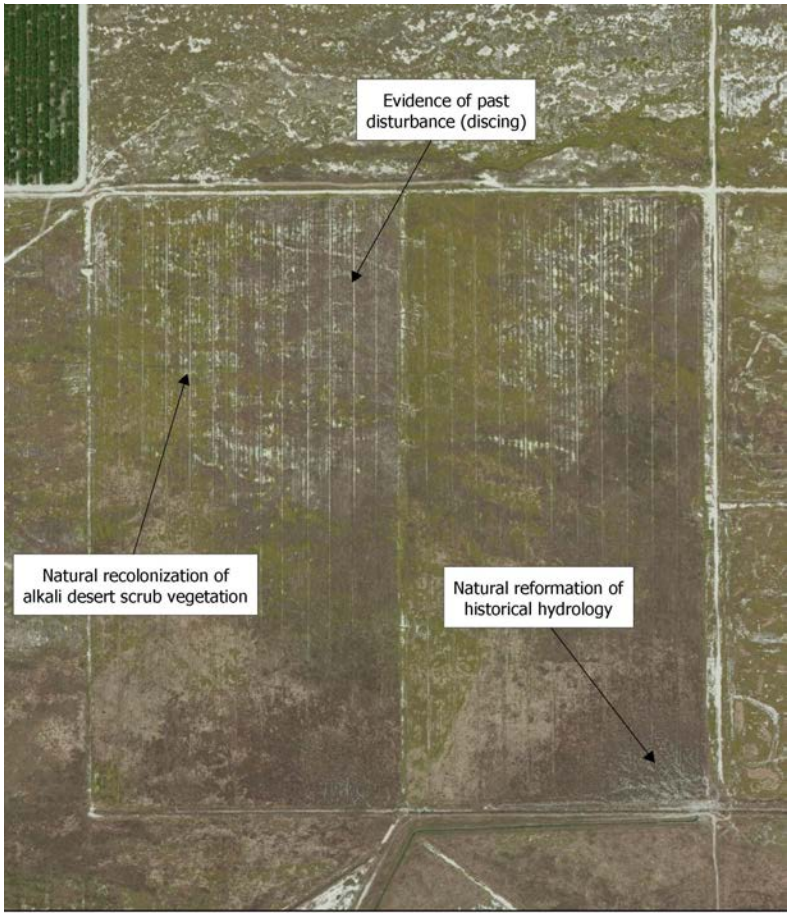

Source: Microsoft BING Map, 2010; URS, 2013

Figure 1 Demonstration of Temporary Impacts to Alkali Desert Scrub

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In the San Joaquin Valley – where the vegetation community composition within the project footprint and a 1,000-foot buffer is dominated by agricultural/cropland, urban, and pasture land, which altogether comprise approximately 90% of the land cover compared to the remaining annual grassland (which is itself a stand-in for the historic native perennial grasslands once present), alkali desert scrub, valley foothill riparian, and valley oak woodlands habitat – invasive exotics are already prevalent in the surrounding developed areas. Efforts have been taken to avoid significant impacts on sensitive natural areas; elsewhere in the San Joaquin Valley, the project footprint crosses through natural land already fragmented and disturbed by the developed lands described above and have mostly likely already been exposed to exotic insects via existing private and county roads, the BNSF, Highway 43, private residences, and vehicular and pedestrian traffic. In accordance with CEQA guidelines, Section 15145, SPECULATION, the suggestion that one impact of construction activities could be the creation of ideal conditions for invasive exotic insects, such as Argentine ants and earwigs, above and beyond the level of disturbance already present is too speculative for further investigation.

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Refer to Standard Response FB-Response-BIO-01.

Furthermore, in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15143, Emphasis, this analysis was limited to the significant effects on the environment. The severity and probability of impacts to small, terricolous invertebrate populations were not considered significant and do not require further discussion. In accordance with CEQA Guidelines Section 15145, Speculation, the suggestion that one impact of the project could be the fragmentation of habitat for small, terricolous invertebrate populations is too speculative for further investigation.

Concerning the “small and non-linear” impacts of construction, project build-out is expected to occur in phases, such that the entire alignment would not be obstructed continuously during construction. Furthermore, design elements, such as road overcrossings and undercrossings, drainage facilities, and specific structures designed for wildlife crossings that facilitate wildlife movement, would be among the first project

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components built to accommodate existing vehicle traffic on surface streets and to maintain hydrologic connectivity. Therefore, as a consequence of project infrastructural needs, impacts on wildlife movement are expected to be “small and non-linear” during project build-out, with opportunities available for wildlife species to pass around or through construction areas.

As described in Section 3.7.5, Environmental Consequences, of the Revised DEIR/Supplemental DEIS, direct and indirect construction and project impacts are discussed for artificial night lighting, including, in particular for bat species; potential disruption or abandonment of bat foraging activities from prolonged disturbance; attraction of nocturnal insects and bats to light sources; potential mortality through disorientation and impacts with construction equipment; and individual mortality from noise, dust, and ultrasonic vibrations from construction equipment. Impacts on other bird and mammal species include avoidance behavior and disruption of wildlife movement, especially in wildlife movement corridors (linkages) or natural lands.

As described in Section 3.16.5.3, High-Speed Train Alternatives, of the Revised DEIR/Supplemental DEIS, during construction “[work] would not occur at night at all times; therefore, this impact would be intermittent over the construction period. Construction at any given location would typically last 1 to 2 years, although construction activities at concrete batch plants and some construction laydown areas would last for up to 5 years.” Mitigation Measure AVR-1b, Minimize Light Disturbance during Construction, proposes that “where construction lighting will be required during nighttime construction, shield such lighting and direct it downward in such a manner that the light source is not visible offsite, and so that the light does not fall outside the boundaries of the project site to avoid light spillage offsite.” This mitigation would be required at all construction sites using nighttime lighting, regardless of its location from sensitive receivers.

Likewise, during the project, “the proposed HST stations in Fresno, Kings County, and Bakersfield would be designed to direct lighting downward. No overhead lights on the HST guideway are proposed, and train lights would be directed toward the guideway.” To further reduce the potential effects of lighting on wildlife, the project description has been amended to explain that “Exterior lighting associated with HMFs would be angled

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toward the ground to limit reflectance or light pollution/spillage outside the HMF, and would incorporate fixture hoods/shielding, cutoff angles, minimum necessary brightness standards consistent with operational safety and security requirements, and, where feasible, switches, timer switches, or motion detectors as necessary."

As described in Section 3.7.7.2, Construction Period Mitigation Measures, of the Revised DEIR/Supplemental DEIS, Mitigation Measure BIO-MM#31, Raptor Protection on Power Lines (renamed in the Final EIR/EIS as BIO-MM#31, Bird Protection), has been proposed to address the risk of birds colliding with the overhead contact system and masts. The measure states that "…the Project Biologist will verify that the catenary system and masts and other structures such as fencing are designed to be bird- and raptor-safe in accordance with applicable recommendations presented in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006), and *Reducing Avian Collisions with Power Lines: State of the Art in 2012* (APLIC 2012). The Project Biologist will check the final design drawings and submit a memorandum to the Mitigation Manager to document compliance with this measure." This mitigation measure has been updated to include that the project design will also take into account APLIC's *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* report, as recommended, and that "during Final Design, the Project Biologist will verify that the catenary system, and masts, and other structures such as fencing are designed to be bird and raptor-safe" in accordance with APLIC's 2006 and 2012 guidance documents. Please note, *Mitigating Bird Collisions with Power Lines* (APLIC 1994) has been superseded by APLIC's 2012 publication.

As recommended, the discussion of direct project impacts has been revised to include fencing as a project impact that could result in injury or mortality from bird strikes or interactions. "Project impacts (e.g., operation of the HST project at-grade or on an elevated structure) could result in injury or mortality from bird strikes or bird interactions with fencing and the electrical systems…"

As described in Section 3.7.5, Environmental Consequences, in the draft *Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report* (Authority and FRA 2012g), impacts on wildlife species are described by guild (mammals, birds, amphibians, reptiles) for special-status and other "native fauna" and include "temporary

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shifts in foraging patterns or territories" for amphibian and reptile species, and "displacement… from the actual fragmentation of the landscape caused by the construction of the HST project components (e.g., security fences, elevated structures, rail beds, and associated facilities). These indirect impacts could interfere with the daily movement, foraging, and dispersal" for bird species; "disrupt breeding or roosting activity or result in the temporary loss of foraging habitats" for bat species; and result in "shifts in foraging patterns or territories" for San Joaquin kit fox and American badger."

In response to concerns about the effects of noise barriers on San Joaquin kit fox movement in urban areas, the discussion of project impacts on wildlife movement corridors has been revised to state that in urban Bakersfield where the track is predominantly elevated, noise barriers will also be elevated alongside the track and will not impede wildlife movement. In areas where noise barriers have been proposed along at-grade sections of track, wildlife movement will be limited to proposed road overcrossings and drainage pipes.

In response to concerns about the use of the San Joaquin kit fox as an umbrella species, this approach is consistent with the USFWS' *Recovery Plan for Upland Species of the San Joaquin Valley, California* (USFWS 1998), which states that: "The broad distribution and requirement for relatively large areas of habitat means conservation of the kit fox will provide an umbrella of protection for many other species that require less habitat. Therefore, the San Joaquin kit fox is an umbrella species for purposes of this recovery plan" (USFWS 1998, page ix).

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As described in Section 3.7.5, Environmental Consequences, Biological Resources and Wetlands, of the Revised DEIR/Supplemental DEIS, direct and indirect construction and project impacts are discussed for artificial night lighting, including, in particular, for bat species potential disruption or abandonment of bat foraging activities from prolonged disturbance, attraction of nocturnal insects and bats to light sources, potential mortality through disorientation and impacts with construction equipment, and individual mortality from noise, dust, and ultrasonic vibrations from construction equipment. Impacts on other bird and mammal species include avoidance behavior and disruption of wildlife

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movement, especially in wildlife movement corridors (linkages) or natural lands.

As described in Section 3.16.5.3, High-Speed Train Alternatives, Aesthetics and Visual Resources, of the Revised DEIR/Supplemental DEIS, during construction "[work] would not occur at night at all times; therefore, this impact would be intermittent over the construction period. Construction at any given location would typically last 1 to 2 years, although construction activities at concrete batch plants and some construction laydown areas would last for up to 5 years." Mitigation Measure AVR-1b, Minimize Light Disturbance during Construction, proposes that "where construction lighting will be required during nighttime construction, shield such lighting and direct it downward in such a manner that the light source is not visible off-site, and so that the light does not fall outside the boundaries of the project site to avoid light spillage off-site."

Likewise, during the project, "the proposed HST stations in Fresno, Kings County, and Bakersfield would be designed to direct lighting downward. No overhead lights on the HST guideway are proposed, and train lights would be directed toward the guideway." To further reduce the potential effects of lighting on wildlife, the project description has been amended to explain that "Exterior lighting associated with HMFs would be angled toward the ground to limit reflectance or light pollution/spillage outside the HMF, and would incorporate fixture hoods/shielding, cutoff angles, minimum necessary brightness standards consistent with operational safety and security requirements, and, where feasible, switches, timer switches, or motion detectors as necessary."

In conclusion, impacts on special-status species during construction are significant under CEQA. However, with the implementation of the proposed mitigation measures identified in Section 3.7.7 and with the inclusion of Mitigation Measure AVR-1b, those impacts are less than significant under CEQA. Lighting impacts are reduced because the shields would "direct it [the light] downward in such a manner that the light source is not visible off-site, and so that the light does not fall outside the boundaries of the project site to avoid light spillage off-site." Construction period impacts on wildlife movement corridors are less than significant and therefore do not require mitigation. Table 3.7-21 has been updated in the Final EIR/EIS to include and reference Mitigation Measure AVR-1b as a measure that will reduce impacts on special-status wildlife species during construction.

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Research on noise effects on wildlife and livestock is limited, but suggests that noise levels of about 100 decibels (dBA) Sound Exposure Level (SEL) (the total A-weighted sound experienced by a receiver during a noise event, normalized to a 1-second interval) may cause animals to alter their behavior. Accordingly, the *High-Speed Ground Transportation Noise and Vibration Impact Assessment* (FRA 2005a) considers an SEL of 100 dBA the most appropriate threshold for disturbance effects on wildlife and livestock of all types. This level is based on a summary of the research and studies referenced in Appendix A of the FRA assessment. Given a reference SEL of 102 dBA at 50 feet for a 220 mile per hour (mph) HST on ballast and tie track, an animal would need to be within 100 feet of an at-grade guideway to experience an SEL of 100 dBA. At locations adjoining an elevated guideway, an SEL of 100 dBA would not occur beyond the edge of the elevated structure. Refer to Section 3.4.3.3, Impact Assessment Guidance, and Section 3.4.5.3, High-Speed Train Alternatives, of the Final EIR/EIS under the heading "Noise Effects on Wildlife and Domestic Animals" for further information regarding noise effects on wildlife and livestock.

Table 3.4-26 of the Final EIR/EIS presents the screening distances to the HST tracks within which the level would exceed the criteria and therefore may affect animals for both at-grade and elevated structures. The criterion for assessing potential noise impacts on wildlife and domestic animals is an SEL of 100 dBA from HST pass-by events. This criterion is based on research into the potential effects from HST noise on animals. These potential effects include relocation, running, physiological effects such as changes in hormones or blood composition, and startle. The criteria for potential startle from rapid onset rates of HST noise apply to humans, because the supporting research is based primarily on human response to rapid onset rates from military aircraft flights. At this time, there is no conclusive evidence that noise and vibration decrease livestock production or affect breeding habits.

In 2005, the Authority and FRA completed the Final Statewide Program EIR/EIS for the proposed California HST System (Authority and FRA 2005) as the first phase of a tiered environmental review process. The Authority certified the final Statewide Program

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EIR/EIS under the California Environmental Quality Act (CEQA), selected the proposed HST System alternative for further project environmental review over the No Project and Modal alternatives, and made several corridor decisions. The Authority also issued a Notice of Determination (Authority 2005c) and CEQA Findings of Fact (Authority 2005a) and adopted a Mitigation Monitoring and Enforcement Plan (Authority 2005b). The FRA issued a Record of Decision (ROD) (November 18, 2005) under the National Environmental Policy Act (NEPA) for the Final Program EIS (FRA 2005b).

The Authority and FRA are now undertaking second-tier project environmental evaluations for several sections of the Statewide HST System. The project EIR/EIS documents for sections of the HST System are being prepared to satisfy the environmental review requirements of state and federal laws and enable the public and agencies to participate in the review of site-specific alternatives. The project EIR/EIS documents will also help define appropriate project mitigation measures to minimize and mitigate adverse impacts that tier from the CEQA Findings of Fact (Authority 2005a) and the ROD (FRA 2005b) for the Statewide Program EIR/EIS (Authority and FRA 2005). The information in the project environmental documents will be used to make decisions about the location of alignments, stations, and facilities to serve the HST and to seek permits and other needed approvals. In all cases, the project environmental analysis will reference and use the information contained in one or both of the Program EIR/EIS documents to ensure consistency with previous decisions and guidance provided by the Authority and FRA. In particular, relevant mitigation strategies for impacts identified in the Program CEQA Findings of Fact and the ROD will be addressed in each project EIR/EIS.

The Authority is both the project sponsor and the lead agency under CEQA. The Authority has determined that project EIRs for sections of the Statewide HST System are the appropriate documents for this next stage of planning and decision-making, which will involve further refining and evaluating of the alignment alternatives, station location options, maintenance facility locations, and phasing options. The coordination and consultation with local and regional agencies needed for project approvals will be part of the project environmental review process.

FRA is the federal lead agency for the preparation of the EIS. Other federal agencies

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with major actions or permits may choose to serve as cooperating agencies. The second-tier project EISs under NEPA for sections of the HST System are the appropriate NEPA documents for the nature and scope of the HST System, the anticipated approvals and decisions by federal agencies, and the need to further examine alignment alternatives and station location options selected at the program level.

The noise and vibration analysis was conducted using the criteria, protocols, and methodology found in the *High-Speed Ground Transportation Noise and Vibration Impact Assessment* (FRA 2005a). FRA adopted this assessment and used it as the basis of the analysis for each segment of the HST project. Because the FRA is the federal lead agency for the preparation of this project EIS, it makes sense to use FRA's assessment document. The 2005 version of the assessment was the latest version available when the analysis was conducted.

Because the version of the assessment used for the EIR/EIS was adopted in 2005, it is expected that additional research and scientific studies have been conducted since then that shed light on certain areas involving the correlation of specific noise levels and metrics to corresponding noise impacts relative to various animal species. The various thresholds, metrics, methodologies, and criteria within the FRA methodology are geared primarily to impacts on humans; they include limited impact criteria for some animals. As such, the analysis is limited to the methodologies adopted and presented by the FRA. With respect to the volume of scientific literature that has been developed since the release of the 2005 assessment, that information, including the various thresholds, methodologies, and metrics with respect to impacts on animal species, along with subsequently adopted noise impact standards and criteria associated with those species, should be presented to the FRA for possible adoption in a future version of the impact assessment.

Generalized noise contours were developed for the project to reflect the locations of the impact criteria levels presented in the impact assessment. These contours were calculated using the equations contained within the assessment. The distances to the noise impact contours for wildlife, as covered in the assessment, were presented in the noise analysis.

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As described in Section 3.7.5, Environmental Consequences, of the Final EIR/EIS and the Fresno to Bakersfield Biological Resources and Wetlands Technical Report (Authority and FRA 2012g), impacts on wildlife species resulting from noise are described by guild (mammals, birds, amphibians, reptiles) for special-status and other "native fauna"; these impacts include mortality of bats during construction due to construction equipment; temporary impacts on American badger, unhabituated San Joaquin kit fox, and other special-status mammals and native fauna; temporary shifts in foraging patterns or territories, refugia abandonment, and increased predation for amphibians and reptiles; and permanent or temporary displacement of daily movement, foraging, and dispersal of special-status bird species to avoid disturbance or reduced reproductive success and increased mortality through the exposure of nests to predators and the elements.

A "spatially explicit sound analysis" or a study of the effect of chronic noise on wildlife species' stress hormone levels, blood pressure, heart rate, and other physiological effects, as suggested by the commenters, for wildlife species by guild or at the species level was not called for in the *Central Valley Biological Resources and Wetlands Survey Plan* (Authority and FRA [2009] 2011), and such analyses are not practicable or feasible.

As stated in Section 3.7, Biological Resources and Wetlands, of the Final EIR/EIS, compensatory mitigation for special-status wildlife species is included among the mitigation measures listed in Table 3.7-21. This table includes the following measures: BIO-MM#5, Prepare and Implement a Biological Resources Management Plan; BIO-MM#51, Install Wildlife Fencing; BIO-MM#52, Construction in Wildlife Movement Corridors; BIO-MM#53, Compensate for Impacts on Special-Status Plant Species; BIO-MM#54, Compensate for Impacts on Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp; BIO-MM#55, Implement Conservation Guidelines during Project Operation for Valley Elderberry Longhorn Beetle; BIO-MM#56, Compensate for Impacts on California Tiger Salamander; BIO-MM#57, Compensate for Impacts on Blunt-Nosed Leopard Lizard, Tipton Kangaroo Rat, and Nelson's Antelope Squirrel; BIO-MM#58, Compensate for Loss of Swainson's Hawk Nesting Trees; BIO-MM#59, Compensate for Loss of Burrowing Owl Active Burrows and Habitat; BIO-MM#60, Compensate for Destruction of

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Natal Dens; BIO-MM#61, Compensate for Permanent Riparian Impacts; BIO-MM#62, Prepare and Implement a Comprehensive Mitigation and Monitoring Plan; BIO-MM#63, Compensate for Permanent and Temporary Impacts on Jurisdictional Waters; BIO-MM#64, Compensate for Impacts to Protected Trees; and BIO-MM#65, Offsite Habitat Restoration, Enhancement, and Preservation.

Prospective offsite compensation locations will be identified in coordination with resource agencies during the preparation of a Compensatory Mitigation Plan that identifies land parcels that appear to retain natural habitat and/or jurisdictional water features for preservation or land where the restoration of land and/or water features would contribute an ecological lift to the landscape. The analysis will be consistent with identified conservation strategies and take into account natural wildlife habitat types, location relative to wildlife movement corridors, level of disturbance, parcel size, and the historic/current presence of wetland features, special-status plant and wildlife species, and other natural resources. Water rights and availability will be included as part of the feasibility analysis during the conceptual mitigation design for prospective wetland mitigation sites.

In accordance with CEQA guidelines, Section 15145, Speculation, and Section 15151, Standards for Adequacy of an EIR, to extrapolate beyond the discussion provided in the Revised DEIR/Supplemental DEIS the potential effects of the project on common, non-listed wildlife species is too speculative for further investigation, and the discussion therein therefore meets the level of adequacy, completeness, and good faith effort at full disclosure necessary to provide decision-makers with information that enables them to make a decision that intelligently takes account of environmental consequences.

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A rodent control program is not proposed during either the construction phase or the project phase. The impacts associated with a rodent control program (page 3.7-54, Direct [Bio#2] Impacts during Construction Period) on special-status bird species (burrowing owl and Swainson's hawk) have been removed from the Final EIR/EIS because the activity is not proposed and should not have been evaluated in the Revised DEIR/Supplemental DEIS. Because a rodent control program is not a part of this project and has been removed from the Final EIR/EIS, there is no need to analyze the potential

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impacts or provide corresponding mitigation.

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Refer to Standard Response FB-Response-PU&E-01, FB-Response-PU&E-02.

The Final EIR/EIS provides details regarding the fencing and overhead contact system in Section 2.2.6, Traction Power Distribution, of the project description (see Figure 2-3) and in the preliminary engineering design plans provided in Volume III (Sections A and B). Furthermore, the Final EIR/EIS provides the required analysis of impacts associated with the electric system, which are discussed in Section 3.7, Biological Resources and Wetlands (see Impact Bio #6), where the text states, "Project impacts (e.g., operation of the HST project at-grade or on an elevated structure) could result in injury or mortality from bird strikes or bird interactions with the electrical systems, as well as by permanent disturbance or temporary displacement from noise, vibration, wind, or visual stimuli." As recommended by the commenter, this sentence was modified for the Final EIR/EIS to include bird interactions with fencing. As recommended, the discussion of direct project impacts has been revised to include fencing as a project impact.

The commenter points out that power lines are known to result in mortality of significant numbers of bird species; however, power line infrastructure is not required by the Fresno to Bakersfield Section of the HST System. Because the electrical infrastructure (e.g., overhead contact system and traction power substations) is different in design, height, and purpose than the transmission line infrastructure (e.g., guidelines, towers, masts, lines), the impacts cannot be directly compared and may not be as severe.

To address the risk of birds colliding with the overhead contact system and masts, as described in Section 3.7.7.2, Construction Period Mitigation Measures, of the Final EIR/EIS, Mitigation Measure BIO-MM#31, Bird Protection, has been revised to also include practices disucssed in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: State of the Art in 2012* (APLIC 2012). Although both guidelines referenced in the measure are specific to power lines, which are not a part of this project, these guidelines will be adopted and applied to this project's electrical infrastructure, where applicable. The revised measure addresses the risk of birds colliding with the overhead contact

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system and masts and states, “The Project Biologist will verify that the catenary system, masts, and other structures, such as fencing, are designed to be bird- and raptor-safe, in accordance with *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: State of the Art in 2012* (APLIC 2012). The Project Biologist will check the final design drawings and submit a memorandum to the Mitigation Manager to document compliance with this measure."

As described in Section 3.7.7.2, Construction Period Mitigation Measures, of the Final EIR/EIS, revised Mitigation Measure BIO-MM#31, Bird Protection, is proposed to address the risk of birds colliding with the overhead contact system and masts and states that the Project Biologist will verify that the catenary system and masts are designed to be raptor-safe in accordance with *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: State of the Art in 2012* (APLIC 2012). The Project Biologist will check the final design drawings and submit a memorandum to the Mitigation Manager to document compliance with this measure.

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Refer to Standard Response FB-Response-BIO-03.

In response to comments related to Mitigation Measures BIO-1–3, 14, and 15, with respect to measures not being tied to a particular impact or with respect to measures that are required as part of existing law and regulations: Designating role and responsibilities for a project mitigation program, granting regulatory access, preparing and implementing a worker environmental awareness program (WEAP), completing take notification and reporting, and submitting post-construction compliance reports are standard elements of regulatory agency permits for large construction projects.

Mitigation Measure BIO-1 is a mandatory component of implementing the wider mitigation program; because the implementation of the various mitigation components (preconstruction surveys, take avoidance, monitoring, compensation, etc.) is a complex process, it is necessary to identify the individuals that will be responsible for

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implementation of each measure.

Development of the Work Environmental Awareness Program (Mitigation Measure BIO-3) as described in the Final EIR/EIS is designed to reduce and minimize the impacts associated with construction activity by training construction and operations personnel in sensitive biological resource identification and avoidance. Implementation of this is intended to minimize and avoid inadvertent impacts on a wide range of sensitive biological resources.

Mitigation Measures BIO-14 and BIO-15 are included in the overall mitigation measures to accommodate anticipated agency requirements. Though the commenter is correct in pointing out that Mitigation Measure BIO-14 and Mitigation Measure BIO-15 do not in themselves mitigate for any particular impact, compliance with agency permitting requirements is generally a mandatory component of permitting conditions and was therefore included as part of the mitigation measures.

In response to comments on Mitigation Measure BIO-4: Please refer to Standard Response #42. This measure has a number of items that specifically identified what will be included in the Weed Control Plan. Portions of this measure have been modified in the Final EIR/EIS. The mitigation measure now states that the Weed Control Plan will establish success criteria and limit the introduction and spread of highly invasive species to less than, or equal to, the predisturbance conditions in areas temporarily impacted by construction activities. An increase in invasive species of more than 5% would require implementation of a control effort. Performance criteria for the weed control plan will be established during development of the plan. The results of preconstruction surveys for noxious weeds will also be taken into account during plan development. Additionally, the weed control plan will be linked to the development of the Biological Resources Management Plan, details of which are described in Mitigation Measure BIO-5. The Biological Resource Management Plan (Mitigation Measure BIO-5) will be in place to monitor the success of the mitigation measure and adjust, if necessary, to achieve the desired results (control of noxious and nuisance species).

In response to comments on Mitigation Measure BIO-5: Please refer to Standard Response #42. While the simple promise of a plan does not mitigate or fulfill the

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mitigation obligation, the Biological Resources Management Plan cannot be fully developed without information from issued agency permits, including detailed compensatory mitigation plans and monitoring criteria. The Authority and FRA believe the outline of the numerous provisions included in the Mitigation Measure BIO-5 contains sufficient information for the general public to conclude that implementation of the Biological Resources Management Plan will be an effective tool to avoid and minimize impacts on biological resources. Furthermore, additional information regarding potential compensatory mitigation properties and the resources that are present have been included in the Final EIR/EIS.

In response to comments on Mitigation Measure BIO-6: Please refer to Standard Responses #01, #42, and #44. The Restoration and Revegetation Plan cannot be fully developed until final design information is available. The plan will comply with all applicable permit conditions (to be issued). Furthermore, the Restoration and Revegetation Plan is only applicable to temporarily disturbed upland areas. Restoration of temporary impacts on riparian areas and jurisdictional waters are addressed in Mitigation Measures BIO-47 and BIO-48.

In response to comments on Mitigation Measures BIO-7, 9–13, 49, and 50: The commenter claims that a number of mitigation measures are not appropriate, and suggests that the measures be presented in other sections or documents. The Authority and FRA believe that while these mitigation measures can also be used by agencies as part of permit requirements, or included in mitigation and monitoring plans, or are not required because they violate state law, or may be included as elements of the project description, or are assumed as part of the project impacts, there is nothing to prevent these mitigation measures from also being included as part of the mitigation measures developed to avoid, minimize, reduce, or rectify the construction and project direct and indirect impacts on biological resources.

ESAs and ERA

Specifically, the identification and installation of environmentally sensitive area (ESA) and environmentally restricted area (ERA) fencing is a standard element of regulatory agency permitting guidelines for large construction projects. The identification of these

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areas would reduce potential for unintentional impacts outside of the construction and project footprint, or within areas during sensitive time periods when construction is not allowed in accordance with other mitigation measures. For example, Mitigation Measure BIO-28, Blunt-nosed Leopard Lizard Avoidance, has specific seasonal buffers requirements that will be identified on plans and marked in the field through implementation of Mitigation Measure BIO-7, Delineate Environmentally Sensitive Areas and Environmentally Restricted Areas.

Equipment Staging, Netting, and Traffic

The impact analysis considers all areas within temporary and permanent impact footprints to be impacted. The implementation of these mitigation measures will serve to minimize direct and indirect impacts and will locate construction elements, such as staging areas, in areas away from sensitive biological resources (e.g., high-quality wetlands or habitat for special-status species).

Entrapment

The Authority and FRA agree that entrapment prevention is an appropriate mitigation measure since it prevents impacts identified under Mitigation Measure BIO-2, but have not included it as best management practice in the project description.

Work Stoppage and Presence of a Biological Monitor

The presence of a Biological Monitor will be required to accurately identify any special-status species within the work area and to provide input to the contractor on the extent and detail of work stoppage. Without a Biological Monitor to implement work stoppage, unintentional direct and indirect impacts on biological resources may occur. Therefore, the designation of stop work authority to the Biological Monitor would serve to reduce and mitigate the amount of take of listed species than would occur if work stoppage were designated only to the contractor.

Additionally, the presence of a construction monitor for work within jurisdictional waters would ensure that permit conditions are being adhered to and therefore serve to

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minimize impacts on these features.

Protected Trees

This measure includes several methods to avoid, minimize, and compensate for impacts on protected trees that would all serve to mitigate for impacts on protected trees.

In response to comments regarding Mitigation Measures BIO-8, 20, 25, 38, and 39: The installation of wildlife exclusion fencing is a common requirement in biological permits, and is included as a mitigation measure in anticipation of such a requirement. The project (landfill) and species (arroyo toad) for which exclusion fencing was installed in the commenter's example are not related to the HST project. While similar issues may exist with other burrowing or ground-dwelling species, the installation, maintenance, and monitoring of the exclusion fence and associated design will significantly minimize the potential for these species to occur to such degree that they are excluded from the work area.

To address the commenter's concerns that fossorial wildlife may pass under an unsecured, aboveground fence, the measure has been slightly revised to include the placement of the fence partially buried below-grade and monitoring requirements. The measure states that "The Contractor's Biologist, under the supervision of the Project Biologist, will install wildlife-specific exclusion barriers at the edge of the construction footprint. Exclusion barriers will be made of durable material, be regularly maintained, and installed below-grade under the supervision of the Project Biologist. Wildlife exclusion fencing will be installed along the outer perimeter of environmentally sensitive areas and ERAs, and below-grade (e.g., 6-10 inches below-grade). The design specifications of the exclusion fencing will be determined through consultation with the U.S. Fish and Wildlife Service [USFWS]) and/or California Department of Fish and Wildlife [CDFW]. The wildlife exclusion barrier will be monitored, maintained at regular intervals throughout construction, and removed following completion of major construction activities. The Project Biologist will submit a memorandum to the Mitigation Manager to document compliance with this measure."

In response to comments on Mitigation Measures BIO-16, 18, 21, 22, 24, 26, 27, 29, 30,

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32–37, 43, and 45: Please refer to Standard Response FB-Response-BIO-03. The Authority and FRA agree that it is important to know the locations of sensitive resources before the start of construction so that construction can commence. The project Mitigation Monitoring Plan will provide a complete list of the preconstruction surveys that must be completed before the start of construction, that coupled with Mitigation Measure BIO-5, Prepare and Implement a Biological Resources Management Plan, requires the plan to "include terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility." To highlight this commitment, the contents of Mitigation Measure BIO-5 have been modified to include "[a] master schedule that shows that construction of the project, preconstruction surveys, and establishment of buffers and exclusions zones to protect sensitive biological resources."

Additionally, with regards to Mitigation Measure BIO-30, this measure has been revised to state: "No more than 14 days prior to the start of ground-disturbing activities, a qualified, agency-approved biologist (designated by the Project Biologist) will conduct visual preconstruction surveys where suitable habitats are present for nesting raptors if construction and habitat removal activities are scheduled to occur during the bird breeding season (February 1 to August 15). Surveys will be conducted in areas within the construction footprint and, where permissible, within 500 feet of the construction footprint for raptor species (not Fully Protected species) and 0.5 mile of the construction footprint for Fully Protected raptor species. The required survey dates will be modified based on local conditions. If breeding raptors with active nests are found, the Contractor's Biologist, under the supervision of the Project Biologist, will establish a 500-foot buffer around the nest to be maintained until the young have fledged from the nest and are no longer reliant upon the nest or parental care for survival, or the nest fails (as determined by the Project Biologist). If fully protected raptors (e.g., white-tailed kite) with active nests are found, the Contractor's Biologist, under the supervision of the Project Biologist, will establish a 0.5-mile buffer around the nest to be maintained until the young have fledged from the nest or the nest fails (as determined by the Project Biologist). Adjustments to the buffer(s) will require prior approval by USFWS and/or CDFW. The Project Biologist will submit a memorandum, on a weekly basis or at other appropriate intervals, to the Mitigation Manager to document compliance with this measure." Construction and access plans cannot be presented until final design, and the locations

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of nesting raptors cannot be confirmed until initiation of preconstruction surveys. No construction would occur within these buffers until either the nestlings have fledged or the nest fails.

Additionally, with regards to Mitigation Measure BIO-40: Impacts on Bat Species from Nighttime Lighting, are addressed in Section 3.7.5.3. Details on the exclusion and deterrence of bats are presented in Mitigation Measure BIO-42. Measures to Reduce Lighting in Wildlife Movement Corridors, are addressed in Mitigation Measure BIO-52.

In response to comments on Mitigation Measure BIO-17: Please refer to Standard Response #42 for information regarding general implementation of plans following certification of the document. Details of this plan are not presented because the number and location of special-status plant species and communities cannot be determined until both final design and preconstruction surveys are completed. As stated in the measure, permit conditions issued by the appropriate resource agencies (e.g., USFWS and CDFW) will guide the development of the plan and performance standards.

In response to comments on Mitigation Measure BIO-19: The stated buffer of 250 feet in this mitigation measure will reduce impacts on vernal pool habitat. As stated in the measure, to prevent impacts during the wet season (October 15–June 1), exclusion fencing and erosion control measures will be installed. These restrictions are subject to revision by regulatory agencies including USFWS and U.S. Army Corps of Engineers (USACE).

In response to comments on Mitigation Measure BIO-23: This measure is included to minimize and prevent the extent of take of special-status reptiles and amphibians. While the commenter makes the argument that relocation of special-status species has little to no effect on conservation of the species due to habitat loss, this mitigation measure does not address conservation and mitigation of habitat lost. Habitat conservation and mitigation measures for reptiles and amphibians are presented in Mitigation Measures BIO-56 and BIO-57. Additionally, the habitat conservation and mitigation measures for wetlands, riparian areas, and other sensitive habitats are presented in Mitigation Measures BIO-61, BIO-62, BIO-63, and BIO-65.

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In response to comments on Mitigation Measure BIO-28: These measures are included, in part, to prevent the take of blunt-nosed leopard lizard individuals. This measure has been revised in the Final EIR/EIS to incorporate avoidance recommendations presented in USFWS-issued Biological Opinion. While the commenter makes the argument that relocation of special-status species has little to no effect on conservation of the species due to habitat loss, this mitigation measure does not address conservation and mitigation of habitat lost. Habitat conservation and mitigation for blunt-nosed leopard lizard are addressed in Mitigation Measure BIO-57.

In response to comments on Mitigation Measure BIO-31: Please refer to Standard Responses #22, #37, #38, and #39.

In response to comments on Mitigation Measure BIO-41: Details of bat avoidance and relocation are dependent on the results of preconstruction surveys and final design. Please see the general comment for preconstruction surveys.

In response to comments on Mitigation Measure BIO-44: The buffers proposed in this mitigation measure are preliminary and are subject to approval by the appropriate regulatory agency (California Department of Fish and Wildlife [CDFW]).

In response to comments on Mitigation Measure BIO-46: Details on impacts on San Joaquin kit fox (SJKF) are presented in the Biological Resources and Wetlands Technical Report (Authority and FRA 2012g). As stated within Mitigation Measure BIO-46, USFWS guidelines for protecting SJKF would be followed during ground-disturbing construction activities. Compensation for SJKF habitat loss is described in Mitigation Measure BIO-60, which has been revised to state that "Habitat will be replaced at a minimum of a 1:1 ratio for natural lands and 0.1:1 for suitable urban or agricultural lands to provide additional protection and habitat in a location that is consistent with the recovery of the species." Additionally, project design features as described in Section 3.7.6 will mitigate for impacts on habitat connectivity and movement corridors.

In response to comments on Mitigation Measures BIO-47, 48, and 62: As stated within Mitigation Measure BIO-47, success criteria for restoration of riparian and other impacted areas will be established in the development of the Comprehensive Mitigation

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and Monitoring Plan (CMMP). The restoration of temporary impacts on jurisdictional waters will be carried out in accordance with the CMMP (Mitigation Measure BIO-62), which will be developed in cooperation with regulatory agencies including USACE, State Water Resources Control Board, and CDFW. The plan will include all required avoidance, minimization, mitigation, and monitoring measures. The plan will also address mitigation for the lost conditions, functions, and values of impacts on waters consistent with agency requirements. Examples of potential success criteria are proposed in this measure and would include criteria for plant cover, habitat functions, and species diversity.

In response to comments on Mitigation Measure BIO-51: Please refer to Standard Response #41. This measure is specific to mammal wildlife movement. Measures pertaining to other mobile animals, including reptiles and amphibians, include Mitigation Measures BIO-18 through BIO-28. Avian species are not considered in this measure as these corridors are land-based and avian species can easily pass over the HST corridor

In response to comments on Mitigation Measure BIO-52: Please refer to Standard Response #41. With regards to night lighting: the shielding of lights in areas of known wildlife movement corridors would reduce the level of impact associated with unshielded lights. The literature referenced by the commenter does not pertain to species known to occur within the study area, nor does it contain information that addresses impacts associated with shielded versus unshielded lights. The commenter's literature appears to show that individuals avoided lit areas; the wildlife movement corridors within the construction area will not be lit, in accordance with implementation of Mitigation Measure BIO-52 which states "the Contractor will keep nighttime illumination (e.g., for security) from spilling into the linkages or shield nighttime lighting to avoid illumination spilling into the linkages." Furthermore, Mitigation Measure BIO-52 contains other measures in addition to lighting that would reduce construction impacts in wildlife movement corridors, such as removing any obstacles from the area and avoiding the use of the area for construction equipment staging.

In response to comments on Mitigation Measures BIO-53–61, 63, and 65: Please refer to Standard Responses #01, #42, and #44. The legal requirement to implement mitigation or compensation measures does not preclude such measures from being included as a

Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

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mitigation measure. Prospective offsite compensation locations will be identified in coordination with resource agencies during the preparation of a Compensatory Mitigation Plan (see Standard Response FB-Response-BIO-02 regarding the compensatory mitigation process) that identifies land parcels that appear to retain natural habitat and/or jurisdictional water features for preservation, or land where the restoration of land and/or water features would contribute an ecological lift to the landscape. The analysis will be consistent with identified conservation strategies and take into account natural wildlife habitat types, level of disturbance, parcel size, and the historic/current presence of wetland features, special-status plant and wildlife species, and other natural resources. The exact details of impacts and project design cannot be determined until completion of preconstruction surveys and final design. Details on restoration, enhancement, and preservation would be provided in the Compensatory Mitigation Plan that will be developed in coordination with regulatory agencies (see response to Mitigation Measures BIO-54 to BIO-57).

In response to the commenter's questions about appropriate "watersheds" and their definitions and use, mention of "watersheds" related to direct and indirect impacts to vernal pools refers specifically to the hydrologic connectivity between any given pool and surrounding pools, dictated by the microtopography of the landscape surrounding said pools. Such watersheds are highly localized, and are predominantly defined by precipitation levels and site microtopography than by a traditional "HUC" watershed. The traditional Hydrologic Unit Code (aka "HUC") watershed refers to a standardized watershed classification system developed by USGS, which is defined by watershed boundaries organized in a nested hierarchy by size. Mention of "watersheds" related to mitigation requirements for sensitive resources, in general, refers specifically to defined HUC watersheds. Any references to "watersheds" in Mitigation Measure BIO-62, Prepare and Implement a Habitat Mitigation and Monitoring Plan, and Mitigation Measure BIO-53, Compensate for Impacts on Special-Status Plant Species, have been revised to say, "HUC watershed" to avoid confusion. At the commenter's suggestion, Mitigation Measure BIO-62, Prepare and Implement a Habitat Mitigation and Monitoring Plan, has been updated to say that "preference will be given to conducting the mitigation within the same HUC-8 or HUC-6 watershed where the impact occurs."

In response to the commenter's suggested mitigation measure that "The mitigation for

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loss of an active nest should be a new and protected nest site that is occupied," the likelihood of locating an active Swainson's hawk nest on land whose landowner is agreeable to establishing a permanent conservation easement or pursuing a fee-title purchase of the property for mitigation purposes is extremely unlikely and could constrain the Authority to mitigation that would be impractical, ineffective, and infeasible. Through ongoing coordination with California Department of Fish and Wildlife, the significant loss of suitable nest trees due to the conversion of land to agriculture and the degradation of riparian habitat in the San Joaquin Valley floor have been identified as one of the primary limiting factors for Swainson's hawks nesting in the San Joaquin Valley. As stated in the mitigation measure, for every documented or active nest tree that is removed or significantly modified, the Authority will acquire and preserve 150 acres of natural habitat. Protecting suitable nesting habitat for Swainson's hawk is both effective and feasible in mitigating for the loss of nest trees by protecting land that provides both nesting and foraging habitat for the species in perpetuity. Details on the location of natural habitat preserved as part of compensation will be provided in the Compensatory Mitigation Plan that will be developed in coordination with regulatory agencies (see response to Mitigation Measures BIO-54 to BIO-57, above).

As described in Mitigation Measure BIO-59, the Authority will provide compensatory mitigation for burrowing owl based on the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), which requires a site-specific analysis accounting for the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area, including habitat acreage and the number of burrows and individual owls. Such information will not be available, nor known, until right-of-way has been secured and preconstruction surveys are performed. The exact locations and details of burrowing owl habitat and habitat loss cannot be determined until completion of final design and preconstruction surveys. Details on the compensation for burrowing owl habitat will be presented in the Compensatory Mitigation Plan that will be developed in coordination with regulatory agencies (see response to Mitigation Measures BIO-54 to BIO-57).

Mitigation Measure BIO-60 has been renamed, "Compensate for Impacts on San Joaquin Kit Fox" and revised to explain that the Authority will mitigate the loss of SJKF habitat by the protection of suitable, approved habitat (USFWS and CDFG). Habitat will

Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

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be replaced at a minimum of a 1:1 ratio for natural lands and 0.1:1 for suitable urban or agricultural lands to provide additional protection and habitat in a location that is consistent with the recovery of the species. The Authority will mitigate the impacts on SJKF in accordance with the USFWS Biological Opinion (2013) and/or California Fish and Game Code 2081(b). Compensatory mitigation could include one of the following:

- Purchase of credits from an agency-approved mitigation bank.
- Fee-title acquisition of natural resource regulatory agency-approved property.
- Purchase or establishment of a conservation easement with an endowment for long-term management of the property-specific conservation values.
- In-lieu fee contribution determined through negotiation and consultation with USFWS.

The exact locations and details of SJKF habitat cannot be determined until completion of final design and preconstruction surveys. Details on the compensation for SJKF habitat will be presented in the Compensatory Mitigation Plan that will be developed in coordination with regulatory agencies (see response to Mitigation Measures BIO-54 to BIO-57).

Compensatory mitigation for jurisdictional waters requires close coordination with USACE through the application of USACE's new 2012 *Standard Operating Procedure for Determination of Mitigation Ratios*. Adherence to this Standard Operating Procedure (SOP) entails a detailed accounting of specific impacts sites and proposed compensatory mitigation sites to identify a project-specific, site-specific mitigation plan that deviates from the traditional "ratios" used in the past. This SOP process is overseen and executed by USACE by a Regulatory Project Manager, who must complete the mitigation ratio checklist on the project's behalf. As stated in Mitigation Measure BIO-63, Compensate for Permanent and Temporary Impacts on Jurisdictional Waters, the ratios proposed represent a minimum to compensate for permanent impacts; the final ratios will be determined in consultation with the appropriate agencies. Compensation described in this measure would be addressed in the CMMP described in Mitigation

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Measure BIO-62. Mitigation ratios presented in this measure are ratios proposed by the Authority, but are subject to change and would be determined in consultation with regulatory agencies. Location and quality of these impacts and their corresponding mitigation will be addressed in the Compensatory Mitigation Plan that will be developed in coordination with regulatory agencies (see response to Mitigation Measures BIO-54 to BIO-57).

Mitigation for permanent riparian impacts will be presented in the CMMP, which will be developed in coordination with regulatory agencies including USACE, USFWS, SWRCB, and CDFW. Mitigation for riparian habitat will be identified through the 401 and 1602 permitting process as "waters of the state." A preliminary compensation ratio of 2:1 for impacted valley foothill riparian is proposed in this measure. Riparian habitat fragmentation is not an impact that traditionally warrants purposed mitigation under CEQA and the California Endangered Species Act; however, the proposed restoration, enhancement, establishment, and preservation of riparian habitat at mitigation and conservation properties will help offset habitat fragmentation within the HUC-6 to HUC-8 watersheds within which project impacts will occur.

In response to comments on Mitigation Measure BIO-64: Regarding mitigation for protected trees, impacts on protected trees are considered significant if the tree is protected by a local ordinance. The mitigation measure must reduce the impact that causes it to be significant. Therefore, the Authority and FRA will refer to local ordinances to determine protected tree measures, and mitigation will occur pursuant to the method identified in the ordinance to reduce impacts. The text in the Final EIR/EIS has been revised to clarify and provide for the requirement to compensate for the loss of protected trees in accordance with the local jurisdiction. As such, if a local regulation or law requires mitigation for the loss of protected trees based on the size of the tree impacted, the Authority and FRA will provide mitigation commensurate with the regulations and laws in that jurisdiction.

The measure in the Final EIR/EIS now states, "The Authority will compensate for impacts, including removal or trimming of naturally occurring native protected trees and landscape or ornamental protected trees, in accordance with the local regulatory body (city or county government). The local regulations and laws allow for a number of

Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

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potential mitigation opportunities. The Authority will provide mitigation commensurate with the regulations and laws in that jurisdiction, such that the resulting impact on protected trees are less than significant, and may include, but are not limited to, the following, depending on the local jurisdiction:

- Transplant all directly affected protected trees that are judged by an arborist to be in good condition to a suitable site outside the zone of impact.

- Replace directly affected protected trees at an onsite or offsite location, based on the number of protected trees removed, at a ratio not to exceed 3:1 for native trees or 1:1 for landscape or ornamental trees.

- Contribute to a tree-planting fund.

The Project Biologist will submit a memorandum to the Mitigation Manager to document compliance with this measure."

Descriptions of local regulations pertaining to oak woodlands are provided in the *Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report*, Table 3-1, Regional and Local Regulations; and Table 3-2, Biological Resources Regulations by City and County Jurisdiction (Authority and FRA 2012g). The Oak Woodlands Conservation Act does not directly provide protection of oak woodlands, but instead provides grant funding and other incentives for voluntary private conservation of oak woodlands in counties that have adopted an Oak Woodlands Management Plan. For example, the Fresno County Oak Woodland Management Plan provides recommendations to landowners to assist with voluntary management of oak woodlands, such as maintaining an average canopy cover of 10–30% when harvesting oaks, and retaining oak trees of all sizes and species represented at the site. If oak woodlands occurred within the project footprint, the Authority would, as with mitigation for protected trees, provide mitigation commensurate with the city or county's Oak Woodlands Management Plan under the Oak Woodlands Conservation Act. As described in Section 3.7.4.2, Plant Communities and Land Cover Types, "valley oak woodland in the Habitat Study Area was located along the floodplain of the Kings River and associated sloughs and side channels (in the Hanford West Bypass alternatives, as

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depicted in Figures A3-1a to A3-1o in Appendix 3.7-A, Attachment 3). Oak woodlands occur "within the Habitat Study Area but not within the project footprint; therefore, it will not be directly impacted." Kings County does not currently have an Oak Woodlands Management Plan under the Oak Woodlands Conservation Act.

BO054-23

Refer to Standard Response FB-Response-BIO-01.

It is expected that heterospecific medium and small mammal species (e.g., American badger, fox, bobcat)—as well as other amphibian, reptile, and "terricolous" invertebrates—will be able to utilize these and other wildlife crossing opportunities available, such as elevated portions of the alignment, bridges over riparian corridors, road overcrossings and undercrossings, and drainage facilities (i.e., large-diameter [60- to 120-inch] culverts and paired 30-inch culverts). Larger mammals, such as deer, mountain lions, bear, and tule elk, are at present largely absent from the project area and as such did not figure into wildlife crossing structure design.

For these reasons and based on input from San Joaquin kit fox expert Dr. Brian Cypher, Associate Director and Research Ecologist at the Endangered Species Recovery Program (Cypher 2012), that San Joaquin kit foxes were no more likely to use a dedicated earthen overcrossing structure than they might be to use an existing road overcrossing, dedicated earthen overcrossing structures were not considered further due to the economics of additional land acquisition, the aesthetic and visual impacts, and the design costs associated with large-scale dedicated earthen crossing structures.

For the San Joaquin kit fox and smaller wildlife species like the blunt-nosed leopard lizard and terricolous invertebrates, peer-reviewed studies and data specific to tailoring wildlife crossing structure design and implementation to individual California wildlife species and/or subspecies are poorly represented in the scientific literature and were not available during the preparation of the technical reports or the EIR/EIS. Dr. Cypher relied on his professional experience studying the San Joaquin kit fox, together with the best-available science on wildlife crossing structure design parameters for other foxes, when making his recommendations on wildlife crossing structure design. The San Joaquin kit fox was used as a representative umbrella species on which to model the

Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

BO054-23

design specifications because it is a high-profile (federally Endangered, state Threatened) species, has a relatively wide dispersal range, is more widespread than other species in the Central Valley, and is of a size comparable to or larger than other species likely to use the structures. Therefore, in the absence of peer-reviewed studies and data specific to San Joaquin kit fox or other wildlife species, it is presumed that the recommended structures are of ample size and should provide adequate crossing opportunities for species other than the San Joaquin kit fox.

The papers cited by the commenter (Mader 1984, Robinson et al. 2012, Trombulak and Frissell 2000) document the effects of linear infrastructure, but do not address design parameters, especially with regard to Central Valley wildlife species. The other reports referenced (Mata et al. 2005, 2008; Bremner-Harrison et al. 2007) address design optimization; Bremner-Harrison et al. 2007 was a primary reference used in the design of the project's proposed wildlife crossing structures, and although Mata et al. 2005 and Mata et al. 2008 were not reviewed during wildlife crossing structure design, their recommendations that "a mitigation strategy for wildlife connectivity must contain many different kinds of underpasses (and even overpasses) to maximize wildlife permeability" is consistent with the wildlife crossing opportunities that would be available across the HST System through its variety of engineered structures, including dedicated wildlife crossing structures, elevated track, bridges, road overcrossings and undercrossings, and drainage facilities (i.e., large-diameter culverts [60 to 120 inches in diameter] and paired 30-inch-diameter culverts).

Flying vertebrates (bats and birds) are expected to navigate over at-grade portions and under elevated portions of the track, as they are expected to do at existing locations in the valley such as fenced-off water treatment ponds and retention/detention basins. Mitigation Measure Bio-MM#31, Raptor Protection on Power Lines, has been revised to more broadly address bird protection. Mitigation Measure Bio-MM#31 (now titled Bio-MM#31, Bird Protection) has been updated to state that the project design will now take into account the findings in both *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012), as recommended. Please note, *Mitigating Bird Collisions with Power Lines* (APLIC 1994) has been superseded by APLIC's 2012 publication.

BO054-24

Refer to Standard Response FB-Response-BIO-01, FB-Response-GENERAL-02.

The project EIR/EIS for the Fresno to Bakersfield Section relies on information from the 2005 Statewide Program EIR/EIS for the California HST System (Authority and FRA 2005). The Statewide Program EIR/EIS considered alternatives on Interstate 5 (I-5), State Route (SR) 99, and the BNSF Railway (BNSF) corridor. The Record of Decision for the Statewide Program EIR/EIS rejected those routes and selected the BNSF corridor as the Preferred Alternative for the Fresno to Bakersfield Section. Further engineering and environmental studies within the broad BNSF corridor have resulted in practicable alternatives that meet most or all project objectives, are potentially feasible, and would result in certain environmental impact reductions relative to each other. Accordingly, the project EIR/EIS for the Fresno to Bakersfield Section focuses on alternative alignments along the general BNSF corridor. The I-5 corridor was again reviewed during the
environmental review for the Fresno to Bakersfield Section (see Section 2.3.2, Range of Potential Alternatives Considered and Findings, of the Final EIR/EIS), but was eliminated from further consideration, as described in Standard Response FB-Response-GENERAL-02.

The purpose of project alternatives is to minimize or avoid impacts. The purpose of an EIR/EIS is to analyze and document the environmental impacts of a project. The fact that a project alternative will result in environmental impacts is not a violation of the California Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA). Because the Authority conducted analysis of alternative alignments that follow SR 99/the Union Pacific Railroad (UPRR) and the I-5 corridor and determined that these alternatives were not practicable, they were not carried forward in the EIR/EIS. Neither CEQA nor NEPA requires an environmental document to analyze alternatives that are not
practicable to implement.

BO054-25

Refer to Standard Response FB-Response-GENERAL-01.

Response to Submission BO054 (Travis Longcore, Land Protection Partners, October 19, 2012) - Continued

BO054-25

As described in Section 3.7, Biological Resources and Wetlands, quantitative and qualitative analyses were completed for the HST project as applicable and feasible for each resource. The cumulative analysis for biological resources in Section 3.19, Cumulative Impacts, provides only a qualitative analysis, consistent with many of the other resource topics addressed therein. The Authority believes this analysis is adequate for the identification of cumulative impacts. As described in CEQA Guidelines Section 15130 and stated in Section 3.19.1 of the Revised DEIR/Supplemental DEIS, "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone."

Solar projects are identified in the cumulative projects list in Appendices 3.19-A and 3.19-B and the cumulative impacts analysis for each resource, including biological and agricultural resources, accounts for these projects.

BO054-26

Refer to Standard Response FB-Response-PU&E-02.

The Authority's policy goal is to use 100% renewable electricity for the operation of the HST. The Authority would consider renewable sources to include bio-energy from livestock, wind, solar, and geothermal. This goal can be achieved through purchase agreements with power suppliers and through the design of project buildings and facilities to meet progressive energy performance goals required by California code and policy (zero-net energy buildings). Developers who enter into agreements with the Authority to supply renewable energy will be responsible for the environmental clearance and permitting for those facilities. In the 2012 Strategic Energy Plan, developed for the Authority by the National Renewable Energy Lab, it was recommended that the Authority prioritize renewable energy projects sited on brownfields or other previously disturbed land.

The cumulative projects list includes several solar projects in Kings County and Kern County (see Appendix 3.19-A, Planned and Potential Projects and Plans). These projects were identified during interviews with local and regional planning agencies and in existing applications for project entitlements or construction, or were analyzed in

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recent environmental documents. The analyses of potential cumulative impacts from these and other cumulative projects combined with the HST project alternatives are provided in Section 3.19.4.2, High-Speed Train Alternatives Contributions, of the Revised DEIR/Supplemental DEIS.

See Section 3.6, Public Utilities and Energy, of the Revised DEIR/Supplemental DEIS for information about HST project energy demand, impacts, and mitigation measures. Table 3.6-12 shows the change in energy usage due to HST versus current and future conditions. The energy analysis uses a dual baseline approach, meaning the HST project's energy impacts are evaluated both against existing conditions and against background (i.e., No Project Alternative) conditions as they are expected to be in 2035.

Project-related effects to biological resources are discussed in Section 3.7.5, Environmental Consequences. California's electricity grid would power the proposed HST system. Management of California's electricity infrastructure and power supply includes demand forecasting, which includes buffer (or reserve) electricity-generating capacity above expected peak demand that is available to call upon as needed. The Fresno to Bakersfield Section of the HST is estimated to require 78 megawatts of peak demand, which is within existing reserves.

Section 3.6, Public Utilities and Energy, estimates the proposed project's electricity demand. The HST system energy demand is estimated in Table 3.6-18. No impacts on the supply of electrical power to existing users would be anticipated. The HST project would not require the construction of a separate power source, although it would include the addition and upgrade of power lines to a series of substations positioned along the HST corridor. Please refer to the summary of electricity requirements in Section 2.2.6, Traction Power Distribution. Section 3.6.5.3, High-Speed Train Alternatives, discusses how the energy demand would be met.

Submission BO055 (Eric John deJong, Lansing LLC, October 18, 2012)

CALIFORNIA High-Speed Rail Authority

RECEIVED 10/18/2012

Comment Card
Tarjeta de Commentarios

Fresno to Bakersfield High-Speed Train Section
Revised Draft Environmental Impact Report/ Supplemental Draft Environmental Impact Statement (Revised Draft EIR/Supplemental Draft EIS)

La Sección de Fresno a Bakersfield del Tren de Alta Velocidad
Proyecto Revisado de Informe de Impacto Ambiental/ Declaración de Impacto Ambiental Proyecto Suplementario (Proyecto Revisado EIR/Proyecto Suplementario EIS)

Please submit your completed comment card at the end of the meeting, or mail to:
Por favor entregue su tarjeta completada al final de la reunión, o enviela por correo a la siguiente dirección:
Fresno to Bakersfield Revised Draft EIR/Supplemental Draft EIS Comment, 770 L Street, Suite 800, Sacramento, CA 95814

The comment period is from July 20 to September 20, 2012. Comments must be received electronically, or postmarked, on or before September 20, 2012.
El periodo de comentario es del 20 de Julio al 20 de Septiembre del 2012. Los comentarios tienen que ser recibidos electrónicamente, o matasellados, el o antes del 20 de Septiembre del 2012.

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E-mail Address/Correo Electrónico: ej@wredenranch.com
(Use additional pages if needed/Usar paginas adicionales si es necesario)

BO055-1 (1) You are taking away my farm ground which I use to feed my cattle. How will you mitigate this loss of farm ground? How will you create more farmground to offset this loss to the valley?

(2) You are also going to impact much more farm ground than the 100 foot swath of ground which you are seizing. How will you address the true impact on the loss of farm ground? How will you mitigate the loss of income from the destruction of valuable farm ground?

BO055-2 (3) You are cutting thru the middle of my farm ground. How are you going to mitigate the loss of access to my own property? How will you offset the increased transportation costs to my operation?

BO055-3 (4) Why not show us an alternate route using I-5?

Response to Submission BO055 (Eric John deJong, Lansing LLC, October 18, 2012)

BO055-1

Refer to Standard Response FB-Response-GENERAL-04, FB-Response-SO-01, FB-Response-AG-01, FB-Response-AG-03, FB-Response-AG-04, FB-Response-AG-05, FB-Response-AG-06.

For information on the economic effects on agriculture, see Volume I, Section 3.12, Impact SO #15.

The Authority recognizes that the loss of farmland cannot be fully mitigated, and as such has been classified as a significant and unavoidable impact. See Impact AG #4 for information on the permanent conversion of agricultural land, and see Mitigation Measure AG-1 in Section 3.14 for measures to reduce impacts on prime farmland.

The Authority will not "seize" land in that it has committed to compensating landowners at a fair market value for their land. During the land acquisition phase, each landowner will have the ability to discuss the impacts from the HST with the Authority's right-of-way agent so that fair compensation for impacts on their property can be made. During the property acquisition process, losses in the value of the remaining property will be taken into account, and compensation will be provided for the loss in productivity.

The EIR/EIS discloses the impact of the loss of farmland. As discussed in Standard Responses FB-Response-AG-03 through FB-Response-AG-06, the impacts of the HST project will be limited on lands that are outside of the project footprint. The creation of uneconomic parcels as a result of farm severance has also been considered, and the impact has been disclosed in the EIR/EIS.

BO055-2

Refer to Standard Response FB-Response-TR-02, FB-Response-AG-02.

BO055-3

Refer to Standard Response FB-Response-GENERAL-02.

Submission BO056 (E.J. de Jong, Lansing LLC dba Wreden Ranch, October 18, 2012)

July 27, 2011

Initial Comments identifying the Potential Impacts of the High Speed Rail Project to Wreden Ranch

4Creeks, Inc. has reviewed the potential impacts of the proposed High Speed Rail (HSR) to Wreden Ranch (Wreden) based on the draft alignment of the new rail. Additional information concerning the design and specifications of the rail, including the proposed cross section at the location of Wreden are requested to provide more specific comments. However, the overall potential impacts to Wreden by constructing the HSR are summarized into the three (3) following categories:

1. Potential Impacts to the Facility Permit(s)
2. Potential Devaluation of Property
3. Potential Physical Impacts and constraints to the existing operations

BO056-1

1. Potential Impacts to the Facility Permit(s)

For Wreden to operate, three (3) permits are required. A conditional use permit is required by Kings County (County Permit), a Permit to Operate is required by the San Joaquin Valley Air Pollution Control District (Air Permit), and Waste Discharge Requirements are provided by the Regional Water Quality Control Board (Water Permit). Each of these permits has different conditions of approval and the potential impacts of the HSR to these permits are summarized as follows:

- The County Permit and Water Permit identify the allowable number of animals at the facility based upon the amount of cropland associated with the dairy and the waste produced. Each acre of farmable land allows a certain number of animals to be housed at the facility. Reducing the number of acres of farmable land decreases the number of animals allowed, thus decreasing the overall revenue and efficiencies of the facility. The prime farm ground loss in just the one hundred (100) foot take for the HSR equates to approximately 12 acres.
- In addition to the 12 acres for the HSR, additional setbacks to the prime farm ground are required to manage and operate the farming effectively. For instance, pest and weed applicators, specifically aerial applicators will stay a minimum of 100 feet to potentially 500 feet away from the HSR to avoid drifting from both the applicator and the HSR. Crop Applicators are not interested in spraying close to the HSR. This will be an additional loss in farm ground area, if pests and weeds cannot be controlled in a portion of the field, it is not feasible to farm the area as it will spread into the rest of the field.
- Any land that is no longer being farmed, will need to be maintained to prevent weed growth and dust control per the Air Permit.

At a minimum, there will be a loss of approximately 36 acres. Each farmable acre allows the farmer to have roughly an additional 5 milking cows. This equates to a minimum loss of 180 milk cows from the permits. The farming operation has a significant loss from losing 36 acres of prime farm ground as well as the dairy operation. A rough estimate on the loss of gross revenue from the dairy facility alone is approximately $4,500 per cow annually, or $810,000 annually for the minimum 300 ft. cross section.

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Phone: (559) 802-3052
www.4-Creeks.com

BO056-2

2. Potential Devaluation of the Property

The owner/operator purchased the facility for several different reasons. One of the key reasons is that this facility was contiguous and operates very efficiently from the Farming Operations to the Dairy Operations. By splitting the property in half, the value of the overall facility is greatly reduced.

In addition, the existing residence within 100 feet of the HSR will be impacted by noise and potentially vibrations from the HSR. This will devalue the house.

By having the HSR so close the freestall barns will create noises and vibrations in the freestall barns as well as the milk barn. This will have a direct effect on the amount of milk a cow produces, thus reducing the value of the dairy.

Finally, the HSR will bring suburbia to proximity of the facility for possible added scrutiny on the facility and political headaches.

Overall, it is estimated that the value of the facility will have a minimum 20% decrease in value.

3. Potential Physical Impacts and constraints to the existing operation

BO056-3

3.1. Rail Crossings
This impact is dependent on the final design of the HSR and any potential easements/crossings it might allow. Currently the operator has no restricted access between the fields or on the public maintained road, Lansing Avenue. The proposed HSR at ground level will separate the fields and shut down the Lansing Avenue to the West of the facility, cutting off any access to the remaining Wreden Farm area. To access the western edge of the farmland, an additional 3 miles of travel will be required each time access is required to the western farm area. This will impact man hours, equipment hours, and fuel cost. Because the crops grown are double cropped each year, hundreds of trips may be required each year. The cost and impact of this will be significant.

BO056-4

3.2. Aerial Spray Application
The operator will have a difficult time finding an applicator willing to crop dust fields within the potential of a vortex created from a high-speed train in the proximity. Aerial applicators are sensitive from wind changes from 8 mph to 10 mph and will need to address the increased liability from the proposed rail. If the owner is unable to control pest and weeds, it will affect its adjacent crops and thus would be better off disking property and not farming. If farming continues, most likely the crop will have a loss of yields, thus reducing the revenue and creating issues with the Water Permit.

BO056-5

3.3 Irrigation System
The supply water for the irrigation system is located in the lagoon next to the dairy. Fresh water and manure water are mixed and then sent throughout the farm. The HSR will cross the irrigation system in several locations and Wreden will need a minimum of a 36" steel casing at each crossing for each pipeline. A culvert system will need to be designed for the open canal system as well. The easements for these pipelines should not restrict Wreden from operating or maintaining the pipelines.

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Submission BO056 (E.J. de Jong, Lansing LLC dba Wreden Ranch, October 18, 2012) - Continued

BO056-6

3.4 Stray Voltage Concerns

Based upon the power source of the HSR, Wreden has a potential impact from stray voltage that connects to the freestall barns or milk barns which are steel building and excellent conduits for electricity. If stray voltage contacts the feeding areas, it can create slight shock in the cows and cause issues when they are feeding. If stray voltage contacts the milk barn, it could cause the pulsators to prematurely release from the cow, resulting in a loss of milk production.

BO056-7

3.5 Noise and Vibration Impacts

Noise impacts to the facility have a potential to affect cow health and milk production. The constant noise of a passing by train echoing in the freestall barns may generate a 10% decrease in milk production. In addition, the nearby residence will have significant noise and vibration impacts from the train and may require the house be relocated. Lastly, there are several existing wells adjacent to and nearby the HSR. The wells are tapped into a sand stratum deep in the soil for the water, but with the vibrations of the HSR, the stratums may collapse and cause the wells to fail. It would be a minimum of $500,000 to replace each well, as the water table for potable water is below 1,200 feet.

BO056-8

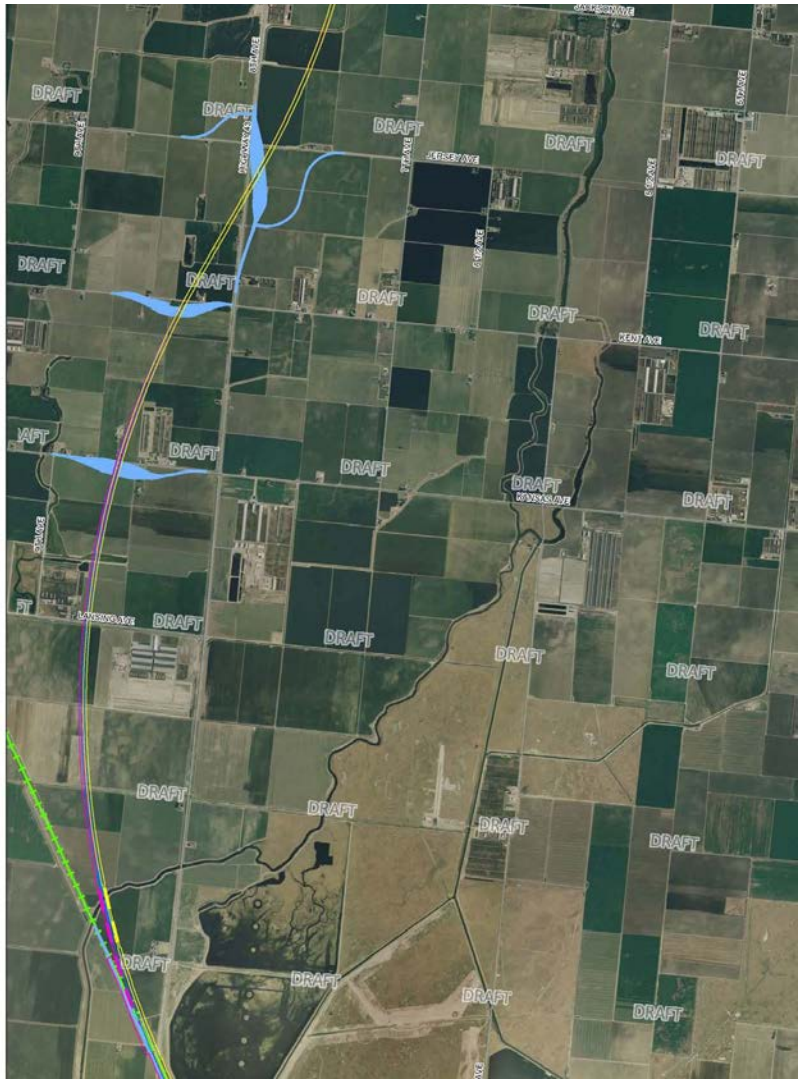
3.6 Cattle Crossing

Wreden has the ability to use a portion of the farmland for pasture land and grazing land for the dry cows and heifers at the facility. The HSR will cut the pasture land areas off and away from the dairy facility, taking away any access from the pasture areas. This will impact the cost of feed and animal health.

Respectfully,

Craig Hartman, PE
Civil Engineer

4 Creeks, Inc. 1150 N. Chinowth St., Suite B, Visalia, CA 93291
Phone: (559) 802-3052
www.4-Creeks.com



Response to Submission BO056 (E.J. de Jong, Lansing LLC dba Wreden Ranch, October 18, 2012)

BO056-1

Refer to Standard Response FB-Response-SO-01, FB-Response-AG-06.

The Authority has committed to help businesses (including confined-animal operations) overcome the regulatory disruptions caused by the project. As a part of the HST project, the Authority will assign a representative to act as a single point of contact to assist each confined-animal facility owner during the process of obtaining new or amended permits or other regulatory compliance necessary to the continued operation or relocation of the facility. The Authority will consider and may provide compensation when acquisition of a confined-animal site would either require relocation of the facility or amendment of its existing regulatory permits (see Section 3.14.6).

The Authority will fairly compensate landowners for loss or disruptions to their operations during the right-of-way acquisition process, including the relocation of existing dairy wastewater ponds and the regulatory costs of permitting relocated wastewater storage ponds. The Authority will work with individual landowners and operators to permit new wastewater lands that may be required. This will be done on a case-by-case basis, with the actual amount of compensation dependent upon the characteristics of the property/dairy operation involved and the necessary permits. The commenter has provided an estimate of his costs, but that amount is unverifiable until actual negotiations begin over the just compensation due.

Obtaining permits for large confined-animal operations is often a slow and expensive process, which makes the conversions of any land used for confined-animal agriculture, whether it is for the grazing of the animals or the disposal of their waste, costly and potentially economically harmful to the farmer. These land conversions could impact the economic viability of one or more confined-animal operations. A more in-depth discussion of the economic impacts can be found in Section 3.12, Socioeconomics, Communities, and Environmental Justice.

The Authority formed an agricultural working group to assist the Authority on agricultural issues. The working group is composed of representatives from universities, government agencies, and agri-business. The group completed a white paper on pesticide use impacts in 2012 (this paper is on the Authority's website). That white paper reports there would be no need for new spraying regulations around the HST because it

BO056-1

would be treated like any other transportation corridor.

Statements regarding the termination of aerial application of pesticides along the HST alignment are an oversimplification of the aerial application process. To conduct aerial applications of pesticides, each farm must submit an application to its respective County Agricultural Commissioner, detailing what types of pesticide they are proposing to spray. After receiving this information, the Agricultural Commissioner places restrictions on the farm's application of pesticides. These restrictions include, but are not limited to, buffer zones, aerial spraying height restrictions, mesh size limits, and wind speed restrictions. When creating these restrictions, the Agricultural Commissioner is looking at nearby sensitive receivers (transportation corridors, houses, business, etc.), the proposed pesticides to be sprayed (different pesticides have different spraying restrictions based on the manufacturer's approved application rates), and several other factors that may influence environmental effects of pesticide application.

Because there are a large number of factors that influence the possible restrictions placed on aerial application of pesticides, an absolute statement of "no spraying within a specific distance" is not reasonable. There are several options available to farmers to avoid having new spraying restrictions placed on them by their Agricultural Commissioner. For example, the farmer could change the pesticides they propose to use to ones that have fewer restrictions; they could also plant a different variety of crops adjacent to the HST that does not require the application of pesticides with spraying restrictions.

The Authority recognizes that possible changes to current spraying practice as a result of the HST may reduce the productivity of a farmer's remaining property. Those possible impacts would be taken into account by the appraiser at the time of the right-of-way acquisition, and any diminution in value to a property owner's remaining parcel(s) will be estimated by the appraiser through the appraisal process. This involves appraising the remainder as it contributes to the whole property value before acquisition, then appraising the remainder in the "after condition" as a separate parcel as though the project was constructed, and including any estimated damages to the remainder, such as cost of re-establishing irrigation systems, replacing wells, providing buffers for aerial spraying, etc. The difference between these "before" and "after" values is termed as

Response to Submission BO056 (E.J. de Jong, Lansing LLC dba Wreden Ranch, October 18, 2012) - Continued

BO056-1

severance damages and will reflect any loss in value of the remainder due to the construction in the manner proposed.

Land that may be impacted by new aerial application restrictions would still be used by the farmer for agricultural purposes, as would new turning areas at the end of crop rows. Therefore, there is no conversion of agricultural land from project impacts on current aerial spraying practices; however, it is an economic hardship in terms of reduced production for the remaining parcels of a farm. As is the case with removing land planted in crops to use as equipment turning lanes, the need to provide a buffer for crop spraying will be analyzed and addressed at the appraisal stage with input from the property owners, managers, and experts in the field.

In April 2013, the Authority reached an agreement with agricultural interests on mitigation of agricultural land impacts for the Merced to Fresno Section of the HST System (Authority 2013). Under that agreement, the Authority will acquire agricultural conservation easements for its impact on Important Farmland (i.e., land classified as prime farmland, farmland of statewide importance, farmland of local importance, and unique farmland) at the following ratios:

- Important Farmland converted to nonagricultural uses either by direct commitment of the land to project facilities or by the creation of remnant parcels that cannot be economically farmed will be mitigated at a ratio of 1:1.
- Where HST project facilities would create a remnant parcel of 20 acres or less in size, the acreage of that remnant parcel will be mitigated at a ratio of 1:1.
- An area 25 feet wide bordering Important Farmland converted to nonagricultural uses by project facilities (not counting remnant parcels) will be mitigated at a ratio of 0.5:1.

BO056-2

Refer to Standard Response FB-Response-AG-02, FB-Response-SO-02, FB-Response-SO-01, FB-Response-N&V-01.

The analysis undertaken by the Authority and FRA show that the HST system has the potential to induce some growth and intensify growth near stations. The project would redirect development growth to central cities, in conjunction with the Senate Bill 375 (state legislation requiring regional targets for reduction of greenhouse gas emissions)

BO056-2

regional efforts and future plans of the cities of Fresno and Bakersfield, and would reduce the pressure for the future conversion of farmlands by encouraging new investments around the stations in Fresno and Bakersfield rather than in peripheral areas.

BO056-3

Refer to Standard Response FB-Response-AG-02.

While the project will result in increased travel time for Wreden Farm by imposing an approximately 3-mile detour, access will remain. During the right-of-way process a private overcrossing or undercrossing may be provided, as described in FB-Response-AG-02. Please see Section 3.12.11, Mitigation Measures; Mitigation Measure SO-4: Provide access modifications to affected farmlands for more information on possible overcrossings or undercrossings.

BO056-4

Refer to Standard Response FB-Response-AG-05.

The Authority formed an agricultural working group to assist the Authority on agricultural issues. The working group is composed of representatives from universities, government agencies, and agri-business. The group completed a white paper on pesticide use impacts in 2012 (this paper is on the Authority's website). That white paper reports there would be no need for new spraying regulations around the HST, as it would be treated like any other transportation corridor.

The white paper "Induced Wind Impacts" examined the potential for airflow from the train to create wind. It found that the induced wind speed would be 2.3 miles per hour at 30 feet from the train. This distance is well within the right-of-way of the system, so induced wind at the edge of the right-of-way would be very small. Note that HST trainsets are very streamlined and applicable and are not directly comparable to the wind effects of a typical freight train, even at higher speed. The typical HST trainset is sealed, with windows that cannot be opened, and no gaps between cars. If pesticide applicators apply pesticides adjacent to the HST in accordance with the existing regulations there should be no liability. If they fail to meet those regulations, the

Response to Submission BO056 (E.J. de Jong, Lansing LLC dba Wreden Ranch, October 18, 2012) - Continued

BO056-4

applicator would be liable for damages.

Statements regarding the termination of aerial application of pesticides within a specific distance of the HST alignment are an oversimplification of the aerial application process. To conduct aerial applications of pesticides, each farm must submit an application to its respective County Agricultural Commissioner, detailing what types of pesticide they are proposing to spray. It is after receiving this information that the Agricultural Commissioner places restrictions on the farm's application of pesticides. These restrictions include, but are not limited to: buffer zones, aerial spraying height restrictions, mesh size limits, and wind speed restrictions. When creating these restrictions, the Agricultural Commissioner is looking at nearby sensitive receptors (transportation corridors, houses, business, etc.), the proposed pesticides to be sprayed (different pesticides have different spraying restrictions based on the manufacturer's approved application rates), and several other factors that may influence environmental effects of pesticide application. As there are a large number of factors that influence the possible restrictions placed on aerial application of pesticides, an absolute statement of no spraying adjacent to the HST is not reasonable. Several options are available to farmers so they may not have new spraying restrictions placed on them by their Agricultural Commissioner. For example, the farmers could change the pesticides they are proposing to use that have fewer restrictions; they could also plant a different variety of crops near the HST that does not require the application of pesticides with spraying restrictions.

The Authority recognizes that possible changes to current spraying practice from the HST may reduce the productivity of a farmer's remaining property. Those possible impacts would be taken into account by the appraiser at the time of right-of-way acquisition, and any diminution in value to a property owner's remaining parcel(s) will be estimated by the appraiser through the appraisal process. This involves appraising the remainder as it contributes to the whole property value before acquisition, then appraising the remainder in the after condition as a separate parcel, as though the project was constructed, and including any estimated damages to remainder, such as, cost of re-establishing irrigation systems, replacing wells, providing buffers for aerial spraying, etc. The difference between these "before" and "after" values is termed as severance damages and will reflect any loss in value to the remainder parcels due to the

BO056-4

construction in the manner proposed.

Land that may be impacted by new aerial application restrictions would still be used by the farmer for agricultural purposes, as would new turning areas at the end of crop rows. Therefore, there is no conversion of agricultural land from project impacts to current aerial spraying practices; however, it is an economic hardship in terms of reduced production for remaining parcels of a farm. As is the case with removing land planted in crops for use as equipment turning lanes, the need to provide a buffer for crop spraying will be analyzed and addressed at the appraisal stage with input from the property owners and managers, and experts in the field.

In April 2013, the Authority reached an agreement with agricultural interests on mitigation of agricultural land impacts for the Merced to Fresno Section of the HST System (Authority 2013). Under that agreement, the Authority will acquire agricultural conservation easements for its impact on Important Farmland (i.e., land classified as prime farmland, farmland of statewide importance, farmland of local importance, and unique farmland) at the following ratios:

- Important Farmland converted to nonagricultural uses either by direct commitment of the land to project facilities or by the creation of remnant parcels that cannot be economically farmed will be mitigated at a ratio of 1:1.
- Where HST project facilities would create a remnant parcel of 20 acres or less in size, the acreage of that remnant parcel will be mitigated at a ratio of 1:1.
- An area 25 feet wide bordering Important Farmland converted to nonagricultural uses by project facilities (not counting remnant parcels) will be mitigated at a ratio of 0.5:1.

BO056-5

Refer to Standard Response FB-Response-SO-01, FB-Response-AG-04.

The Authority will work with individual land owners and operators to permit new wastewater lands to make up for the loss of those from the HST footprint. Lost business revenue from the HST will be dealt with on a case-by-case basis.

Response to Submission BO056 (E.J. de Jong, Lansing LLC dba Wreden Ranch, October 18, 2012) - Continued

BO056-6

Refer to Standard Response FB-Response-AG-06.

People and businesses in California use electric power for many purposes and services in homes and businesses, farms, and factories. The intensive use of electric power in California and all developed countries has ensured that the potential health effects of electromagnetic fields (EMFs) and the resulting currents and voltages on people and animals have been thoroughly studied. As a result, the levels at which EMFs and stray voltages and currents can cause health or behavior effects are well established. Broadly used international standards were created based on intensive investigation to ensure that:

* EMFs and the resulting stray currents and voltages are measured and controlled.
* Fields do not disturb or injure people or animals.

Stray voltages occur when there is a voltage or potential difference between the neutral conductor on an electrical system and the ground (earth). Stray currents occur when the earth conducts some of the current of a power system. Stray voltages and currents exist whenever a power system has more than one connection to the earth, so they are a general condition in homes, factories, farms, and anywhere electric power is used. As a result, engineers and power systems have well-established procedures and standards to provide protection against the effects of stray voltages and currents.

Stray voltages and currents can cause shocks, as described in the EIR/EIS under Impact EMF/EMI #8 - Potential for Nuisance Shocks.

The Authority's traction power and rail designs recognize the need to control stray voltages and currents to avoid shocks. The bonding and grounding of California HST equipment will fulfill the requirements of EN 50122-1: 2011, Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 1: Protective provisions against electric shock, Section 9.2.2. This standard was established specifically to protect people near traction power systems like the one that would be used for the California HST project. International Electrotechnical Commission (IEC) standard TS 60479-1:2007,

BO056-6

Effects of current on human beings and livestock – Part 1: General aspects, is a related document that provides specific guidance for protecting livestock.

For the California HST, the running rails will be periodically connected to earth all along the track, and the rails will carry a significant amount of train propulsion current, called return current. This return current will create a stray voltage along the rails, which also will be connected to the earth due to the periodic grounding.

The project will calculate the maximum stray voltages and will provide all necessary protections against shock from stray voltage, such as grounding procedures for metal fences, buildings, buried pipes, above-ground irrigation pipes, etc. that run parallel to the track.

The California HST project will avoid disturbing or injuring cattle or other animals or people near the HST track by:

* Using the broad knowledge of currents and fields from existing electric railways in the United States and around the world.
* Learning from the experience in preventing adverse effects.
* Performing the California HST program actions to apply necessary protections along the HST track.

BO056-7

Wells currently located adjacent to the existing BNSF tracks are subject to vibration levels substantially higher than the vibration levels that would be generated by HST operations. If the wells are not currently experiencing any of these problems under existing conditions, they would not be expected to experience these problems with the addition of HST operations.

BO056-8

Refer to Standard Response FB-Response-AG-02, FB-Response-SO-01.

Submission BO057 (Victor Martinov, Lazy "H" Ranch, August 13, 2012)

SOUTHLAND PROPERTIES
(805) 688-8145
(805) 688-8546 fax

RECEIVED

August 13 , 2012

California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Re: Draft EIR/EIS for Fresno to Bakersfield Section

Subject: Meeting dated 5/24/2012 with representatives of California High-Speed Authority and representatives of the Lazy "H" Ranch community, (2500 Jewetta Ave., Bakersfield, CA 93312). The meeting was held at the Lazy "H" Community site.

In addition to other areas of the project previously objected to in letters dated September 15, 2011 and January 3, 2012, (copies of which are attached hereto and made a part hereof) the subject meeting disclosed further disturbing information regarding the design along the Lazy "H" Ranch community property.

BO057-1

Although the right of way for the project will not encroach on Lazy "H" community property, the sound wall, which could be as high as 20 to 22 feet tall and run approximately 1,000 feet along Lazy "H" property will affect twenty two, (22) homes. What is most objectionable and intolerable is that this wall will be as close as 3 feet to most of the homes. Having a 20-22 foot high barrier with a 3-foot backyard would change the entire ecological, natural environment, not to mention making all those particular families feel imprisoned in their own homes.

Please address this extremely adverse situation and find mitigating measures to deal with this unbearable living condition. I feel confident that among the potential measures discussed at the subject meeting, a balance of design techniques can go a long way toward alleviating this.

Some measures discussed included: Relocating the wall away from the homes, lowering the rails, allowing for a lower wall, using other textures and materials such as glass sections, and other measures. This section along the Lazy "H" community could be recessed, thereby reducing the elevation of the wall.

Please consider the homeowners quality of life, serenity and home values as well. As I said above, design techniques can alleviate this harsh construction flaw.

Sincerely,

Victor Martinov
Owner, Lazy "H" Ranch

enc.

cc: Kern County Board of Supervisors:
Jon McQuiston, Zack Scrivner, Mike Maggard, Ray Watson, Karen Goh

La Cumbre Management, Jim Murdock

— Post Office Box 299, Santa Ynez, CA 93460-0299 —

SOUTHLAND PROPERTIES
(805) 688-8145
(805) 688-8546 fax

January 3, 2012

California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Re: California High-Speed Rail,
Fresno to Bakersfield Section

This letter is in opposition to the design and construction of the California High-Speed Rail System at this time and with this apparent sense of urgency. In general, it is obvious, that this is a time of economic crises, a time when our State cannot spend money that it does not have - a time when putting people to work can be accomplished by rebuilding and improving existing infrastructure not creating unsustainable debt and commitment.

If the visionaries have a dream, let us proceed in an orderly way, with orderly sound planning, financially and structurally. This should involve not only appropriate design analysis but selecting routes that would be of minimum disruption, destruction, inconvenience, and gridlock.

Surely when in the future this type of High-Speed alternative is, if ever, possible and desired, a less nocuous and more efficient routing than currently contemplated, can be selected - a routing that will consider the many lives that will be disrupted - the many land uses include: residential, business, churches, schools, agricultural and others. Appropriate routes could avoid densely populated and improved areas and, as an example, would follow existing transportation corridors such as Interstate Highway 5.

Following I-5 would not only give a more direct route from North to South, but would offer long reaches of unimproved land. The use of I-5 routing would therefore be much less disruptive and allow greater opportunity to afford the appropriate stations with services and parking.

Specifically, we are the owners of a manufactured home community consisting of 87 individually owned homes. The lives of these homeowners would be disrupted and the landowner's business would be ruined. The impact of sound, vibration, electromagnetic and other negative aspects of a High-Speed Train in the immediate proximity of our community would be unbearable to the tenants and would cause the dissolution of the community.

Please review the letter dated September 15, 2011 from the owners of the "Lazy H Ranch" to California High-Speed Rail Authority, which is attached hereto as Exhibit A together with the petition of the homeowners, Exhibit B and the letter from La Cumbre Management dated September 27, 2011 to California High-Speed Rail Authority, (Exhibit C).

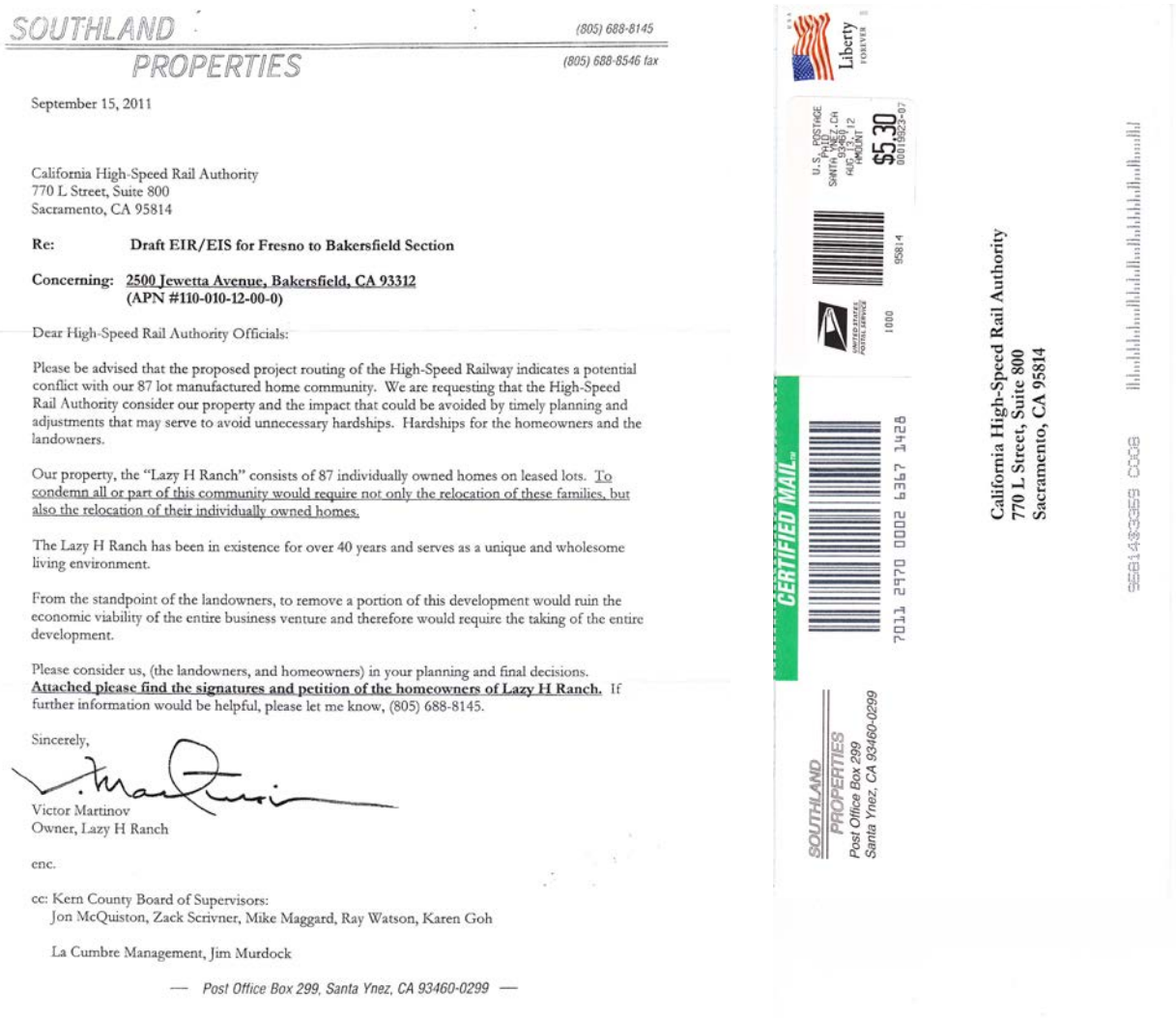
We are extremely concerned for the general well-being of the State of California, and our survival and we are deeply troubled for our tenants and the future of our community. Thank you for your consideration of this monumental matter and your serious attention.

Sincerely submitted,

Victor Martinov
Owner, Lazy H Ranch

— Post Office Box 299, Santa Ynez, CA 93460-0299 —

Submission BO057 (Victor Martinov, Lazy "H" Ranch, August 13, 2012) - Continued



SOUTHLAND PROPERTIES

(805) 688-8145
(805) 688-8546 fax

September 15, 2011

California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Re: **Draft EIR/EIS for Fresno to Bakersfield Section**

Concerning: **2500 Jewetta Avenue, Bakersfield, CA 93312**
(APN #110-010-12-00-0)

Dear High-Speed Rail Authority Officials:

Please be advised that the proposed project routing of the High-Speed Railway indicates a potential conflict with our 87 lot manufactured home community. We are requesting that the High-Speed Rail Authority consider our property and the impact that could be avoided by timely planning and adjustments that may serve to avoid unnecessary hardships. Hardships for the homeowners and the landowners.

Our property, the "Lazy H Ranch" consists of 87 individually owned homes on leased lots. To condemn all or part of this community would require not only the relocation of these families, but also the relocation of their individually owned homes.

The Lazy H Ranch has been in existence for over 40 years and serves as a unique and wholesome living environment.

From the standpoint of the landowners, to remove a portion of this development would ruin the economic viability of the entire business venture and therefore would require the taking of the entire development.

Please consider us, (the landowners, and homeowners) in your planning and final decisions. **Attached please find the signatures and petition of the homeowners of Lazy H Ranch.** If further information would be helpful, please let me know, (805) 688-8145.

Sincerely,

Victor Martinov
Owner, Lazy H Ranch

enc.

cc: Kern County Board of Supervisors:
Jon McQuiston, Zack Scrivner, Mike Maggard, Ray Watson, Karen Goh

La Cumbre Management, Jim Murdock

— Post Office Box 299, Santa Ynez, CA 93460-0299 —

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SOUTHLAND PROPERTIES
Post Office Box 299
Santa Ynez, CA 93460-0299

California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Response to Submission BO057 (Victor Martinov, Lazy "H" Ranch, August 13, 2012)

BO057-1

The project alignment in the area adjacent to the Lazy H Community has been moved to run along the east side of the BNSF right-of-way. The location of this updated alignment will put the centerline at a distance of at least 78 feet from the eastern property line of the Lazy H Community. As a result, the noise barrier for this alignment would also be located on the east side of the BNSF alignment as opposed to running along the east side of the Lazy H Community.

Submission BO058 (Ken Filipponi, LifeTime Pacific, LLC, September 26, 2012)

Fresno - Bakersfield (July 2012+) - RECORD #204 DETAIL

Status :	Unread
Record Date :	9/26/2012
Response Requested :	No
Stakeholder Type :	Business
Affiliation Type :	Businesses and Organizations
Interest As :	Businesses And Organizations
Submission Date :	9/26/2012
Submission Method :	Project Email
First Name :	Ken
Last Name :	Filipponi
Professional Title :	Member
Business/Organization :	LifeTime Pacific, LLC
Address :	PO Box 420
Apt./Suite No. :	
City :	Atascadero
State :	CA
Zip Code :	93423
Telephone :	805-235-4242
Email :	kenfilipponi@att.net
Email Subscription :	
Cell Phone :	
Add to Mailing List :	

Stakeholder Comments/Issues :

BO058-1

Subject Property:

1200 Orange Avenue and Hwy 43

Corcoran, CA 93212

To Whom This May Concern:

We submit the following public comments/concerns regarding the California
High Speed Rail Project and its potential adverse impact on the above-referenced property:

. The property currently has an active BNSF rail spur that provides considerable value to the property as a whole and may be adversely impacted
by the project;

. We are currently discussing possible other commercial uses of the property with the City of Corcoran that would utilize all of the existing acreage as well as the existing building and may be adversely impacted by
the project;

. We are currently negotiating with at least one cell site carrier and possibly others in the future. This business opportunity may be adversely impacted by the project;

. There may be other potential adverse impacts to the property that are unknown at this time.

Ken Filipponi, Member

LifeTime Pacific, LLC

PO Box 420

Atascadero, CA 93423

kenfilipponi@att.net

805-235-4242

EIR/EIS Comment :
Official Comment Period : Yes

Response to Submission BO058 (Ken Filipponi, LifeTime Pacific, LLC, September 26, 2012)

BO058-1

Refer to Standard Response FB-Response-SO-01, FB-Response-SO-03.

Displaced businesses that rely on railroad spurs to gain access to the BNSF railroad will be relocated to ensure continued access to the BNSF in a new location.

Submission BO059 (Baldwin Moy, Low-Income Rural Communities (Atty. For), California Rural Legal Assistance, Inc., October 5, 2012)

CALIFORNIA RURAL LEGAL ASSISTANCE, Inc.

Madera Office
126 North B Street
Madera, CA 93638
(559) 674-5671
(559) 674-5674 (fax)
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Baldwin S. Moy
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José R. Padilla
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Luis C. Jaramillo
Deputy Director

William G. Hoerger
Michael Meuter
Ilene Jacobs
Cynthia Rice
Directors of Litigation, Advocacy & Training

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El Centro	Oxnard
Fresno	Paso Robles
Gilroy	Salinas
Madera	San Luis Obispo
Marysville	Santa Barbara
Modesto	Santa Cruz
Santa Maria	Santa Rosa
Watsonville	Stockton

August 24, 2012

Chairperson and Members
California High-Speed Rail Authority
770 L St., Ste. 800
Sacramento, CA 95814-3359

Re: Fresno-Bakersfield Final EIR/EIS

Dear Chairperson Richards and Board Members:

California Rural Legal Assistance is the statewide farmworker legal services program that represent the low-income rural communities in the San Joaquin Valley. These comments are submitted on behalf of our clients, low-income, minorities, farmworkers and indigenous individuals and families in our service areas. Same supplement those initially provided to the Draft EIR/EIS a year ago, incorporate by reference additional comments submitted to the Merced-Fresno Final EIR/EIS dated May 4, 2012, a copy of which is attached hereto (Exhibit 1) and serve as our continuing comments on the Project.

BO059-1

As you are aware, our overarching concern centers on the inequitable disproportionate impacts occasioned for the Environmental Justice (EJ hereafter) communities without conferring a fair share of the benefits as required by Title IV and Executive Order 12898. In that regard, we are once again disappointed by the failure of the subject document to analyze, in depth, socioeconomic impacts identified and to propose concrete and substantive mitigative measures to address the economic inequity. The Final EIR/EIS offers no discernible accessibility to or positive expectation of a fair share of the employment opportunities – jobs and/or funds for the implementation of social justice provisions. Essentially what we have is public dollars going into a mega-investment project where none of the tangible benefits flow to the disadvantaged communities.

BO059-2

Indeed, the Authority is duty-bound to create frameworks and procedures to enforce laws and regulations that increase career opportunities and promote equal employment opportunities from those from historically under-served communities. This mega-project potentially could have a tremendous impact on the lives of those workers and their families living in disadvantaged communities, local business they patronize and the local tax base as part of a larger effort to help diverse workers gain access to middle class careers, develop skills and scale up the entire area. In order to create work opportunities for many of these workers would require an apprenticeship

LSC

BO059-2

component pathway to ensure preparedness of targeted population. Most likely, they will need supportive services and pre–apprenticeship programs to get them job-ready to gain craft entry.

Whether or not apprenticeship and job goals are met is twofold. First, it necessarily depends on oversight by the Authority. The contractor must be held accountable otherwise job goals are nothing more than words in a contract. Second, addressing goals are meaningless unless residents step up to fill these positions. This is not an easy population to accommodate. These challenges are not insurmountable and can be overcome by proactive planning and program development. Challenges include problems in recruiting and training to say the least. To make sure that happens outreach, referral, and support services are necessary. The best way to attain this means getting them into appropriate job training in order to get them into the pipeline for project jobs. An established community-based organization(s) is best positioned to provide the appropriate outreach and referral through proven methods for getting the word out to interested job-seekers and helping them to enroll in the right programs.

BO059-3

With that having been said, a Project Labor Agreement (PLA) remains the most effective vehicle to establish workforce development goals, implement these goals, and monitor compliance and report on their attainment. It is simply not enough to adopt policy and assume that policy goals will be achieved. What is critical to this process is how the policy is implemented. In order for this to happen, there needs to be dedicated personnel, financial resources, programs, and coordination, commitment and support from all stakeholders. More specifically, to achieve an increase in goals for apprentice utilization and diversity, the Authority must designate a community coordinator to provide oversight of the project as an employee of the prime contractor – monitoring the outreach, recruitment, hiring and successful retention and promotion of women and people of color.

BO059-4

In sum, the implementation process requires dedicated staff, financial resources, commitment and buy-in from leadership and stakeholders, and supportive programs for workers. This can best be accomplished through an independent third-party individual, entity or employee with the prime contractor, preferably a community-based organization subcontractor, who serves as the project facilitator and whose role, among other things, is to:

1. Ensure that the subcontractors are meeting their goals and commitment for training;
2. Conduct systematic and direct monitor hiring plan (outreach, recruitment, hiring, retention, and promotion);
3. Provide labor and non-trade support services, info and referral;
4. Coordinate utilization of existing services with local CBOs and WIB;
5. Conduct periodic meetings of stakeholders;
6. Set up workshops, fairs and similar outreach;
7. Evaluate workforce development outcomes;
8. Collaborate in the annual Title VI certification and assurance;
9. Review progress of participants in achieving competence;

Submission BO059 (Baldwin Moy, Low-Income Rural Communities (Atty. For), California Rural Legal Assistance, Inc., October 5, 2012) - Continued

BO059-4

10. Submit reports of monitoring review for contract compliance on current and cumulative basis, and/or
11. Ensure that job training/hiring clauses in subcontractors' bids are implemented and if not, initiate enforcement and remedial actions through proper channels.

BO059-5

In closing, we urge the Authority to take the very necessary steps to ensure that the EJ goals and objectives of Title VI and E.O. 12898 are achieved. In that connection, it has come to our attention that the Department of Transportation in coordination with the CAHSRA will be establishing an "On-the-Job Training community council" which efforts we applaud as a beginning step in the abovesaid process. With this letter, we are respectfully requesting that California Rural Legal Assistance be appointed as a member of the "community council."

BO059-6

Thank you for your anticipated cooperation and kind attention to the points raised in this letter and we stand ready to provide clarification and further comments.

Very truly yours,
California Rural Legal Assistance

Baldwin S. Moy

Response to Submission BO059 (Baldwin Moy, Low-Income Rural Communities (Atty. For), California Rural Legal Assistance, Inc., October 5, 2012)

BO059-1

Refer to Standard Response FB-Response-SO-07, FB-Response-GENERAL-14, FB-Response-GENERAL-18.

The environmental justice analysis adheres to the definition defined by Executive Order 12898 and U.S. Department of Transportation Order 5610.2, which defines an environmental justice effect as a "disproportionately high and adverse effect on minority and low-income populations." This is an adverse effect that is predominately borne by a minority population and/or a low-income population or that would be appreciably more severe or greater in magnitude for the minority and/or a low-income population than the adverse effect that would be suffered by the non-minority and/or non-low-income population along the project. Section 4.3 in the Community Impact Assessment Technical Report identifies the environmental justice populations along the project. The methodologies for identifying these populations are detailed in Appendix A of the Community Impact Assessment Technical Report. Section 5.3 in the Community Impact Assessment Technical Report provides detailed information on the potential for substantial environmental justice effects across resources along the project. See Volume I, Section 3.12, Impact SO#17 and Impact SO#18 and Mitigation Measure MM SO-6 as well as sections 4.3 and 5.3 in the Community Impact Assessment Technical Report for information on the environmental justice analysis and methodology. Determination of potential environmental justice effects includes consideration of all possible mitigation. Mitigation of impacts to less than significant is not possible in every instance, so the effect is acknowledged and considered in decisions about project alternatives.

BO059-2

Refer to Standard Response FB-Response-SO-07, FB-Response-GENERAL-18.

The Authority has approved a Community Benefits Policy that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers.

Jobs created by construction and operation of the project would likely be filled by workers in the region. To help offset any disproportionate effects, the Authority has approved a Community Benefits Policy that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. The Community Benefits Policy also helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the California High-Speed Rail System. Under the Authority's Community Benefits Policy, design-build construction contracts will be required to adhere to the National Targeted Hiring Initiative, which states a minimum of 30% of all project work hours shall be performed by national Targeted Workers, and a minimum of 10% of National Targeted Workers' hours shall be performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a General Educational Development Test (GED) certificate or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or being an apprentice with less than 15% of the required graduating apprenticeship hours in a program. The Community Benefits Policy will supplement the Authority's Small Business Program which, has an aggressive 30% goal for small business participation, including goals of 10% for disadvantaged business enterprises and 3% for disabled veteran business enterprises.

BO059-2

reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. The Community Benefits Policy also helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the California High-Speed Rail System. Under the Authority's Community Benefits Policy, design-build construction contracts will be required to adhere to the National Targeted Hiring Initiative, which states a minimum of 30% of all project work hours shall be performed by national Targeted Workers, and a minimum of 10% of National Targeted Workers' hours shall be performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a General Educational Development Test (GED) certificate or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or being an apprentice with less than 15% of the required graduating apprenticeship hours in a program. The Community Benefits Policy will supplement the Authority's Small Business Program which, has an aggressive 30% goal for small business participation, including goals of 10% for disadvantaged business enterprises and 3% for disabled veteran business enterprises.

BO059-3

Refer to Standard Response FB-Response-SO-07.

Jobs created by construction and operation of the project would likely be filled by workers in the region. To help offset any disproportionate effects, the Authority has approved a Community Benefits Policy that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. It helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the High-Speed Rail system. Under the Authority's Community Benefits Policy, design-build construction contracts will be required to adhere to the National Targeted Hiring Initiative, which states a minimum of 30% of all project work hours shall be

Response to Submission BO059 (Baldwin Moy, Low-Income Rural Communities (Atty. For), California Rural Legal Assistance, Inc., October 5, 2012) - Continued

BO059-3

performed by national Targeted Workers and a minimum of 10% of National Targeted Workers hours shall be performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a GED or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or an apprentice with less than 15% of the required graduating apprenticeship hours in a program. The Community Benefits Policy will supplement the Authority's Small Business Program which has an aggressive 30% goal for small business participation, which includes goals of 10% for disadvantaged business enterprises and 3% for disabled veteran business enterprises.

BO059-4

Although Authority staff will provide oversight of the design-build contractors' performance with regard to the Community Benefits Policy, the Authority retains the option of using a subconsultant as a project facilitator.

BO059-5

The Authority is committed to implementing its mitigation measures and the Community Benefits Policy.

BO059-6

The Authority appreciates this suggestion and plans to continue to work with all stakeholders as this project progresses.

Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012)

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RECEIVED
10/19/2012

Jason W. Holder
jholder@fablaw.com

October 18, 2012

VIA OVERNIGHT MAIL

California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, California 95814

RE: Revised Draft EIR/Supplemental Draft EIS Comment (California High-Speed Train Project: Fresno to Bakersfield Section)

To Whom It May Concern:

On behalf of our client, Madera County Farm Bureau ("Madera FB"), we submit the enclosed CD containing exhibits to the Corrected Memorandum of Points and Authorities in Support of Petitioners' Motion for Preliminary Injunction/Application for Administrative Stay ("PI Motion Opening Brief").

BO060-1

Madera FB's comment letter regarding the above referenced Draft EIR for the Fresno to Bakersfield Section includes as an exhibit the PI Motion Opening Brief and references the exhibits located on the enclosed CD. We request that the administrative record of proceedings for the Fresno to Bakersfield section of the High-Speed Train project include copies of all documents contained on the enclosed CD, along with all administrative record documents cited in the PI Motion Opening Brief. We provide the enclosed CD and refer to the cited administrative record documents so that California High-Speed Rail Authority staff can refer to this evidence when evaluating and responding to Madera FB's comments.

We appreciate your cooperation. If you have any questions or concerns regarding this, please contact me. Thank you.

Very truly yours,

FITZGERALD ABBOTT & BEARDSLEY LLP

By
Jason W. Holder

cc: (via e-mail only)
Anja Raudabaugh, Executive Director, Madera County Farm Bureau

R.M. FITZGERALD 1858 - 1934 CARL H. ABBOTT 1867 - 1933 CHARLES A. BEARDSLEY 1882 - 1963

Response to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012)

BO060-1

The material attached to this comment has been entered into the Administrative Record for the Fresno to Bakersfield Section EIR/EIS.

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf

2.8 Construction Plan

This section summarizes the general approach to building the HST system, including activities associated with pre-construction and construction of major system components. To maintain its eligibility for federal American Recovery and Reinvestment Act (ARRA) funding, the Authority intends to begin final design and project construction in early 2013. The Initial Operating Section (IOS) first construction is to be completed by December 2018. Service on the IOS is expected to start in 2022.

The Fresno to Bakersfield Section would be built using a "design-build" (D/B) approach. This method of project delivery involves a single contract with the project owner to provide design and construction services. This differs from the "design-bid-build" approach, where design and construction services are managed under separate contracts and the design is completed before the project is put out for construction bids. The D/B approach offers more flexibility to adapt the project to changing conditions. The contract with the D/B contractor will require compliance with standard engineering design and environmental practices and regulations as well as implementation of any project design features and applicable mitigation measures included in this EIR/EIS.

The Authority has prioritized a portion of the Merced to Fresno and the Fresno to Bakersfield Project sections as the first section of the California HST System to be built to meet the ARRA funding requirements, which includes both a funding deadline of September 30, 2017 and the requirement that the Federal investment demonstrate "independent utility" as that term is defined in the High Speed Intercity Passenger Rail Notice of Funding Availability and Interim Program Guidance (74 FR 29900, 29905, June 23, 2009). The IOS first construction will be available for immediate use for improved and faster service on the San Joaquin intercity line prior to the initiation of HST service on the IOS in 2022, thus providing for independent utility consistent with ARRA. The Central Valley was determined to be the best location for the initial construction, with service extending south to Palmdale and the San Fernando Valley and north to San Jose to link with blended service to Metrolink in the south and Caltrain in the north. The Authority has met the "independent utility" requirement of the federal stimulus financing because the IOS first construction track would have dedicated passenger track capable of higher speeds, thereby improving existing San Joaquin operations. It would also include a basic station design (platform) for non-electrified passenger service in Fresno (located at the planned Fresno Station).

The interim use of the IOS first construction track for upgraded San Joaquin service could have environmental impacts that differ from those analyzed in this EIR/EIS; for example, increased noise and air quality impacts with increased frequency of diesel trains during the temporary period when San Joaquin service would use the IOS first construction track (between 2018 and 2022). Service upgrades for the San Joaquin service and the potential for environmental impact would be assessed by the operating agency prior to service initiation.

2.8.1 General Approach

Upon receiving the required environmental approvals and securing needed funding, the Authority would begin implementing its construction plan. Given the size and complexity of the HST project, the design and construction work could be divided into a number of procurement packages. In general, the procurement would address the following:

- Civil/structural infrastructure, including design and construction of passenger stations, maintenance facilities, and right-of-way facilities.
- Trackwork, including design and construction of direct fixation track and sub-ballast, ballast, ties and rail installation, switches, and special trackwork.

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

- Core systems, such as traction power, train controls, communications, the operations center, and the procurement of rolling stock.

One or more D/B packages would be developed and the Authority would then issue construction requests for proposals (RFPs), start right-of-way acquisition, and procure construction management services to oversee physical construction of the project. During peak construction periods, work is envisioned to be underway at several locations along the route, with overlapping construction of various project elements. Working hours and workers present at any time would vary depending on the activities being performed. Though the D/B contractor will set the actual schedule, the approximate schedule for construction is provided in Table 2-17 as follows.

Table 2-17
Approximate Construction Schedule[a]

Activity	Tasks	Duration
Right-of-way Acquisition	Proceed with right-of-way acquisitions once State Legislature appropriates funds in annual budget	March 2013–March 2015
Survey and Preconstruction	Locate utilities, establish right-of-way and project control points and centerlines, establish or relocate survey monuments	March 2013–October 2013
Mobilization	Safety devices and special construction equipment mobilization	June 2013–July 2014
Site Preparation	Utilities relocation; clearing/grubbing right-of-way; establishment of detours and haul routes; preparation of construction equipment yards, stockpile materials, and precast concrete segment casting yard	July 2013–July 2017 (two site preparation periods)
Earth Moving	Excavation and earth support structures	December 2013–August 2015
Construction of Road Crossings	Surface street modifications, grade separations	December 2013–August 2015
Construction of Aerial Structures	Aerial structure and bridge foundations, substructure, and superstructure	December 2013–December 2017
Track Laying	Includes backfilling operations and drainage facilities	May 2016–December 2017
Systems	Train control systems, overhead contact system, communication system, signaling equipment	March 2018–January 2021
Demobilization	Includes site cleanup	August 2017–June 2022 (two demobilization periods)
HMF Phase 1[b]	Test Track Assembly and Storage	April 2017–November 2017
HMF Phase 2[b]	Test Track Light Maintenance Facility	April 2017–December 2018
Maintenance-of-Way Facility	Potentially collocated with HMF[a]	April 2017–December 2018
HMF Phase 3[b]	Heavy Maintenance Facility	January 2018–July 2019
HST Stations	Demolition, site preparation, foundations, structural frame, electrical and mechanical systems, finishes	Fresno: May 2019–May 2022 Kings/Tulare Regional: TBD[c] Bakersfield: May 2019–May 2022

Table 2-17
Approximate Construction Schedule[a]

Activity	Tasks	Duration

Notes:

[a] Based on a two-phase implementation of the project: first construction will meet the ARRA funding deadline and be completed in 2017; the remainder of the Initial Operating Segment will be completed by 2022 per the Business Plan and based on anticipated funding flow.
[b] HMF would be sited in either the Merced to Fresno or Fresno to Bakersfield Section.
[c] Right-of-way would be acquired for the Kings/Tulare Regional Station; however, the station itself would not be part of initial construction.

Acronym:

TBD = to be determined

Consistent with the MOU for Achieving an Environmentally Sustainable High-Speed Train System in California (Authority, FRA, U.S. Department of Housing and Urban Development, Federal Transit Administration, and EPA 2011), the Authority intends to build the project using sustainable methods that:

- Minimize the use of nonrenewable resources.
- Minimize the impacts on the natural environment.
- Protect environmental diversity.
- Emphasize using renewable resources in a sustainable manner. An example of this approach would be the use of material recycling for project construction (e.g., asphalt, concrete, or Portland Cement Concrete [PCC], excavated soil).

Fill material would be excavated from local borrow sites and travel by truck from 10 to 30 miles to the preferred alignment. Railroad ballast would be drawn from existing, permitted quarries located from the Bay Area to Southern California. Ballast would be delivered by a combination of rail and trucks. All materials would be suitable for construction purposes and free from toxic pollutants in toxic amounts in accordance with Section 307 of the Clean Water Act.

Applicable design standards are included in Appendix 2-D.

2.8.2 Pre-Construction Activities

During final design, the Authority and its contractor would conduct a number of pre-construction activities to determine how best actual construction should be staged and managed. These activities include the following:

- Conducting geotechnical investigations, which would focus on defining precise geology, groundwater, seismic, and environmental conditions along the alignment. The results of this work would guide final design and construction methods for foundations, underground structures, tunnels, stations, grade crossings, aerial structures, systems, and substations.
- Identifying staging areas and precasting yards, which would be needed for the casting, storage, and preparation of precast concrete segments, temporary spoil storage, workshops, and the temporary storage of delivered construction materials. Field offices and/or temporary jobsite trailers would also be located at the staging areas.
- Initiating site preparation and demolition, such as clearing, grubbing, and grading, followed by the mobilization of equipment and materials. Demolition would require strict controls to

ensure that adjacent buildings or infrastructure are not damaged or otherwise affected by the demolition efforts.

- Relocating utilities, where the contractor would work with the utility companies to relocate or protect in place high-risk utilities as overhead tension wires, pressurized transmission mains, oil lines, fiber optics, and communications prior to construction.
- Implementing temporary, long-term, and permanent road closures to re-route or detour traffic away from construction activities. Handrails, fences, and walkways would be provided for the safety of pedestrians and bicyclists.
- Locating temporary batch plants, which would be required to produce PCC or asphaltic concrete (AC) needed for roads, bridges, aerial structures, retaining walls, and other large structures. The facilities generally consist of silos containing fly ash, lime, and cement; heated tanks of liquid asphalt; sand and gravel material storage areas; mixing equipment; aboveground storage tanks; and designated areas for sand and gravel truck unloading, concrete truck loading, and concrete truck washout. The contractor would be responsible for implementing procedures for reducing air emissions, mitigating noise impacts, and reducing the discharge of potential pollutants into storage drains or watercourses from the use of equipment, materials, and waste products.
- Conducting other studies and investigations, as needed, such as local business surveys to identify business usage, delivery, shipping patterns, and critical times of the day or year for business activities. This information would help develop construction requirements and worksite traffic control plans, and will identify potential alternative routes, cultural resource investigations, and historic property surveys.

2.8.3 Major Construction Activities

Four major types of construction activities are briefly described below. Because there is no tunnel construction proposed for the Fresno to Bakersfield HST Section, this construction element is not discussed.

2.8.3.1 Earthwork

Earth support is an important factor in constructing deep excavations that will be encountered on several alignment sections. It is anticipated that the following excavation support systems may be used along the route. There are three general excavation support categories, which are described below.

- Open Cut Slope. Open cut slope is used in areas where sufficient room is available to open-cut the area and slope the sides back to meet the adjacent existing ground. The slopes are designed similar to any cut slope, taking into account the natural repose angle of adjacent ground material and global stability.
- Temporary. Temporary excavation support structures are designed and installed to support vertical or near vertical faces of the excavation in areas where room to open-cut does not exist. This structure does not contribute to the final load carrying capacity of the tunnel or trench structure and is either abandoned in place or dismantled as the excavation is being backfilled. Generally, it consists of soldier piles and lagging, sheet pile walls, slurry walls, secant piles, or tangent piles.
- Permanent. Permanent structures are designed and installed to support vertical or near vertical faces of the excavation in areas where room to open-cut does not exist. This

structure forms part of the permanent final structure. Generally it consists of slurry walls, secant piles, or tangent pile walls.

2.8.3.2 Bridge, Aerial Structure, And Road Crossing Construction

Similar to existing high-speed rail systems around the world, it is anticipated that the elevated guideways will be designed and built as single box segmental girder construction. Where needed, other structural types will be considered and used, including steel girders, steel truss, and cable-supported structures.

- Foundations. A typical aerial structure foundation pile cap is supported by an average of 4 large diameter bored piles with diameters ranging from 5 to 9 feet. Depth of piles depends on geotechnical site conditions. Pile construction can be achieved by using rotary drilling rigs, and either bentonite slurry or temporary casings may be used to stabilize pile shaft excavation. The estimated pile production rate is 4 days per pile installation. Additional pile installation methods available to the contractor include bored piles, rotary drilling cast-in-place piles, driven piles, and a combination of pile jetting and driving.

  Upon completing the piles, pile caps can be constructed using conventional methods. For pile caps constructed near existing structures such as railways, bridges, and underground drainage culverts, temporary sheet piling (i.e., temporary walls) can be used to minimize disturbances to adjacent structures. It is anticipated that sheet piling installation and extraction is achieved using hydraulic sheet piling machines.
- Substructure. Aerial structures with pier heights ranging from 20 to 90 feet may be constructed using conventional jump form and scaffolding methods. A self-climbing formwork system may be used to construct piers and portal beams over 90 feet high. The self-climbing formwork system is equipped with a winched lifting device, which is raised up along the column by hydraulic means with a structural frame mounted on top of the previous pour. In general, a 3-day cycle for each 12 feet pour height can be achieved. The final size and spacing of the piers depends on the type of superstructure and spans they are supporting.
- Superstructure. It will be necessary to consider the loadings, stresses, and deflections encountered during the various intermediate construction stages, including changes in static scheme, sequence of tendon installation, maturity of concrete at loading, and load effects from erection equipment. As a result, the final design will depend on the contractor's means and methods of construction and can include several different methods, such as a span-by-span, incrementally launched, progressive cantilever, and balanced cantilever.

  Road crossings of existing railroads, roads, and the HST would be constructed on the line of the existing road or offline at some locations. When constructed online, the existing road would be closed or temporarily diverted. When constructed offline, the existing road would be maintained in use until the new crossing is completed. Where new roadway undercrossings of existing railroads are required, a temporary shoofly track would be constructed to maintain railroad operations during undercrossing construction.

  Construction of foundations and substructure would be similar to that for the aerial structures, but reduced in size. The superstructure would likely be constructed using precast, prestressed, concrete girders and cast-in-place deck. Approaches to the bridges would be earthwork embankments, mechanically stabilized earth wall, or other retaining structures.

2.8.3.3 Railroad Systems Construction

The railroad systems are to include trackwork, traction electrification, signaling, and communications. After completion of earthwork and structures, trackwork is the first rail system

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

to be constructed, and it must be in place at least locally to start traction electrification and railroad signalizing installation. Trackwork construction generally requires the welding of transportable lengths of steel running onto longer lengths (approximately 1/4 mile), which are placed in position on crossties or track slabs and field-welded into continuous lengths from special trackwork to special trackwork.

Both tie and ballast as well as slab track construction would be used. Tie and ballast construction, which would be used for at-grade and minor structures, typically uses cross ties and ballast that are distributed along the trackbed by truck or tractor. In sensitive areas, such as where the HST is parallel to or near streams, rivers, or wetlands, and in areas of limited accessibility, this operation may be accomplished by using the established right-of-way with material delivery via the constructed rail line. For major civil structures, slab track construction would be used. Slab track construction is a non-ballasted track form employing precast track supports.

Traction electrification equipment to be installed includes traction power substations and the overhead contact system. Traction power substations are typically fabricated and tested in a factory, then delivered by tractor-trailer to a prepared site adjacent to the alignment. It is assumed that substations are to be located every 30 miles along the alignment. The overhead contact system is assembled in place over each track and includes poles, brackets, insulators, conductors, and other hardware.

Signaling equipment to be installed includes wayside cabinets and bungalows, wayside signals (at interlocking), switch machines, insulated joints, impedance bounds, and connecting cables. The equipment will support automatic train protection, automatic train control, and positive train control to control train separation, routing at interlocking, and speed.

2.8.3.4 Station Construction

As HST stations for the Fresno to Bakersfield Section would be newly constructed, existing train operations, including station capacity and passenger levels of service, would be maintained during construction. HST stations require significant coordination and planning to accommodate safe and convenient access to existing businesses and residences and to accommodate traffic control during construction periods. Additional information about the station areas is provided in Section 2.4.4. The typical construction sequence would be:

- Demolition and Site Preparation. The contractor would be required to construct detour roadways, new station entrances, construction fences and barriers, and other elements required as a result of taking existing facilities on the worksite out of service. The contractor would be required to perform street improvement work, site clearing and earthwork, drainage work, and utility relocations. Additionally, substations and maintenance facilities are assumed to be newly constructed structures. For platform improvements or additional platform construction, the contractor may be required to realign existing track.
- Structural Shell and Mechanical/Electrical Rough-Ins. For these activities, the contractor would construct foundations and erect the structural frame for the new station, enclose the new building, and/or construct new platforms and connect the structure to site utilities. Additionally, the contractor would rough-in electrical and mechanical systems and install specialty items such as elevators, escalators, and ticketing equipment.
- Finishes and Tenant Improvements. The contractor would install electrical and mechanical equipment, communications and security equipment, finishes, and signage. Additionally, the contractor may install other tenant improvements if requested.

2.9 Permits

The Authority and FRA are in the process of preparing agreements with environmental resource agencies to facilitate the environmental permitting required during final design and construction. These agreements—a Memorandum of Understanding and a Memorandum of Agreement or Programmatic Agreement—will clearly identify the Authority's responsibilities in meeting the permitting requirements of the federal, state, and regional environmental resource agencies. A Memorandum of Agreement was established in 2010 between the Authority, the FRA, the USACE, and the USEPA (Authority et al. 2010) regarding integration of NEPA, Clean Water Act Section 404, and Rivers and Harbors Act Section 14 processes. Coordination with the United States Coast Guard was conducted and the Coast Guard indicated that this project is not within their jurisdiction (Sulouff 2011). Table 2-18 lists the major environmental permits required for the HST Project. As a state agency, the Authority is exempt from local permit requirements; however, in order to coordinate construction activities with local jurisdictions, the Authority will seek local permits as part of construction processes consistent with local ordinances. The agencies identified in Table 2-18 are anticipated to rely on the EIR/EIS to support their permitting and approval processes.

Table 2-18
Potential Major Environmental Permits and Approvals

Agency	Permit
Federal	
USACE	Section 404 Permit for Discharge of Dredge or Fill Materials into Waters of the U.S., including wetlands Section 10 Permit for Construction of any Structure in or over any Navigable Water of the United States
U.S. Department of Interior/Federal Railroad Administration	Section 4(f) of the U.S. Transportation Act of 1966
U.S. Department of Interior/National Park Service	Section 6(f) of the Land and Water Conservation Fund Act of 1965
U.S. Advisory Council on Historic Preservation via the California State Historic Preservation Office	Section 106 Consultation (National Historic Preservation Act of 1966)
USEPA	Review of Environmental Justice conclusions General Conformity Determination
U.S. Fish and Wildlife Service	Section 7 Consultation and Biological Opinion
National Marine Fisheries Service	Section 7 Consultation and Biological Opinion
State	
California Department of Fish and Game	California Endangered Species Act permits California Department of Fish and Game Section 1602 Lake and Streambed Alteration Agreement Use of Title 14 lands – Allensworth Ecological Reserve
California Department of Transportation (Caltrans)	Caltrans Encroachment Permits
California Public Utilities Commission	Approval for construction and operation of railroad crossing of public road and for construction of new transmission lines and

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Table 2-18
Potential Major Environmental Permits and Approvals

Agency	Permit
	substations
California State Lands Commission	Lease for crossing state sovereign lands
Regional	
San Joaquin Valley Air Pollution Control District	Rule 201 General Permit Requirements, Rule 403 Fugitive Dust, Rule 442 Architectural Coatings, and Rule 902 Asbestos
Regional Water Quality Control Board	Clean Water Act Section 401 Water Quality Certification Section 402 National Pollutant Discharge Elimination System (NPDES) Water Discharge Permit Dewatering permit (Order No. 98-67) Spill Prevention, Control, and Countermeasure (SPCC) Plan (part of Section 402 process) Stormwater Construction and Operation Permit
Central Valley Flood Protection Board	Title 23 California Code of Regulations, Section 2, and Title 33 Code of Federal Regulations, Section 208.10 (flood protection facilities)

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

California High-Speed Train Project

Request for Proposal for Design-Build Services

RFP No.: HSR 11-16

Book 1, Parts A - C: Instructions to Proposers

Revision(s)	Date	Description
0	3/22/2012	Initial Release, R0
1	4/27/2012	Addendum 1
2	6/5/2012	Addendum 2
3	7/1/2012	Addendum 3
4	8/22/2012	Addendum 4

Note: Signatures apply for the latest technical memorandum revision as noted above.

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PART A. Instructions to Proposers

1 Introduction and Purpose of Solicitation

1.1 Authority, System and Project Overview

1.1.1 Authority

Established in 1996 by State legislation, the California High-Speed Rail Authority (Authority) has a statutory mandate to plan, build, and operate a high-speed rail system to be coordinated with California's existing transportation network, particularly intercity rail and bus lines, commuter rail lines, urban rail transit lines, highways, and airports. The Authority is seeking competitive proposals to provide design-build services (Proposals) for Construction Package 1 (Project) of the Initial Construction Segment (ICS) of the California High-Speed Train System (System) in California's Central Valley. This procurement is conducted in accordance with the Authority's contracting power described in Section 185036(a) of the California Public Utilities Code.

1.1.2 System

The System goal is to increase and maintain California's mobility, vital to our economy's health, as the population grows from 38 million today to a projected 50 million by 2035. The planned System length is approximately 800 miles from Sacramento to San Diego, with nine (9) segments running through the Bay Area, Central Valley, Inland Empire, and Southern California. The train will travel at speeds up to 220 miles per hour with approximately 15 stops. A key performance goal is to make the trip from San Francisco to Los Angeles within 2 hours and 40 minutes. The initial operating segment (IOS) will run through the Central Valley, and includes the ICS. Completion of the Project represents the first step toward delivery of the System.

1.1.3 Project

The Project is located within the Counties of Madera to the north and Fresno to the south, and the City of Fresno in the southern area. It is composed of one base alignment and two alignment options:

- Construction Package (CP) 1A (including the hybrid alternative) – Approximately twenty-three (23) miles, from south of Avenue 17 to north of Stanislaus Street (base alignment)
- CP 1B – Approximately one (1) mile, from north of Stanislaus Street to south of Santa Clara Street (option)
- CP 1C – Approximately five (5) miles, from south of Santa Clara Street to south of East American Avenue (option)

The Project will extend from twenty-three (23) to twenty-nine (29) miles in length depending on the final alignment selected through the environmental process. The Project alignment will include at-grade, aerial structures, and trench sections and one short tunnel. Also, the Project will include approximately seventeen (17) or twenty-five (25) grade separations and one (1) or three (3) bridges depending on the chosen alignment. The Contractor will be responsible for all work required to design and construct the Project.

Refer to the Scope of Work in Book 2, Part C for a more detailed description of the Project, including other major elements of Work.

1.1.4 Project Cost and Funding

The estimated Project cost is between $1.2 billion and $1.8 billion. The Authority intends to finance the Project with State and federal funding, provided by the Federal Railroad Administration (FRA) and funding made available through the American Recovery and Reinvestment Act of 2009 (ARRA). No private funding is required.

The Authority will act as the FRA designated recipient of grant funds obligated under the High-Speed Intercity Passenger Rail (HSIPR) Program. The Authority Chief Executive Officer (CEO) and the Authority Board are ultimately accountable to the FRA for the expenditure of federal funds for the Project. As a recipient of federal transportation grants, the Authority will be subject to the oversight requirements of the FRA. The Authority will work closely with the FRA in order to meet all of the FRA requirements and will make quarterly submissions of Project budget and schedule reports to the FRA. The Authority will coordinate with the FRA through regularly scheduled monthly meetings, and as otherwise needed.

1.2 Construction Package 1 Request for Proposals

This Request for Proposals (RFP) is the second phase of a 2-phase best value procurement process. Proposals are only invited from, and will only be considered from, Shortlisted Offerors (Proposers) based on their Statements of Qualifications (SOQs) submitted in response to the Request for Qualifications (RFQ) issued by the Authority on November 15, 2011.

The purpose of this RFP is for the Authority to seek competitive proposals to provide design-build services for the Project. By submitting a Proposal, Proposers agree to be bound by and meet all of the requirements specified in this RFP. Failure to do so may result in rejection of the Proposal and elimination of the Proposer from the procurement.

This RFP includes the following documents (RFP Documents):

- Book 1 – Instructions to Proposers (ITP)
  - Instructions (this document)
  - Certifications
  - Forms

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- Book 2 – Contract Requirements
  - Signature Document
  - Special and General Provisions
  - Scope of Work
- Book 3 – Supplemental Contract Requirements
  - Final Environmental Documents and Mitigation Monitoring Plan
  - Third-Party Agreements and Permits
  - Approved Design Variances
  - HSR Design Criteria Manual
  - HSR Directive Drawings
  - HSR Plans Preparation Manual
- Book 4 – Reference Documents
  - Drawings
  - Reports
  - Electronic Design Files
  - Standard and Special Specifications
  - Electronic Cross Sections Design Files

The ITP and Reference Documents are not Contract Documents and will not form a part of the Contract. The ITP provides instructions to be followed by Proposers in their response to this RFP No. HSR 11-16. The Reference Documents are included in the RFP for the purpose of providing information to Proposers that is in the Authority's possession. The Authority has not determined whether the Reference Documents are accurate, complete or pertinent, or of any value to the Proposers. The Authority makes no representation, warranty or guarantee as to the accuracy, completeness, pertinence or fitness of the Reference Documents. The Authority takes no responsibility for the Reference Documents and shall not be responsible for any conclusions drawn therefrom, except to the extent the Contract Documents expressly allow the Contractor to rely on such documents under the "Differing Site Conditions" clause (Section 22) of the General Provisions.

2 Definitions

The following terms used in this ITP shall have the meanings set forth below. Refer to Book 2, General Provisions, Section 1 for the meaning of capitalized terms and acronyms used but not defined herein.

- **Alternative Technical Concept (ATC) –** Any concept submitted by a Proposer and accepted by the Authority, which differs from the requirements of the Contract Documents provided in the RFP and results in performance and quality of the end product that is equal to or better than the performance and quality of the end product absent the deviation as determined by the Authority in its sole discretion, and is not merely the result of reduced quantities, performance or reliability.
- **Best Value Proposer** – The Proposer that submits the Best Value Proposal, as defined in Book 2, General Provisions, Section 1.
- **Contract Price** – The combined price for Construction Package 1A, 1B and 1C submitted by the Proposer in Form E: Contract Price
- **Financial Statements –** consist of the following:
  - Balance sheet
  - Income statement
  - Statement of changes in cash flow; and (iv) footnotes
- **Guarantor –** Any Person that is the obligor under any guaranty in favor of the Authority required under the Contract.
- **Key Personnel –** Those individuals identified in the Proposal to fill the positions specified in Form G (Key Personnel Matrix).
- **Major Participant –** Any of the following entities:
  - Principal Participants;
  - The Lead Engineering Firm;
  - Each Subcontractor that may perform 10 percent or more of the construction Work; and
  - Each Subcontractor that may perform 20 percent or more of the design Work.
- **Material Change** – Any material changes in financial condition, corporate form, market capitalization, or potential liabilities that may affect an entity's ability to complete the Project for any entity for which financial statements are provided in the Proposal. Set forth below is a representative list of events intended to provide examples of what the Authority considers a material change in financial condition, corporate form, market capitalization, or potential liabilities. This list is intended to be indicative only.
  - An event of default or bankruptcy involving the affected entity, a related business unit within the same corporation, or the parent corporation of the affected entity.
  - A change in tangible net worth of 10 percent of shareholder equity.

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- A sale, merger or acquisition exceeding 10 percent of the value of shareholder equity prior to the sale, merger or acquisition which in any way involves the affected entity, a related business unit, or parent corporation of the affected entity.
- A change in credit rating for the affected entity, a related business unit, or parent corporation of the affected entity.
- Inability to meet conditions of loan or debt covenants by the affected entity, a related business unit or parent corporation of the affected entity which has required or will require a waiver or modification of agreed financial ratios, coverage factors or other loan stipulations, or additional credit support from shareholders or other third parties.
- In the current and the three (3) most recently completed fiscal years, the affected entity, a related business unit in the same corporation, or the parent corporation of the affected entity either:
  - Incurs a net operating loss;
  - Sustains charges exceeding 5 percent of the then shareholder equity due to claims, changes in accounting, write-offs or business restructuring; or
  - Implements a restructuring/reduction in labor force exceeding 200 positions or involve the disposition of assets exceeding 10 percent of the then shareholder equity.
- Other events known to the affected entity, a related business unit or parent corporation of the affected entity which represents a material change in financial condition over the past three (3) years or may be pending for the next reporting period.

- **Offeror** – A Person that submitted an SOQ in response to the RFQ.
- **Principal Participant** – is defined as one or all of the following:
  - The Proposer
  - If the Proposer is a joint venture, partnership, or limited liability company, any joint venture, general partner, or member thereof
  - Any Person holding (directly or indirectly) a 15 percent or greater interest in the Proposer
- **Proposer** – The Shortlisted Offeror submitting a Proposal, as defined in Book 2, General Provisions, Section 1, in response to this RFP.
- **Proposer Team** – Collectively, the Proposer, other Major Participants, Subcontractors, and their respective employees, agents, and officers.
- **Request for Qualifications (RFQ)** – The Request for Qualifications, including all addenda thereto, issued by the Authority for the Project on November 15, 2011.
- **Request for Proposals (RFP)** – This written solicitation, issued by the Authority in March 2012 to all Shortlisted Offerors for submission of detailed proposals to undertake the Project.

- **Shortlisted Offerors** – Offerors invited by the Authority, based on the Authority's evaluation of each Offeror's SOQ, to submit Proposals in response to this RFP.
- **Statement of Qualifications (SOQ)** – The document submitted by a Proposer in response to the RFQ issued on November 15, 2011.
- **Surety** – A properly licensed surety company, insurance company, or other Person approved by the Authority, which has issued a Proposal Bond and/or will issue a Performance Bond and Payment Bond. To be considered a Surety for purposes of this ITP the surety company, insurance company, or other Person approved by the Authority shall:
  - Be registered with the California State Insurance Commissioner;
  - Appear on the current Authorized Insurance List in the State of California published by the Office of the Insurance Commissioner, and
  - Possess an A.M. Best and Company rating level of A- or better and Class X or better, or as otherwise approved by the Authority in its sole discretion.
- **Total Warranty Price** – The combined price for all five (5) Warranty Options provided in Form E, Price Breakdown Form.
- **Warranty Options** – The ITP requests that the Proposer provide a price for five (5) warranty options to extend the original warranty period for each option by one year as specified in Section 13 of the Special Provisions.

3 Procurement and Project Schedules

Table 1 summarizes the schedule of events in this RFP phase of the two (2)-step procurement process (the "RFP Schedule"). The RFP Schedule is subject to modification at the sole discretion of the Authority. Proposers will be notified of any change in the RFP Schedule by an addendum to this RFP.

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Table 1: RFP Schedule

Activity	Deadline*	Responsibility
Issue RFP	March 22, 2012	Authority
One-on-One Meetings with Potential Proposers	May 14-15, 2012	Both
Mandatory Department of Labor EEO and AA Seminar	May 16, 2012	Both
Mandatory Authority Small Business Program Seminar	May 16, 2012	Both
Mandatory Authority Sponsored Small Business Outreach Meeting	May 17, 2012	Both
Meetings with Potential Proposers on Possible ATCs	June 4-6, 2012	Both
Follow-up Meetings with Potential Proposers on ATCs (Tentative)	June 18-20, 2012	Both
Proposal Agreement Submittal Deadline	June 15, 2012	Proposers
ATC Submittal Deadline	July 9, 2012	Proposers
List of Critical Right-of-Way Parcels Submittal	Within 60 Days of receipt of RFP	Proposers
Response to ATC Submittals	July 27, 2012	Authority
Deadline for Proposer Questions	September 14, 2012	Proposers
Deadline to Submit Changes to Proposer Teams	August 10, 2012	Proposers
Proposal Deadline	November 2, 2012	Proposers
Deadline to Submit Escrowed Proposal Documentation (See 8.2.5)	November 5, 2012	Proposers
Anticipated Contract Award	January 2013	Authority

* All deadlines are 3:00 p.m. Pacific Time unless otherwise indicated.

Table 2 summarizes the anticipated schedule of events for Project implementation.

Table 2: Anticipated Project Implementation Schedule

Activity	Approximate Date	Responsibility
Initial Notice to Proceed	March 2013	Authority
Final Acceptance	May 2016	Contractor
ARRA Funding Deadline	September 30, 2017	Authority

4 Project Goals

The Authority's goals for this Project focus the Contractor on schedule, budget, quality, environmental mitigation, sustainability, safety, and small business utilization.

4.1 Schedule

The Authority's goal is to have the design, construction, and testing of the Project completed in accordance with the schedule requirements of the Grant/Cooperative Agreement, including completion of the ICS and FRA approval of a final report submitted by the Authority on or before September 30, 2017.

4.2 Budget

The Authority's budget goal is for the design and construction of the Project to be completed within the budget for the Project, which is estimated at $1.2 billion to $1.8 billion.

4.3 Quality

The Authority's quality goal is for the Project to be designed and constructed in such manner as to serve as a model for the high standard of quality that the Authority will require for the remainder of the ICS and the entire System.

Consistent with the Authority's quality goal, the Contractor shall develop and implement a Quality Management Plan that provides quality control and quality assurance for both design and construction of the Project, including control of quality-related documents, and which effectively coordinates with the Contractor's Verification and Validation process.

4.4 Verification, Validation (V&V), and Self Certification

The Authority's goal for verification, validation, and self-certification is to complete a series of self-certified, verified and validated, design-build construction packages to confirm that the technical contract requirements have been fulfilled and provide the Authority documentation that the System will meet the overall performance requirements.

4.5 Environmental Mitigation and Compliance

The Authority's environmental goal is for the Project to comply with all environmental laws and regulations, including permit terms and conditions, and to effectively implement all required mitigation measures the Authority and the FRA adopt at the conclusion of the California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) environmental review processes. Construction activities under this contract will be subject to specific mitigation measures and other commitments, which will be included in the environmental documents for the Project.

4.6 Sustainability

The Authority's vision is to design and construct the System in a manner that minimizes impacts to the natural and built environment and encourages compact land development around transit stations. The goal for the Project is to demonstrate environmental design excellence that employs sustainability as its measure of and foundation for design and

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construction. Additionally, these goals will provide a benchmark for sustainable infrastructure and serve as a model that requires and is progressively improved upon for the remainder of the System. In furtherance of these goals, as set forth in the Authority's Memorandum of Understanding; which also establishes its partnership for sustainable planning with the US Department of Housing and Urban Development (HUD), the Federal Railroad Administration (FRA), and the US Environmental Protection Agency (EPA); the following must be achieved:

- Exemplary energy use minimization and energy efficiency
- Minimize water use
- Reduce greenhouse gas emissions and dependency on fossil fuels
- Employ sustainable, healthy materials and reduce the extraction of scarce resources
- Reduce waste to landfill

4.7 Safety and Security

The Authority's safety and security goal is for work to be performed on the Project in a manner that ensures the safety and security of employees, contractors, emergency responders, and the public. Implicit in this goal is the compliance with applicable safety and security laws, regulations, requirements and railroad industry practices, including all FRA railroad safety regulations. To achieve this goal, the Contractor will be expected to promote the following elements of the Authority's safety and security program at all levels of management within the Contractor's organization:

- Plan all work to prevent injury, damage, and lost production time
- Compliance with federal, State, and local laws and regulations, and with industry standards
- Maintain a system for prompt detection of and corrective actions for unsafe and/or unhealthy practices and conditions
- Timely notification and investigation of accidents/incidents or claims, to determine causes, and to initiate prompt corrective and mitigation actions
- Maintain a comprehensive security program, encompassing personnel, facility, and site management in conjunction with emergency planning and response procedures
- Actively participate and cooperate at all levels of management within the Contractor's organization, along with direct coordination with the Authority to promote the Authority's safety and security program

4.8 Overall Project Small Business Goal

For this Project, the Authority has established an overall project Small Business utilization goal of 30 percent of the Total Contract Price to be achieved through the utilization of firms, in any combination and at any tier level, who are certified as Small Businesses (SB) inclusive of

Disadvantaged Business Enterprises (DBEs), Disabled Veteran Business Enterprises (DVBEs), and Microbusinesses (MBs).

The selected design-build contractor will be responsible for establishing subsequent contract goals, as appropriate for the subcontracting solicitation packages it lets in conformance with 49 CFR Part 26.53 Best Practices and the Authority's Small and Disadvantaged Business Enterprise Program.

More detailed information regarding the Overall Project Small Business goal is in the Authority's Small and Disadvantaged Business Enterprise Program located in Book 3, Part A.

5 Project Status

The status of significant Project activities includes:

5.1 Environmental Analysis

The Project encompasses project scopes addressed in two (2) separate environmental documents as described above. As part of this environmental analysis, on August 12, 2011, the Authority and FRA released for public review and comment both the Merced to Fresno HSR Project Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and the Fresno to Bakersfield HSR Project Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS). The initial comment period for both documents closed on October 13, 2011. After considering the initial public comments for Merced to Fresno, the Authority identified a preferred alignment for the Merced to Fresno HSR Project. On April 20, 2012, the Authority and FRA released a Final EIR/EIS for the Merced to Fresno HSR Project. The Authority Board certified the Final EIR/EIS on May 3, 2012, and filed a Notice of Determination (NOD) with the State Clearinghouse on May 4, 2012. The FRA is anticipated to issue a Record of Decision (ROD) in August 2012, following the Authority Board's action.

In response to public input during the initial comment period for Fresno to Bakersfield, the Authority and FRA released a Revised Draft EIR/Supplemental Draft EIS for the Fresno to Bakersfield HSR Project for additional public comment on July 20, 2012. Following the close of the subsequent comment period, the Authority and FRA will consider any additional comments, identify a preferred alignment alternative for the Fresno to Bakersfield HSR project, and the Authority will obtain all necessary State and Federal agency approvals. The release of the Fresno to Bakersfield Final EIR/EIS is anticipated in January 2013 after which Authority Board and FRA action on the final document and subsequent NOD/ROD is anticipated. No Notice to Proceed (NTP) will be issued for any construction activity until issuance of the relevant NOD/ROD.

Proposers are advised that the Authority's issuance of this RFP does not constitute a commitment to undertake this project or enter into a contract for all or any portion of this project. It is possible that the environmental process will result in the selection of a no-build

alternative for the Project or an alignment that differs from the preferred alignment identified in the Final EIR/EIS. Nothing contained in this RFP is intended to modify, limit, or otherwise constrain the environmental process, or commit the Authority or any other entity to undertake any action with respect to the Project, including the selection of a Contractor or the design and construction of the Project.

To review the construction mitigation measures included in each of the DEIR/EIS documents, Proposers may refer to the following links at the Authority's website:

- Merced to Fresno Final EIR/EIS: http://www.cahighspeedrail.ca.gov/final-eir-m-f.aspx
- Fresno to Bakersfield Revised Draft EIR/Supplemental Draft EIS: http://www.cahighspeedrail.ca.gov/revised-draft-eir-f-b.aspx

Upon issuance of the NOD/ROD the Authority will issue an addendum incorporating the provisions of the final EIR/EIS and including any updated mitigation measures included in the final EIR/EIS or NOD/ROD.

5.2 Investigations of Site Conditions

Existing available geotechnical data and limited geotechnical investigations are located in Book 4, Part B, Sections 2 and 3.

Preliminary hazardous materials/waste information is available in the environmental documents. The Authority is also consulting with school districts pursuant to Public Resources Code § 21151.4 regarding certain hazardous substances and hazardous air emissions, and mitigation measures to avoid hazardous materials/air emissions impacts to schools.

5.3 Permitting

The Authority has obtained or will obtain various permits and governmental approvals. The Contractor will be responsible for obtaining all other permits and governmental approvals, including final versions of any draft approvals obtained by Authority, as further described in General Provisions, Book 2, Part B, Section 7.7 and Book 3, Part D.

5.4 Right-of-Way

The Authority intends to provide the Contractor with sufficient right-of-way to contain the limits of construction in support of the alignment and scope of work for this solicitation, as developed in the preliminary engineering drawings. The Work must be designed and constructed within the right-of-way limits indicated in these drawings unless otherwise stated in the Contract.

The Authority cannot commence parcel acquisition for the Merced to Fresno or Fresno to Bakersfield project scopes until the respective NOD/RODs are obtained, but is currently undertaking preliminary activities to expedite the acquisition process. The current Right-of-

Way Acquisition Plan is located in Book 3. Details regarding parcel maps and numbers, parcel access dates and the updated right-of-way footprint will be released in addenda to the RFP.

Proposers must submit information regarding right-of-way parcels to be acquired and possession dates necessary to accommodate the Proposer's anticipated construction schedule in Form I by the date indicated in Table 1.

5.5 Utility Relocation

The Authority has commenced discussions with utility owners regarding master agreements for the Project. The Authority has also mapped existing high risk utilities and identified conflicts with the high risk utilities, based on preliminary engineering drawings for CP 1A, CP 1B and CP 1C. Current agreements and mapping documentation are located in Book 3.

5.6 Other Third Parties

The Authority has entered or will enter into memoranda of understanding (MOUs) and other agreements with certain State and local agencies, railroads and other third parties that may be impacted by the Project. These MOUs and other agreements are located in Book 3 or will be provided by addenda.

5.7 Design Information

Technical Memorandum 0.3, Basis for Design, is included for reference in Book 3. The document provides potential Proposers a definition of the major components and performance objectives of the System. The document, as originally issued, pre-dated the Draft EIR/EIS and the latest business plan; therefore the document includes updates to some of the values and organizational groupings.

The Design Manual and Computer Aided Design and Drafting (CADD) Guidelines are included in Book 3.

The standard drawings and standard specifications are located in Book 4 and the directive drawings are included in Book 3.

6 Federal Requirements

This Project will receive federal funding, including ARRA funds. Therefore, the procurement documents and any Contract entered into by the Authority shall be subject to the requirements of applicable Federal law, regulations, and conditions in the Grant/Cooperative Agreement with FRA. The Authority reserves the right to modify this procurement to address any concerns, conditions or requirements of the funding agencies, including FRA. The full Grant/Cooperative Agreement, including relevant Federal requirements, is available for review by Proposers on the Project Website at the following link:

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- Not identify the Proposer's identity in the body of the question or contain proprietary or confidential information
- Indicate whether the question is a Class 1, 2, 3 or 4 question
- Each page of questions shall be marked with the Proposer's name and date of submission

As used above, "Class 1" means a potential "go/no-go" issue that, if not resolved in an acceptable fashion, may preclude the Proposer from submitting a Proposal. "Class 2" means a major issue that, if not resolved in an acceptable fashion, will significantly affect price or, taken together with the entirety of other issues, may preclude the Proposer from submitting a Proposal. "Class 3" means an issue that may affect price, or another material issue, but is not at the level of a Category 1 or Category 2 issue. "Class 4" means an issue that is minor in nature, a clarification, or a comment concerning a conflict between documents or within a document, etc.

Proposers will be limited to seventy (70) comments/questions per the released RFP, and per each addendum released modifying the RFP. Each Proposer's allotment of comments/questions will be reset to seventy (70) upon release of each addendum. If a question has more than one subpart, each subpart will be considered a separate question. Corrections of typographical errors, incorrect cross references or inconsistencies within or among the RFP documents will be excluded from the 70 question limitation and shall be categorized as a "Class 4" question.

7.5.2 Authority Responses

The Authority will use the following guidelines when responding to questions and requests for clarification:

- Questions and requests for clarification from all Proposers will be reviewed by the Authority's procurement team.
- The Authority will post responses to questions and requests for clarification in the form of a response matrix posted on the Project Website.
- The Authority will send an e-mail notification as soon as each response to questions and requests for clarification is issued.

7.6 Site Visits

Proposers will be permitted one (1) visit with Authority representation of portions of the Project site. Authority will notify Proposers in writing of the date for the visit and specific parameters related to the visit. Attendance at the site visit by Proposers shall be mandatory. Each Proposer shall, by submission of a Proposal, be deemed to have participated in the site visit and to have satisfied itself as to the conditions to be encountered in performing the Work.

California High-Speed Train Project

Request for Proposal for Design-Build Services

RFP No.: HSR 11-16
Scope of Work

ATTACHMENT 2
LIMITS OF WORK MAP

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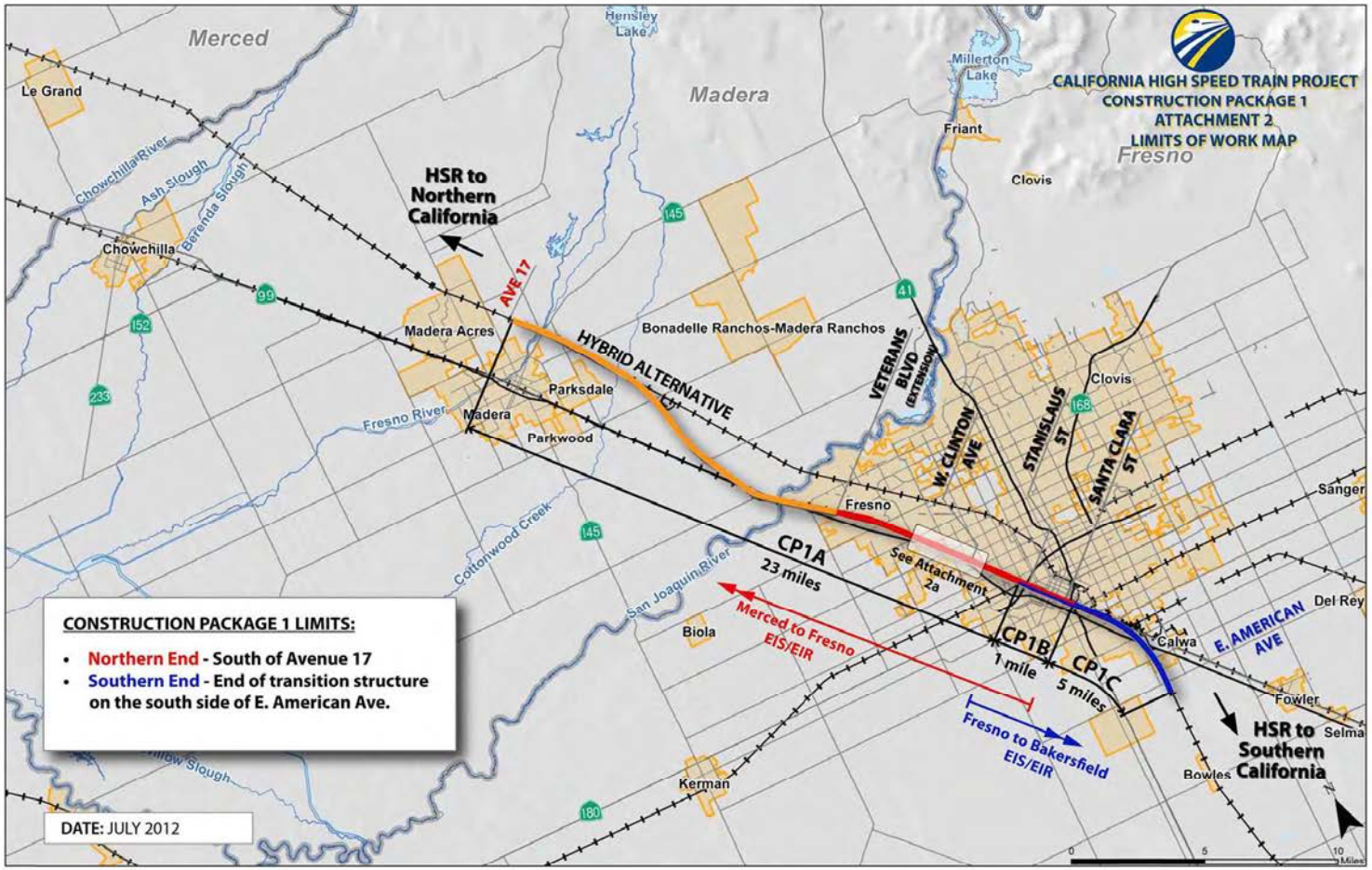

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U.S. Department of Transportation
Federal Railroad Administration

Record of Decision

California High-Speed Train Merced to Fresno Section

1.0 Introduction

This is the Record of Decision (ROD) of the Federal Railroad Administration (FRA), an operating administration of the U.S. Department of Transportation (DOT), and the lead Federal agency for the California High-Speed Train (HST) Merced to Fresno Section (Project) (Figure 1). The Project Proponent is the California High-Speed Rail Authority (Authority), the lead agency for state environmental reviews under the California Environmental Quality Act (CEQA) and joint lead agency with FRA for Federal environmental reviews under the National Environmental Policy Act (NEPA). The Authority proposes to construct and operate the Project subject to the approval of the appropriate Federal agencies. These agencies include FRA and the Federal cooperating agencies—the U.S. Army Corps of Engineers (USACE) and the Bureau of Reclamation. Other Federal agencies with specific review or permitting roles include the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS).

To comply with NEPA and CEQA, FRA and the Authority issued a joint Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Merced to Fresno Section of the California HST Project in August 2011 and a joint Final EIR/EIS in April 2012. Consistent with 40 Code of Federal Regulations (C.F.R.) 1506.2, the Final EIR/EIS is one document that covers both state and federal environmental requirements. Because this ROD contains only the decision of FRA, a Federal agency, based on the Draft and Final EIR/EIS, the documents will be referred to as the "Draft EIS" and the "Final EIS." In making its decision, FRA considered the information and analysis contained in the 2011 Draft EIS and 2012 Final EIS (collectively, "EIS Documents"). FRA also considered public and agency comments received during the public comment period for the Draft EIS and the waiting period following the Final EIS. Based on the analysis of the Project's potential environmental effects (both adverse and beneficial) in the EIS Documents and substantive agency and public comments, FRA selects the north-south Hybrid Alternative and the Downtown Merced Station and Downtown Fresno Mariposa Street Station alternatives, as described further in Section 4.0, Alternatives, below.

Record of Decision for California High-Speed Train Merced to Fresno Section

Figure 1
California HST System Initial Study Corridors

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FRA has prepared the ROD in accordance with the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 C.F.R. Section 1505.2) and FRA's Procedures for Considering Environmental Impacts (64 Federal Register [FR] 28545, May 26, 1999) (FRA Environmental Procedures). Specifically, this ROD:

- Provides background on the NEPA process leading to the Final EIS, including a summary of public involvement and agency coordination.
- States and reaffirms the Project's purpose and need.
- Identifies the alternatives considered in the EIS Documents.
- Summarizes the alternatives previously considered in the alternatives analysis process and not carried forward for study in the Draft EIS.
- Identifies the Selected Alternative.
- Identifies the Environmentally Preferable Alternative.
- Summarizes environmental benefits and adverse effects.
- Summarizes the comments received on the Final EIS.
- Discusses the measures to avoid and minimize environmental harm and requires a monitoring and enforcement program for all mitigation measures.
- Presents the FRA Decision, determinations, and findings on the proposed Project and identifies and discusses the factors that were balanced by FRA in making its decision.

1.1 California HST System

The Authority is responsible for planning, designing, constructing, and operating the California HST System. Its state statutory mandate is to develop a high-speed rail system that coordinates with the state's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The California HST System will provide intercity, high-speed service on more than 800 miles of track throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego, as shown in Figure 1. The Authority and FRA prepared two programmatic (Tier 1) EIR/EIS documents to select preferred alignments and station locations to advance for project-level analysis in Tier 2 EIR/EISs. See Chapter 1 of the Merced to Fresno Section Final EIS for a more detailed description of the HST System, history of Tier 1 documents, and HST system phasing. Figure 1 shows the proposed California HST System that resulted from the Tier 1 EIR/EISs and Tier 1 decisions. The HST System will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train-control systems, with trains capable of operating up to 220 miles per hour (mph) over a fully grade-separated, dedicated guideway alignment.

The Authority plans two phases: Phase 1 (to be constructed in stages dependent on funding availability) will connect San Francisco to Los Angeles/Anaheim via Pacheco Pass and the Central Valley through a combination of dedicated high-speed rail infrastructure blended with existing urban systems, with a state statute mandated express travel time from San Francisco to Los Angeles of 2 hours and 40 minutes or less. Phase 2 will extend the system from Los Angeles to San Diego and from Merced to Sacramento. The HST System could have more than 200 trains per day after full build-out of Phase 2. The California High-Speed Rail Program Revised 2012 Business Plan[1] describes in more detail how Phase 1 of the HST System will be implemented and recognizes current budgetary and funding realities, which will result in both Phase 1 and Phase 2 being constructed over a longer period of time than originally anticipated.

The California HST System as approved through Tier 1 decisions has been divided into nine individual sections for more detailed, second-tier analysis. The nine sections were identified by certain operating characteristics including the requirement that they terminate at or proximate to station locations in larger urban centers. The individual project sections tier from decisions made during the programmatic decision and are units of the whole system that can be combined together as necessary due to funding and constructability constraints.

The Merced to Fresno Section is one of the nine individual sections undergoing Tier 2 environmental review for Phases 1 and 2 of the California HST System. As described in the October 1, 2009, Notice of Intent (NOI) for the Merced to Fresno Section (74 FR 50869), FRA identified the Project termini as the station sites in downtown Fresno and Merced. This is consistent with the Tier 1 decisions and permits full analysis and consideration of the potential impacts of construction and operation of the Merced to Fresno Section of the California HST System.

1.2 Merced to Fresno Section

FRA and the Authority, as joint lead agencies for NEPA compliance, commenced the environmental review process for the Project in 2009. The Authority held scoping meetings for the Project in March 2009. The Draft EIS was issued in August 2011 and the 60-day public review period closed on October 13, 2011. The Draft EIS presented the purpose and need for the Project; the reasonable range of alternatives for rail alignment, station site, heavy maintenance facility (HMF), and a connection to the east-west running San Jose to Merced Section also known as "wye connections"; the existing environmental setting; potential effects (both beneficial and adverse) from construction and operation; and mitigation measures to reduce or eliminate potential adverse environmental effects.

The Draft EIS informed decision-makers, interested parties, and the public about the various alternatives and potential impacts. FRA and the Authority held public hearings

[1]. Authority. 2012. *California High-Speed Rail Program Revised 2012 Business Plan*. Sacramento, Calif. April 2012. Available at http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx.

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in Merced, Madera, and Fresno to provide opportunities for all of the public to comment on the Draft EIS verbally and in writing. FRA and the Authority received 895 comment submittals on the Draft EIS.

FRA and the Authority considered the information presented in and the comments received on the Draft EIS when preparing the Final EIS. During a hearing by the Authority Board of Directors in December 2011, the Authority designated the Hybrid as the Preferred Alternative. The Final EIS, published April 20, 2012, identified the Hybrid as the Preferred Alternative and included minor design modifications to proposed alternatives resulting from public and agency comments on the Draft EIS and an evaluation of the potential environmental effects of the Preferred Alternative.

Following the identification of the Preferred Alternative in the Final EIS, the USACE and EPA concurred (on March 26, 2012,[2] and March 23, 2012,[3] respectively)—based upon the analyses incorporated in the Draft EIS and the subsequent Final EIS, as well as documents submitted as part of the Section 404 permitting process, and the biological assessment of ecosystems impacts and cultural and community impacts—that the Hybrid Alternative is the least environmentally damaging practicable alternative (LEDPA), consistent with USACE's permit program (33 C.F.R. Part 320–331) and EPA's Section 404(b)(1) Guidelines (40 C.F.R. 230–233).[4]

Table 1 summarizes the major NEPA milestones of the Project.

[2] Response to February 22, 2012 Checkpoint C Package, and the March 9, 2012 response for the proposed Merced to Fresno segment of the California HST Project. Letter from Michael S. Jewell, Chief, Regulatory Division to Mark McLoughlin, Authority. Sacramento, CA. March 26, 2012.

[3] Response to Checkpoint C – Request for Agreement on Preliminary Least Environmentally Damaging Practicable Alternative and Draft Mitigation Plan for California HST Project Merced to Fresno Section. Letter from Connell Dunning, Transportation Team Supervisor, Environmental Review Office, Communities and Ecosystems Division, to David Valenstein, FRA, and Tom Fellenz, Authority. San Francisco, CA. March 23, 2012.

[4] For more information about the integration of NEPA with Clean Water Act Section 404 permitting, please see Section 2.2. For more information about the identification of the LEDPA and the integration of USACE's 404 permit into the NEPA process, please see Section 4.4.

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Table 1: Summary of Major NEPA Milestones

Milestone	Date
Notice of Intent (NOI)	February and October[5] 2009
Public Scoping Meetings	March 2009
Notice of Availability Published and Circulation of Draft EIS/Draft Section 4(f) Evaluation	August 2011
Public Hearings: Merced, Madera, and Fresno	September 2011
Notice of Availability and Publication of Final EIS and Final Section 4(f) Evaluation	April 2012

1.3 Initial Project Construction

The Authority identified the Central Valley as the highest construction priority, and FRA selected this Project for construction funding. Recognizing funding limitations, and to maximize potential interim use of the HST System in the Central Valley, the Authority will phase construction of the Project.

The Authority will use the design/build project delivery method to construct the HST System in the Central Valley. When using design/build, one contractor (or team of contractors) is selected to provide design and construction services under a single contract. Construction within the Merced to Fresno Section is anticipated to commence in 2013 after the Authority selects a design/build contractor(s) as part of an ongoing procurement process.

This ROD will allow the Authority to move forward with construction and related activities for the Selected Alternative within the Merced to Fresno Section, a portion of which (between Avenue 17 and Los Angeles Street) is funded for construction.

2.0 Federal Agency Actions

The specific roles and responsibilities of the Federal agencies involved in the Project, including lead, cooperating,[6] and permitting agencies, are further described below. Table 2 identifies permit and approvals anticipated for these agencies.

[5] The original NOI was filed for the Merced to Bakersfield Section in February 2009; it was amended in October 2009 for the Merced to Fresno Section.

[6] The Bureau of Reclamation is a cooperating agency but does not have jurisdiction over a permit or approval for this section.

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Table 2: Federal Permits or Approvals Anticipated

Agency	Permit/Approval
FRA	• FRA funding approval • FRA regulations related to HST operation and safety • Section 4(f) of the U.S. Transportation Act of 1966 • National Historic Preservation Act Section 106 Consultation • Clean Air Act General Conformity Determination
USACE	• Clean Water Act Section 404 Permit for discharge of dredge or fill materials into waters of the United States, including wetlands • Rivers and Harbors Act Section 408 Permit for the use, including modifications or alterations, of any flood control facility built by the USACE • 33 C.F.R. 208.10 Permit for encroachment on a local flood control facility built by the USACE that does not include modifications to the facility
USFWS	• Endangered Species Act Section 7 Consultation and Biological Opinion
NMFS	• Endangered Species Act Section 7 Consultation and Biological Opinion

2.1 Federal Railroad Administration

Under 49 United States Code (U.S.C.) 20101 et seq., FRA has authority over the safety of railroads. FRA will exercise jurisdiction over railroad safety issues during design and operation of the Project. FRA also administers the High-Speed Intercity Passenger Rail grant program. Based on the evaluation of applications submitted to FRA and the two Tier 1 EIRs/EISs and subsequent RODs, FRA selected the Authority to receive grant funds for preliminary engineering and environmental reviews for Phase 1 of the California HST System, and final design and construction of the California HST System between Madera, a city located within the Merced to Fresno Section, and Bakersfield (Kern County) in the Fresno to Bakersfield Section.

Section 4(f) of the DOT Act of 1966 (49 U.S.C. 303) prohibits DOT and its modal administrations, including FRA, from undertaking a transportation project or providing Federal funding or discretionary approvals for a project that results in the use (unless the use has *de minimis* impacts) of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites, unless there is no feasible and prudent alternative to the use of the resource and the action includes all possible planning to minimize harm to the property resulting from use. Section 4(f) also protects historic sites of national, state, or local significance located on public or private

land. FRA's Environmental Procedures contains FRA processes and protocols for analyzing the potential use of Section 4(f) protected properties. FRA's Section 4(f) Determination is included as Section 9.2 of this ROD.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. 470f), requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP that are available at 36 C.F.R. Part 800. Under the NHPA, significant cultural resources, referred to as historic properties, include any prehistoric or historic district, site, building, structure, object, or landscape included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). A Programmatic Agreement (PA) among FRA, ACHP, the California State Historic Preservation Officer (SHPO), and the Authority regarding compliance with Section 106 of the NHPA for the HST System was executed on July 22, 2011.[7] In accordance with the PA, a Memorandum of Agreement (MOA) for the treatment of adverse effects on historic properties in the Merced to Fresno Section of the HST System was executed on August 31, 2012 (see Appendix A). The City of Madera, the City of Fresno, and Fresno County, as well as the following Federally-recognized Native American tribes: Cold Springs Rancheria of Mono Indians, Santa Rosa Rancheria Tachi Tribe, the North Fork Rancheria of Mono Indians, and the California Valley Miwok Tribe; and the following non-Federally recognized Native American tribes: North Fork Mono Tribe, and the Chowchilla Tribe of Yokuts, have accepted the Authority and FRA's invitation(s) to be consulting parties to the MOA and treatment plan(s). [8]

Pursuant to the Clean Air Act (CAA) Section 176(c) requirements, EPA promulgated 40 C.F.R. 51 Subpart W and 40 C.F.R. Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans" (58 FR 63214, November 30, 1993, as amended, 75 FR 17253, April 5, 2010). These regulations, commonly referred to as the General Conformity Rule, apply to all Federal actions, including those by FRA, except for those Federal actions that are excluded from review (e.g., stationary source emissions) or related to transportation plans, programs, and projects under Title 23 or the Federal Transit Act, which are subject to the Transportation Conformity Rule.

A conformity determination under the General Conformity Rule is required if the Federal agency determines the following: the action will occur in a nonattainment or maintenance area; that one or more specific exemptions do not apply to the action; the action is not included in the Federal agency's "presumed to conform" list; the emissions from the proposed action are not within the approved emissions budget for an applicable

[7] Authority and FRA. 2012. *Programmatic Agreement.* Appendix 3.17-A of the *California HST Merced to Fresno Section Final Project EIR/EIS. Volume II: Technical Appendices.* Sacramento, CA, and Washington, D.C. April 2012.

[8] Signatures of potentially concurring parties are currently being sought.

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facility; and the total direct and indirect emissions of a pollutant (or its precursors), are at or above the *de minimis* levels established in the General Conformity regulations. The proposed Project is subject to review under the General Conformity Rule; therefore, FRA prepared a Conformity Determination consistent with the applicable regulatory requirements. The final General Conformity Determination was issued on September 18, 2012.

2.2 U.S. Army Corps of Engineers

USACE is responsible for issuing permits under the Clean Water Act (CWA) Section 404 (33 U.S.C. 1344) (Section 404) and the Rivers and Harbors Act Section 14 (33 U.S.C. 408) (Section 408).[9] USACE is required to comply with NEPA and issue its own Record of Decision before it can issue a permit under Section 404 or Section 408.

As a first step in Project permitting, the Authority, FRA, USACE, and EPA executed a Memorandum of Understanding (MOU or NEPA/404/408 MOU) in November 2010. The MOU outlines a process to integrate the requirements of NEPA with the requirements of Section 404 and Section 408. The purpose of the MOU is to ensure the analysis underlying the EIS Documents for each HST section is sufficient to support USACE's Preliminary LEDPA determination and for USACE to issue a NEPA decision document.

Consistent with the MOU, FRA and the Authority initiated the CWA Section 404 permitting process with USACE on August 3, 2011. As part of the CWA Section 404 permitting process, FRA and the Authority prepared a Wetland Delineation Report (2011) and submitted it to USACE for issuance of a preliminary jurisdictional determination, which USACE issued on November 3, 2011. Jurisdictional determinations and issuance of a permit for the discharge of fill material into waters of the United States associated with construction and operation of the Project will be part of the CWA Section 404 permit process administered by USACE.[10]

Pursuant to NEPA, Section 404, and Section 408, USACE and EPA issued letters identifying the Hybrid Alternative as the preliminary LEDPA on March 26, 2012, and March 23, 2012, respectively. The Section 404 process continues with submittal of a permit application to USACE and development of a mitigation plan. The Section 408

[9] CWA Section 404 sets forth a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. USACE may only issue a Section 404 permit for a project alternative that USACE determines is the Least Environmentally Damaging Practicable Alternative (LEDPA). Section 408 permit decisions will be made for alteration/modification of completed Federal flood risk management facilities and any associated operation and maintenance, and real estate permissions or instruments (as applicable).

[10] For CWA section 404(b)(1) compliance, USACE must take into consideration the context of the geographic area of the proposed action and the type of project being proposed. USACE has determined that the overall project purpose (as stated above) allows for a reasonable range of practicable alternatives to be analyzed and is acceptable as the basis for the USACE 404(b)(1) alternatives analysis.

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process continues with USACE's evaluation of potential Project impacts on flood protection facilities. USACE will issue a NEPA decision after a preliminary review of impacts on facilities under its jurisdiction. Subsequently, the Authority will submit permit applications for facilities under Section 408 jurisdiction to USACE.

2.3 U.S. Fish and Wildlife Service

Concurrently with the NEPA process, FRA initiated the Endangered Species Act (ESA) Section 7 (16 U.S.C. 1536) consultation process, pursuant to 50 C.F.R. Part 402. Section 7 of the Federal ESA requires Federal agencies to consult with USFWS and/or NMFS, depending on the type of species or habitat affected, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered fish, wildlife, or plant species or result in the destruction or adverse modification of designated critical habitat for any such species. Impacts associated with threatened and endangered species, including critical habitat, occupied habitat, and suitable habitat for special-status species, is addressed through a coordination process that is outlined under Section 7 of the Federal ESA. If a project may have an impact on a resource under Section 7, a study that describes the impacts, known as a Biological Assessment (BA), is required to be submitted to the appropriate agency with jurisdiction over the resource (USFWS, and/or NMFS). After the appropriate agency has accepted the BA, the agency will render a Biological Opinion (BO). A BO is the agency's opinion as to whether a project is likely to jeopardize the continued existence of an ESA-listed species or result in the destruction or adverse modification of a species' critical habitat.

Because the Project is likely to have an impact under Section 7, FRA prepared a BA for the Project and consulted with USFWS, as required. FRA's informal and formal Section 7 consultation with USFWS has been ongoing and was instrumental in scoping the biological resource analysis for the EIS Documents, as well as for the BA. FRA developed and submitted the Draft BA to USFWS in October 2011, which evaluated direct, indirect, and cumulative effects of the Project on Federally listed, threatened, endangered, or proposed listed species and their designated habitat.

Following USFWS review and additional consultation and coordination, USFWS issued a BO for the Project on September 14, 2012. In the BO, USFWS concluded that the Project, as proposed, is not likely to jeopardize the continued existence of the listed wildlife and plant species potentially occurring in the Project action area. Consistent with Section 7 requirements, the BO stipulates several reasonable and prudent conservation measures to avoid or reduce potential impacts. The BO is included as Appendix B. This BO also includes an incidental take statement authorizing activities associated with the first phase of construction in the Central Valley, as described in Section 1.3.

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2.4 National Marine Fisheries Service

Because the Project might impact protected aquatic species under NMFS jurisdiction, in addition to the Section 7 consultation with USFWS described above, FRA is required to consult with NMFS.

FRA submitted a Draft BA to NMFS in October 2011. In addition to the BO issued by USFWS, NMFS issued a BO for the Project on April 17, 2012. NMFS concluded in its BO that the Project would not likely jeopardize the continued existence of the listed species. NMFS anticipates that the Project would result in the incidental take of California Central Valley steelhead and Central Valley spring-run Chinook salmon.[11] Consistent with Section 7 requirements, the BO stipulates several reasonable and prudent conservation measures to avoid or reduce potential impacts. This BO is included as Appendix B. The BO also includes an incidental take statement authorizing activity associated with construction and operation of the Project.

3.0 Purpose and Need

As established in the Final Program EIS, the purpose of the California HST System is to provide a reliable high-speed electric-powered train system that links the major metropolitan areas of California, delivering predictable and consistent travel times. A further objective is to provide an interface with commercial airports, mass transit, and the highway network and to relieve capacity constraints of the existing transportation system as increases in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources.[12]

The purpose of this Project is to implement the Merced to Fresno Section of the California HST System to provide the public with electric-powered high-speed rail service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit systems, and the highway network in the south San Joaquin Valley and to connect the northern and southern portions of the system.

The capacity of California's intercity transportation system, including the central part of the San Joaquin Valley region, is insufficient to meet existing and future travel demands. The current and projected future system congestion will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The current transportation system has not kept pace with the increase in population, economic activity, and tourism within the state, including in the central part of the San Joaquin Valley region. The interstate highway system, commercial airports, and conventional passenger rail system serving the intercity travel market are operating at or near capacity

[11] Within the Project action area, these species potentially occur only in the San Joaquin River.

[12] Authority and FRA. 2005. *Final Program EIR/ EIS for the Proposed California HST System*. Sacramento, CA, and Washington, DC. August 2005.

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and will require large public investments for maintenance and expansion to meet existing demand and future growth over the next 25 years and beyond. Moreover, the feasibility of expanding many major highways and key airports is uncertain; some needed expansions might be impractical or are constrained by physical, political, and other factors. The need for improvements to intercity travel in California, including intercity travel between the central part of the San Joaquin Valley, the San Francisco Bay Area, Sacramento, and Southern California, relates to the following issues:

- Future growth in demand for intercity travel, including the growth in demand within the central part of the San Joaquin Valley region.
- Capacity constraints that will increase congestion and travel delays, including those in the central part of the San Joaquin Valley region.
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic wellbeing of residents, businesses, and tourism in California, including the central part of the San Joaquin Valley region.
- Reduced mobility as a result of increasing demand on limited modal connections between major airports, transit systems, and passenger rail in the state, including the central part of the San Joaquin Valley region.
- Poor and deteriorating air quality and pressure on natural resources and agricultural lands as a result of expanded highways and airports and urban development pressures, including those within the central part of the San Joaquin Valley region.

4.0 Alternatives

This section summarizes the alternatives analysis process and the alternatives evaluated in the EIS Documents and describes the Selected and Environmentally Preferable alternatives.

4.1 Alternatives Considered in the Alternatives Analysis Process and Not Carried Forward for Consideration in the EIS Documents

FRA and the Authority have undertaken an extensive, public screening process for alternatives to study in the EIS Documents. The potential alternatives considered but eliminated from detailed study were presented in the *Preliminary Alternatives Analysis Report* (April 2010), the *Alternatives Analysis Report* (August 2010), and the *Supplemental Alternatives Analysis Report* (May 2011) and are summarized in Chapter 2 of the EIS Documents. Several potential alternatives either failed to adequately meet the project purpose, need, and objectives, failed to offer a substantial environmental advantage over one or more of the alternatives studied in the EIS Documents, or were deemed infeasible from a cost, technical, or engineering perspective and therefore were eliminated from further analysis in the EIS Documents.

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4.2 Alternatives Considered in the EIS Documents

The EIS Documents included three alignment alternatives: UPRR/SR 99 Alternative, BNSF Alternative, and the Hybrid Alternative (Figure 2). The No Action Alternative was also analyzed in the EIS Documents. The EIS Documents also included the Downtown Merced HST Station, two station alternatives for Downtown Fresno (the Kern Street Station Alternative and Mariposa Street Station Alternative), five HMF alternatives, and two wye alternatives. These alternatives are described in detail in Chapter 2 of the Final EIS. The alternatives analyzed in the EIS Documents are those that FRA and the Authority considered reasonable and feasible.

4.2.1 HST Alignment Alternatives

No Action Alternative

The No Action Alternative would result in no construction and no operation of the HST System. As a result, it would not meet the Project's purpose, need, and objectives.

The No Action Alternative is the basis for comparison of the Project alternatives in the Environmental Documents. The No Action Alternative represents the state's transportation system (highway, air, bus, conventional rail) as it is currently and as it would be after implementation of programs or projects that are currently projected in regional transportation plans, have identified funds for implementation, and are expected to be in place by 2035, as well as any major planned land use changes. The entire San Joaquin Valley is projected to grow at a rate higher than any other region in California. The three counties—Merced, Madera, and Fresno—are projected to continue to grow at an average rate of 3% per year. By 2035, the population in the study area is projected to grow from 1,365,911 to 2,298,075, for a net increase of 60%. Accommodating this new population would require land acquisition and the construction of new infrastructure, including roadways, electric power generation, water and wastewater facilities, schools, hospitals, and commercial and industrial facilities. To support this growth, development would consume an estimated 91,000 acres because, according to current planning trends, these counties would develop at a density of approximately 10 persons per acre.

UPRR/SR 99 Alternative

The alignment for the UPRR/SR 99 Alternative traverses urban downtown areas in the cities of Merced, Madera, and Fresno. It is generally adjacent to SR 99 and the UPRR railway. The HST alignment is designed to follow the existing UPRR corridor adjacent to the UPRR mainline right-of-way and to avoid the existing UPRR operations right-of-way and active rail spurs to the greatest extent possible. In several locations, the HST alignment is elevated to cross over the UPRR operational right-of-way. In these instances, the alternative maintains required horizontal and vertical clearance over UPRR operational right-of-way to avoid or minimize impacts on other UPRR right-of-

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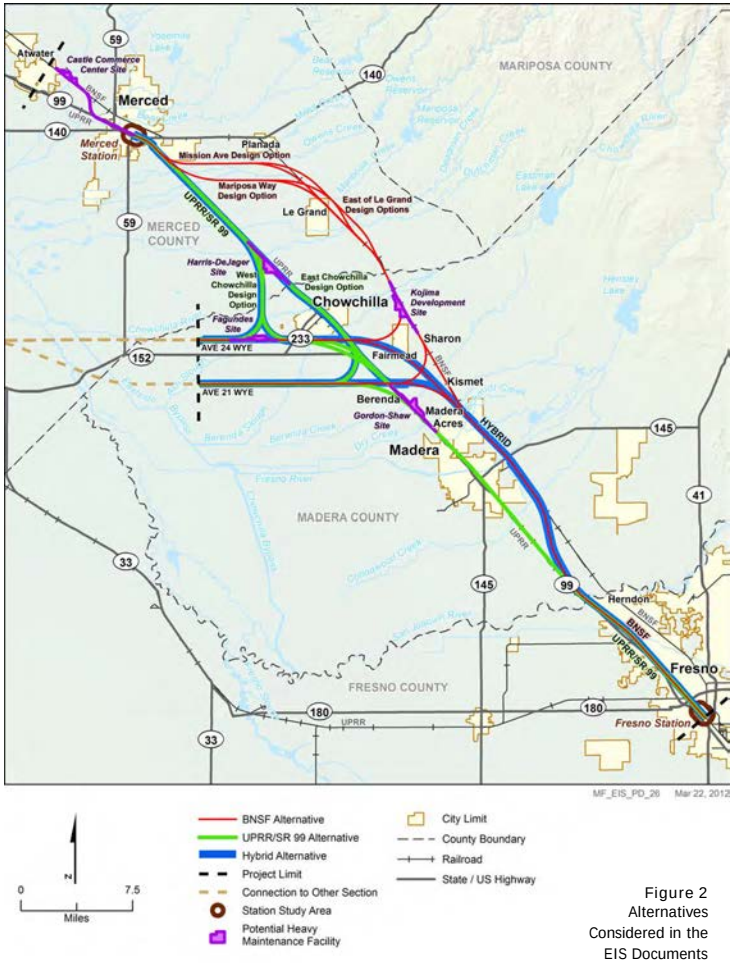

Figure 2
Alternatives Considered in the EIS Documents

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way, spurs, and facilities. Similarly, the HST alignment follows the SR 99 corridor and, therefore, crosses over SR 99 in some locations and under SR 99 in Merced. As the alignment travels through rural areas, it affects existing local frontage roads used by small communities and farm operations. Where these frontage roads parallel the HST alignment, they would be shifted and reconstructed to maintain their function. Where roads are perpendicular to the proposed HST, overcrossings or undercrossings are planned approximately every two miles, while other roads would be closed.

The north-south alignment of the UPRR/SR 99 Alternative would begin at the HST station in Downtown Merced, located on the west side of the UPRR right-of-way. South of the station and leaving Downtown Merced, the HST alignment would be at-grade and cross under SR 99. As the HST alignment approaches Chowchilla, the UPRR/SR 99 Alternative has two primary design options: the East Chowchilla design option, which would pass Chowchilla on the east side of town, following the Ave 24 Wye alignment, and the West Chowchilla design option, which would travel south at a distance of three to four miles west of Chowchilla before turning back to rejoin the UPRR/SR 99 transportation corridor. Both of the Ave 21 and the Ave 24 Wye options would connect in the vicinity of Chowchilla; these wye options are described below in Section 4.2.4. The HST alignment would continue south on the east side of the UPRR corridor south of Dry Creek and remain on an elevated profile for 8.9 miles through Madera. After crossing over Cottonwood Creek and Avenue 12, the HST alignment would transition to an at-grade profile and continue to be at-grade until north of the San Joaquin River. The UPRR/SR 99 Alternative would continue toward Fresno, crossing the San Joaquin River, and rise over the UPRR railway on an elevated guideway supported by straddle bents. The HST alignment would then cross over the existing Herndon Avenue and descend into an at-grade profile. The alignment would continue west of and parallel to the UPRR right-of-way. Advancing south from Clinton Avenue between Clinton Avenue and Belmont Avenue, the two-track HST alignment would run at-grade adjacent to the western boundary of the UPRR right-of-way and then enter the station in Fresno.

BNSF Alternative

The alignment for the BNSF Alternative traverses from north to south, crossing the cities of Merced, Le Grand, Madera, and Fresno. The north-south alignment of the BNSF Alternative would begin at the HST station in Merced. South of Merced, there are two design options that traverse east to the BNSF in the vicinity of the community of Le Grand. The BNSF alternative would remain at-grade through Merced and would cross under SR 99 at the south end of the city. Just south of the SR 99/East Childs Avenue interchange, the BNSF Alternative would cross over SR 99 and UPRR once more as it begins to curve to the east, crossing over the E Mission Avenue interchange. It would then travel east to the vicinity of Le Grand where it would turn south and travel adjacent to the BNSF tracks. Continuing southeast along the west side of BNSF, the HST alternative would begin to curve just before Plainsburg Road through a predominantly rural and agricultural area. One mile south of Le Grand, the HST alignment would cross

Deadman and Dutchman creeks. The HST alignment would deviate from the BNSF corridor just southeast of S White Rock Road, and would remain at-grade for another seven miles, except at the bridge crossings, and would continue on the west side of the BNSF corridor through the community of Sharon. The HST alignment would continue at-grade through the community of Kismet until reaching the crossing at Dry Creek. The BNSF Alternative would cross Dry Creek and continue at-grade through agricultural areas along the west side of the BNSF corridor through the community of Madera Acres north of the City of Madera. Between Le Grand and Madera, the proposed Ave 21 or Ave 24 Wye alignments would connect with this north-south portion of the alternative. The wye alignments are described below in Section 4.2.4. The HST alignment would continue at-grade on the west side of the BNSF corridor, crossing over the Fresno River and SR 145. This would involve raising the HST tracks over the existing SR 145 undercrossing. South of Avenue 15 east of Madera, the alignment would transition toward the UPRR corridor. The alignment would follow the east side of the UPRR corridor near Avenue 9 south of Madera and then would continue along nearly the same route as the UPRR/ SR 99 Alternative over the San Joaquin River to enter the community of Herndon. The HST alignment for the BNSF Alternative in the Fresno vicinity would be the same as for the UPRR/SR 99 Alternative.

Hybrid Alternative

From north to south, generally, the Hybrid Alternative would follow the UPRR/SR 99 alignment with either the West Chowchilla design option and Ave 24 Wye or the East Chowchilla design option and Ave 21 Wye; at the wye connection, it would join the BNSF Alternative through Madera and would continue south over the San Joaquin River on to the Fresno station. The HST alignments in the Merced vicinity for the Hybrid Alternative and design options are the same as for the UPRR/SR 99 Alternative. Approaching the Chowchilla city limits, the Hybrid Alternative would follow one of two wye options. In the vicinity of Madera and south to Fresno, the Hybrid Alternative is the same as the BNSF Alternative, and throughout the Fresno vicinity, both the Hybrid and BNSF Alternatives are the same as the UPRR/SR 99 Alternative

4.2.2 Station Alternatives

The Downtown Merced and Downtown Fresno stations would each occupy several blocks, to include the station plazas, drop-offs, multimodal transit center, and parking structures. The stations would include the platforms and associated building for passenger services and concessions, and back-of-house functions and access structures. Both the Merced and Fresno stations would have additional platform tracks, with the platforms at-grade.

Downtown Merced Station

The Downtown Merced Station would be between Martin Luther King Jr. Way to the northwest and G Street to the southeast, approximately seven blocks west of the existing Amtrak station. The station would be accessible from both sides of the UPRR, but the

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primary station house would front 16th Street. The major access points from SR 99 include V Street, R Street, Martin Luther King Jr. Way, and G Street. Primary access to the parking facility would be from W 15th Street and W 14th Street, just one block east of SR 99. The closest access to the parking facility from the SR 99 freeway would be R Street, which has a full interchange with the freeway. The site proposal includes a parking structure that would have the potential for up to six levels with a capacity of approximately 2,250 cars and an approximate height of 50 feet. During Phase 1 of the HST System (see Section 1.1), when parking demand would be higher at the station, additional parking would be provided either at existing sites distributed throughout the community or at a second structure.

Fresno Mariposa Street Station Alternative

The Mariposa Street Station Alternative is located in Downtown Fresno, less than one half mile east of SR 99. The station would be centered on Mariposa Street and bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west. The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The two-level station would be at-grade, with passenger access provided both east and west of the HST guideway and the UPRR tracks, which would run parallel with one another adjacent to the station. The first level would contain the public concourse, passenger service areas, and station and operation offices. The second level would include the mezzanine, a pedestrian overcrossing above the HST guideway and the UPRR railway tracks, and an additional public concourse area. Entrances would be located at both G and H Streets. The eastern entrance would be at the intersection of H Street and Mariposa Street, with platform access provided via the pedestrian overcrossing. This entrance would provide a "front door" connection with Downtown Fresno on an axis that also includes the County Courthouse and City Hall several blocks to the east. The main western entrance would be located at G Street and Mariposa Street.

The Mariposa Street Station Alternative includes the potential for up to three parking structures occupying a total of 5.5 acres. Two of the three potential parking structures would each sit on two acres, and each would have a capacity of approximately 1,500 cars. The third parking structure would be slightly smaller in footprint (1.5 acres), with five levels and a capacity of approximately 1,100 cars. An additional two-acre surface parking lot would provide approximately 300 parking spaces. Currently, Downtown Fresno has a large amount of excess public parking within a mile of the proposed HST station. Based on discussions with the City of Fresno, the balance of spaces needed to satisfy the estimated year 2035[13] parking demand (7,400 total spaces) would be accommodated by existing public spaces, without the need for additional parking lots or structures.

[13] During Phase 2 of the California HST System (see Section 1.1).

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Fresno Kern Street Station Alternative

The Kern Street Station Alternative for the HST station is also situated in Downtown Fresno and would be centered on Kern Street between Tulare Street and Inyo Street. This station would include the same components as the Mariposa Street Station Alternative, but under the Kern Street Station Alternative, the station would not encroach on the historic Southern Pacific Railroad depot just north of Tulare Street and would not require relocation of existing Greyhound facilities. The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The station building would have two levels housing the same facilities as the Mariposa Street Station Alternative (i.e., UPRR tracks, HST tracks, mezzanine, and station office). The approximately 18.5-acre site would include 13 acres dedicated to the station, bus transit center, short-term parking, and kiss-and-ride accommodations. Two of the three potential parking structures would each sit on two acres and each would have a capacity of approximately 1,500 cars. The third structure would be slightly smaller in footprint (1.5 acres) and have a capacity of approximately 1,100 cars. Like the Mariposa Street Station Alternative, the balance of the spaces needed to satisfy the estimated year 2035 parking demand (7,400 total spaces) would be accommodated by existing public spaces, and the majority of station facilities would be sited east of the HST tracks.

4.2.3 Heavy Maintenance Facility

One HMF site will be required for operation of the entire HST System. The HMF, to be located within the Central Valley, would serve two functions: (1) support train arrival, assembly, testing, and commissioning to operations and (2) become the state's system-wide heavy maintenance workshop. It is anticipated that permanent emergency standby generators will be located at the HMF. The EIS Documents evaluated five different locations for the HMF site (as shown in Figure 2):

- Castle Commerce Center, accessible by all HST alternatives.
- Harris-DeJager, accessible along the UPRR/SR 99 and Hybrid alternatives if coming from the Ave 21 Wye. (This site was withdrawn from consideration by the property owners on October 27, 2011.)[14]
- Fagundes, accessible by all HST alternatives, via the Ave 24 Wye.
- Gordon-Shaw, accessible along the UPRR/SR 99 Alternative.
- Kojima Development, accessible along the BNSF Alternative if coming from the Ave 21 Wye.

4.2.4 Wyes

The connection between the east-west alignment of the San Jose to Merced Section (i.e., Pacheco Pass connection) and the north-south alignment of the Merced to Fresno

[14] Kopshever, Jim. 2011. E-mail from Jim Kopshever, Harris-DeJager site property owner, to Peter Valentine, regarding withdrawal of site from consideration for use as an HMF, October 27, 2011.

Section would require a railroad wye. Two railroad wye locations (see Figure 2) were considered in the EIS Documents. These include the Ave 24 Wye (generally following the south side of Avenue 24) and the Ave 21 Wye (generally following the north side of Avenue 21). Based on input from regulatory agencies, FRA and the Authority have determined that a previously studied SR 152 east-west alignment and related wyes merit detailed study as well. Although the Final EIS identifies the possibility of the SR152 wye, full environmental analysis of this wye option as well as additional analysis on the Ave 24 and Ave 21 options, where necessary, will occur in the San Jose to Merced Project EIR/EIS.

4.3 Selected Alternatives

4.3.1 Alignment Alternative

The Selected Alternative is the Hybrid Alternative with the Downtown Merced Station and Downtown Fresno Mariposa Street Station Alternative. Chapter 7 of the Final EIS identified the Hybrid Alternative as the preferred north-south alignment for the Merced to Fresno Section, as shown in Figure 3. In identifying a preferred north-south alignment alternative, FRA was guided by the project purpose and need and project objectives found in the Final EIS Chapter 1, Project Purpose, Need, and Objectives, as well as the objectives and criteria developed for and recorded in the *Merced to Fresno Section Preliminary Alternatives Analysis Report*[15] and *Supplemental Alternatives Analysis Report.*[16] For the Merced to Fresno Section, these objectives and criteria primarily include impacts on biological resources, agricultural resources, cultural resources, impacts on urban environments (e.g. noise and parks), and cost.

The Hybrid Alternative will result in the least or similar effects on biological resources compared to the other build alternatives. It will have the fewest effects on waters of the United States, including impacts on seasonal wetlands and direct impacts on vernal pools, whereas the BNSF Alternative would have resulted in substantially more permanent effects on waters of the United States. Overall, direct conversion of conservation habitats, habitats to support special-status wildlife species, and wildlife corridors are minimized through the selection of the Hybrid Alternative.

The Hybrid Alternative effects on prime farmland resources is similar to the UPRR/SR 99 Alternative, which would have up to a third fewer acres removed from production over the BNSF Alternative. While the UPRR/SR 99 Alternative would have the fewest effects on farmlands, the Hybrid Alternative counters this difference with the

[15] Authority and FRA. 2010. *Preliminary Alternatives Analysis Report, Merced to Fresno Section HST Project EIR/EIS.* Available at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx. Prepared by AECOM and CH2M HILL. Sacramento, CA, and Washington, DC. April 7, 2010

[16] Authority and FRA. 2010. *Supplemental Alternatives Analysis Report, Merced to Fresno Section HST Project EIR/EIS.* Available at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx. Prepared by AECOM and CH2M HILL. Sacramento, CA, and Washington, DC. August 5, 2010

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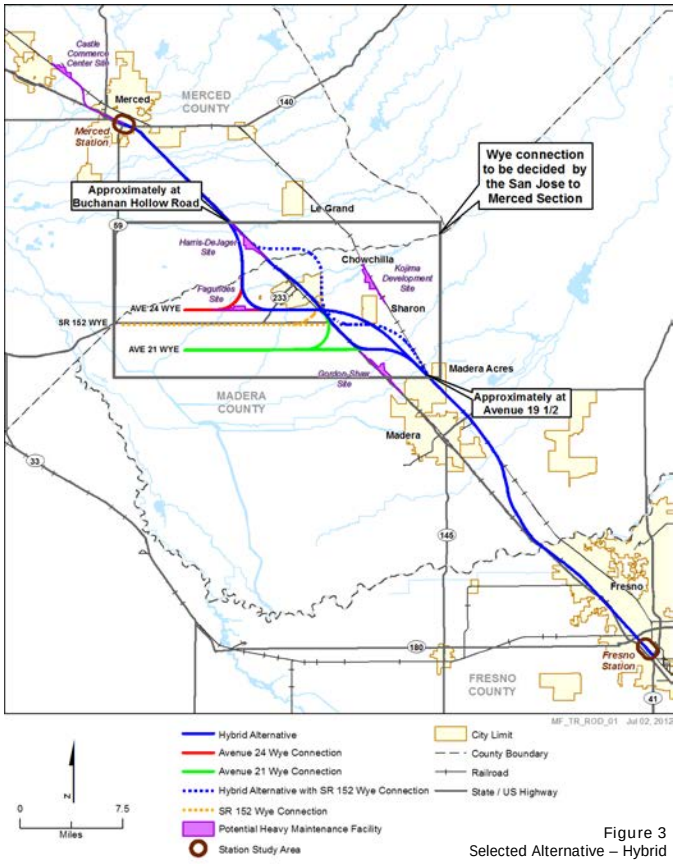

Figure 3
Selected Alternative – Hybrid

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advantage of avoiding more community resources than the other alternatives. The Hybrid Alternative will result in fewer effects on community resources than either of the other two alternatives but substantially less than the UPRR/SR 99 Alternative, for which impacts would be exacerbated during construction for resources such as noise, dust, and air quality, as well as reduced access to parks and businesses. Additionally, the Hybrid Alternative was found to result in the least harm to Section 4(f) resources. Overall, in balancing the effects on natural and community resources, the Hybrid Alternative will minimize environmental impacts the most among the three action alternatives.

Consistent with the purpose and need to construct, operate, and maintain an electric-powered high-speed train system, the Hybrid Alternative's performance is comparable to if not better than the other alternatives. In terms of HST System travel time, the Hybrid Alternative offers the second-best travel time, taking only 30 seconds longer between San Francisco and Los Angeles, a minute more between Merced and Fresno, and the same amount of time between San Francisco and Merced compared to the UPRR/SR 99 Alternative. The BNSF Alternative would have the same travel time as the Hybrid Alternative between San Francisco and Los Angeles but otherwise would take as much as four minutes longer than the UPRR/SR 99 Alternative. The Hybrid Alternative is shorter in length than the BNSF Alternative and has less elevated guideway and fewer impacts on adjacent infrastructure than the UPRR/SR 99 Alternative. This difference translates into fewer emissions during construction and less disturbance on local traffic patterns and traffic circulation in adjacent communities.

Consistent with the NEPA/404/408 MOU, permitting criteria were also considered in the selection of the alternatives. These considerations are consistent with the criteria used in the Section 404(b)(1), implementing regulations (40 C.F.R. 230–233), including minimizing impacts on waters of the United States and other sensitive environmental resources. As a result of the analyses incorporated in the EIS Documents as well as NEPA/404/408 MOU documentation, USACE and EPA concurred (on March 26, 2012,[17] and March 23, 2012,[18] respectively) that the Hybrid Alternative is the LEDPA, consistent with USACE's permit program (33 C.F.R. Parts 320–331) and EPA's Section 404(b)(1) Guidelines (40 C.F.R. Part 230).

Overall, the Hybrid Alternative best balances the minimization of impacts on the environment, farmland, and communities. It would avoid the greater impacts on the environment and rural communities in Merced County that would occur with the BNSF Alternative and it would avoid the greater impacts on more urban areas, such as in the City of Madera, along the UPRR/SR 99 Alternative. A summary of the environmental effects associated with the Selected Alternative is provided in Section 5.0, below. The Hybrid Alternative also best meets the regulatory and permitting criteria under Sections 404 and 408.

[17] USACE, 2012.
[18] EPA, 2012.

4.3.2 Station Alternatives

Chapter 7 of the Final EIS also describes the Downtown Merced HST station, between Martin Luther King Jr. Way and G Street, and the Downtown Fresno Mariposa Street Station Alternative as preferred station locations, as shown in Figures 4 and 5, respectively. The Downtown Merced Station is consistent with the City of Merced's future land use plans for the downtown area and the intent to strengthen connectivity with the city's transit center. The City of Fresno's Fulton Corridor Specific Plan (2011) specifies that the Mariposa Street Station Alternative would better serve the planned transit improvements for the downtown area.[19]

4.3.3 Heavy Maintenance Facility

The HMF site will be located in the Central Valley. While the EIS contains a thorough analysis of the potential impacts of the HMF alternatives in the Merced to Fresno Section, FRA and the Authority are also examining possible HMF alternatives in the Fresno to Bakersfield and San Jose to Merced sections. As only one HMF site will be required for full HST operations, FRA and the Authority will select the HMF site once all three Central Valley HST section EIS processes are complete. FRA and the Authority are conducting additional environmental analysis of the HMF as necessary, as part of the San Jose to Merced and Fresno to Bakersfield Section EISs.

4.3.4 Wyes

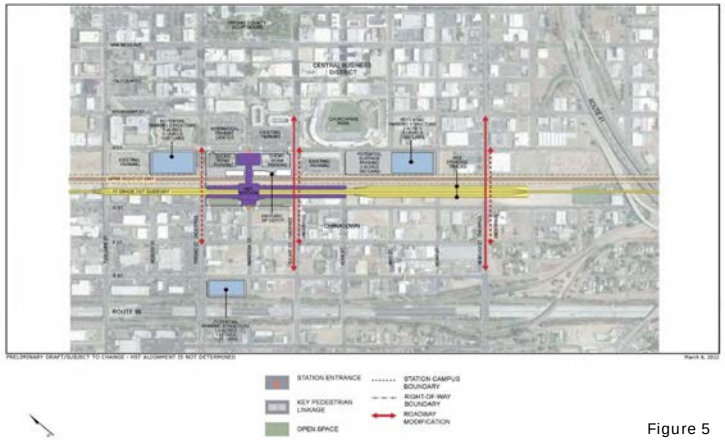
The Hybrid Alternative would eventually connect to an HST wye with one of three associated east-west alignments (along Avenue 24, Avenue 21, and SR 152) (see Figure 3). The wyes and east-west alignments would connect the selected Hybrid Alternative with the San Jose to Merced Section north of Madera Acres at approximately Avenue 19½, depending on the eventual selection of the east-west connection and wye. All alignments within the area denoted by the rectangle on Figure 3 will be carried forward for further study and consideration as part of the San Jose to Merced Section Draft EIS. A decision on the east-west alignment within this area is anticipated to occur at the conclusion of the San Jose to Merced Section EIS process.

4.4 Environmentally Preferable Alternative

CEQ regulations implementing NEPA require that an agency identify the alternative or alternatives considered to be environmentally preferable, which is defined as "the alternative that will promote the national environmental policy as expressed in the NEPA, Section 101" (440 C.F.R. 1505.2). This means the alternative that causes the least damage to the physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

[19] City of Fresno. Fulton Corridor Specific Plan. October 14, 2011. Available at http://fresnodowntownplans.com/project/details/fcsp.

Figure 4
Downtown Merced Station



Source: URS (2011).

Figure 5
Downtown Fresno Mariposa Street Station Alternative

In determining an environmentally preferable alternative, FRA considered all action alternatives, as well as the No Action Alternative. FRA weighed and balanced the physical environmental effects associated with the action alternatives as well as those associated with the No Action Alternative. FRA determined that the adverse environmental effects associated with the Hybrid Alternative were less substantial than the consequences associated with the No Action Alternative in terms of air quality, energy, and traffic, and thus identified an action alternative as environmentally preferable. Final selection of the Hybrid Alternative as the Environmentally Preferred alternative over the UPRR/SR 99 and the BNSF alternatives involved the above noted advantages as well as the comparably relatively low community, farmland, and biological effects, including lower impacts on jurisdictional wetlands. Based on consideration of these factors, FRA identified the Hybrid Alternative as the Environmentally Preferable Alternative.

The Hybrid Alternative would result in fewer effects on community resources than either of the other two alternatives but substantially less than the UPRR/SR 99 Alternative, for which impacts would be exacerbated during construction for resources such as noise, dust, and air quality, as well as reduced access to parks and businesses. Overall, in balancing the effects on natural and community resources, the Hybrid Alternative would minimize environmental impacts the most. Of the three alignment alternatives, the Hybrid Alternative is the LEDPA for issuance of the necessary Section 404 permits.

For the HST station in Merced, the Authority only developed one alternative, in close cooperation with the City of Merced to consider environmental and community factors, and it is thus considered the Environmentally Preferable Alternative. For the Downtown Fresno Station, two alternatives were considered and the environmental impacts were similar. Both stations would affect eligible historic structures listed on the NRHP. Other effects include noise, which would be mitigated, as well as temporary impacts on businesses and transportation circulation during construction. However, due to the City of Fresno's planning and the orientation of the Downtown Fresno City Center, the preferred Mariposa Street Station Alternative offers substantially more opportunities for transit-oriented development. As a result, the Mariposa Street Station Alternative was determined to be the Environmentally Preferable Alternative.

5.0 Summary of Potential Effects

Construction and operation of the Selected Alternative has the potential to affect a variety of natural and social resources. Some impacts will be beneficial, others will be adverse. Those impacts that are adverse can be further categorized as impacts that are significant and those that are not significant. Under NEPA, determining the significance of an impact requires consideration of both context and intensity.[20]

[20] The context of an impact is the setting of the affected environment in which the impact occurs. Intensity refers to the severity of the impact, which includes consideration of the type, quality, and

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To fully understand the potential range of impacts of the Selected Alternative, the Final EIS analyzed all potential impacts resulting from construction and operation of the HST. A full discussion of the potential impacts of the Selected Alternative, organized by resource area, can be found in Chapter 3 of the Final EIS. Most potential impacts will not be significant when considering the context and intensity of the impact. Potential impacts of the Selected Alternative will not rise to the level of significance in the following resource areas: electromagnetic fields and electromagnetic interference; public utilities and energy; hydrology and water resources; geology, soils, and seismicity; hazardous materials and waste; and station planning, land use, and development. In determining that the Selected Alternative will not result in significant impacts on these resources, implementation of project design features and best management practices (BMP) are presumed and will be required as part of project implementation as described further in Section 6.0. Although not discussed below, FRA considered these adverse but not significant impacts in reaching its decision.

Some potential adverse impacts would be significant were it not for implementation of mitigation measures that effectively avoid or reduce the impact. Other impacts would be significant even after mitigation measures are implemented. Finally, some impacts of the Selected Alternative will be beneficial. The following sections summarize the significant adverse impacts, the adverse impacts that would be significant if not for the implementation of mitigation, and the beneficial impacts that may occur with construction and operation of the Selected Alternative.

5.1 Transportation

The Selected Alternative will benefit the regional transportation system by diverting intercity trips from the regional roadway system and commercial air flights to high-speed rail. Diverting trips to high-speed rail will reduce the overall number of vehicle trips on the regional roadway system, improve future levels of service, and reduce overall vehicle miles traveled.

The Selected Alternative will cause traffic impacts in congested urban areas due to realignment of SR 99, increased traffic around HST stations, and road closures. Specifically, realignment of SR 99 will change traffic circulation patterns due to closure of interchange ramps, thereby increasing traffic at intersections in the vicinity of the freeway shift and impacting freeway operations. HST stations and road closures in Merced and Fresno will increase traffic at local roadways and intersections nearby, reducing acceptable levels of service in those locations. Traffic mitigation measures to improve operations at key intersection and roadway segments will include lane widening, modification to signals, additional lanes, and restriping. Although all of these impacts will be reduced with the implementation of such measures, the Selected

sensitivity of the resource involved, as well as the location, extent, and duration of the effect (40 C.F.R. 1508.27).

Alternative may result in extending the duration of peak periods of congestion in already-congested urban areas, and these impacts are considered significant.

5.2 Air Quality and Climate Change

Operation of the HST will benefit statewide and regional air quality. The HST will result in a permanent net benefit to air quality because it will lower emissions of mobile source air toxics, greenhouse gases, volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur dioxide, carbon monoxide, and particulate matter smaller than or equal to 10 microns and 25 microns in diameter (PM_{10}, and $PM_{2.5}$) by diverting trips from modes with higher emissions (commercial air flights and automobile trips) to high-speed rail, which has lower emissions.

Construction of the HST will create temporary air quality impacts. Construction emissions of VOCs and NO_x are expected to cause or contribute substantially to violations of air quality standards in the San Joaquin Valley Air Basin (SJVAB). If ballast material is hauled from quarries located in the South Coast Air Basin (SCAB), NO_x may exceed air quality standards in the SCAB. With mitigation, air quality impacts in these two air basins will be reduced and will not be significant.

Specifically, the Authority will mitigate construction emissions in the SJVAB by providing funds for the San Joaquin Valley Air Pollution Control District (SJVAPCD) Emission Reduction Incentive Program[21] to fund grants for projects that achieve emission reductions, thus offsetting impacts on air quality related to the Selected Alternative. Purchase of offset emissions through a Voluntary Emission Reduction Agreement (VERA) with the SJVAPCD for these pollutants will reduce construction emission impacts in the SJVAB to less than significant. If ballast is hauled from the SCAB, the Authority will mitigate construction emissions in the SCAB by purchasing NO_x offsets from the South Coast Air Quality Management District, reducing these impacts to less than significant as well.

5.3 Noise

The Selected Alternative will cause severe noise impacts for up to 525 sensitive receivers, such as residences, without mitigation. Sound barriers will eliminate most significant noise impacts. However, some receivers are located outside of areas where barriers can be effective, or a sound barrier will not fully eliminate the severe noise impact. Because the degree of noise level change in residential areas, including in rural areas, is expected to affect such a high number of receivers, noise impacts resulting from operation of the HST will be significant.

[21] SJVAPCD. 2011. Emission Reduction Incentive Program. Available at www.valleyair.org/Grant_Programs/GrantPrograms.htm.

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The realignment of SR 99 in Fresno will create noise impacts for surrounding sensitive receivers. However, with sound barriers and building insulation as mitigation, the number of noise impacts would be reduced.

With full implementation of the *Proposed California HST Project Noise and Vibration Mitigation Guidelines*,[22] most significant noise impacts will be eliminated. However, where sound barriers are used, even with the implementation of such mitigation, significant noise effects will remain for some receivers because they are located outside of the area where the barrier will be fully effective or the sound barrier will not fully mitigate the effect (i.e., noise is reduced by five decibels but would still be significant). Furthermore, significant noise effects will remain for receivers mitigated only with indoor sound insulation or with implementation of noise easements.

5.4 Public Utilities and Energy

The statewide and regional impact on energy use from operation of the HST will be beneficial. While the HST System will require electricity to operate, it will result in a permanent net reduction in energy use because it will divert trips from transportation modes with higher energy use (commercial air flights and automobiles) to high-speed rail, which has lower energy use.

The Selected Alternative will not cause any significant adverse impacts on public utilities or energy.

5.5 Biological Resources and Wetlands

The Selected Alternative will not cause significant impacts on biological resources or wetlands after mitigation measures are implemented. The Selected Alternative will not result in significant impacts on wildlife movement, critical habitat, essential fish habitat, or mitigation banks. Other resource impacts that would be significant prior to mitigation, and the mitigation measures identified to reduce impacts to less than significant, are described below.

Riparian habitat will be temporarily affected during construction and there will be permanent impacts as a result of the Selected Alternative. Restoration of riparian habitat shortly after construction disturbance will mitigate construction period impacts to less than significant. The Authority will compensate for permanent impacts on riparian habitat, determined in consultation with the appropriate agencies (e.g., California Department of Fish and Game [CDFG]), by restoring nearby areas to suitable habitat through permittee-responsible mitigation and/or by purchasing credits in a mitigation bank. This mitigation measure will result in less than significant permanent impacts on riparian habitat.

[22] Authority and FRA. 2012. *Proposed California HST Project Noise and Vibration Mitigation Guidelines.* Appendix 3.4-A of the *California HST Merced to Fresno Section Final Project EIR/EIS. Volume II: Technical Appendices.* Sacramento, CA, and Washington, D.C. April 2012.

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The Selected Alternative may result in an incremental regional effect and measureable adverse loss of **special-status plant species** populations. Measures to mitigate impacts on special-status plant species include developing and implementing a plan to address monitoring, salvage, relocation, and propagation of special-status plant species during and after construction; the purchase of credits from an existing mitigation bank; and/or conducting a special-status plant re-establishment program within the same watershed or in proximity to the impact area. Mitigation measures and compliance with the Section 7 BO and the Incidental Take Permit will mitigate temporary and permanent impacts on special-status plant species to less than significant.

The Selected Alternative may result in an incremental regional effect and measurable adverse loss of **jurisdictional waters and wetlands**. Measures to mitigate impacts on jurisdictional waters and wetlands include monitoring of construction impacts, restoration of disturbed areas after construction, compensation for permanent impacts, and implementation of a Habitat Mitigation and Monitoring Plan. Mitigation measures and compliance with the CWA, regulatory agency permit conditions, and the Streambed Alteration Agreement (pursuant to Section 1600 of the California Fish and Game Code) will mitigate impacts on jurisdictional waters and wetlands to less than significant both temporarily during the construction period and permanently.

The Selected Alternative will result in an incremental regional effect and measurable adverse loss of **special-status wildlife species** populations. Measures to mitigate impacts on special-status wildlife populations include implementation of a Habitat Mitigation and Monitoring Plan, submittal of post-construction compliance reports to regulatory agencies, and compensation through habitat replacement or monetary contributions, among others. Mitigation measures and compliance with the Section 7 BO and the Incidental Take Permit will mitigate impacts on special-status wildlife species to less than significant temporarily during the construction period and permanently.

The Selected Alternative will potentially impact some of the species and habitat present at **Camp Pashayan** within the San Joaquin River Ecological Reserve and could contribute to an incremental regional and measurable loss of populations. Minimization and mitigation measures and project design features at the San Joaquin River developed in ongoing coordination with CDFG will result in less than significant impacts on biological resources at Camp Pashayan.

5.6 Hydrology and Water Resources

Currently, groundwater supports many existing water uses along the Selected Alternative. As a result of the Selected Alternative, some of these uses will no longer exist. The elimination of some water uses will reduce regional groundwater drawdown, which will be a beneficial effect to groundwater supplies in the region.

The Selected Alternative will not cause any significant adverse impacts on hydrology or water resources.

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5.7 Safety and Security

Operating on a fully grade-separated, dedicated track alignment, using contemporary safety, signaling, and automated train control systems, the HST System, including the Selected Alternative, would provide a safe and reliable means of intercity travel. Design of the system also would avoid conflicts with other vehicles, existing rail systems, pedestrians, and bicyclists and allow the trains to operate year-round under different weather conditions. Overall, the HST would provide a safety benefit. The Selected Alternative will also improve safety where existing at-grade railroad crossings are replaced with grade-separated crossings, resulting in a beneficial effect on safety at railroad crossings in local communities.

The demand for local emergency services may increase in the Downtown Merced and Downtown Fresno station areas due to the number of additional people present at the stations. The Authority will monitor service levels in the vicinity of the stations to establish baseline service demands and will fund the Authority's fair share of services above the average baseline service demand level, based on projected passenger use. The resulting impact on emergency providers will be less than significant.

5.8 Socioeconomics, Communities, and Environmental Justice

Project construction will temporarily benefit regional economic conditions through increased sales tax revenues and job creation due to project spending. Jobs will be created through construction of the Selected Alternative and through other sectors that provide materials, equipment, and services. Construction will also benefit employment for low-income and minority communities (also called communities of concern) with the implementation of mitigation measures such as special recruitment, training, and other employment programs.

Permanent benefits include improved mobility within the region, improved traffic conditions on freeways, improvements in regional air quality, new employment opportunities, and increased tax revenues in the region. Benefits of the Selected Alternative will likely accrue to a greater degree in minority and low-income communities because they comprise a large percentage of the population in the project area.

The Selected Alternative will result in adverse effects on minority and low-income populations. With mitigation, the effects of noise impacts on communities of concern in Merced and Fresno and visual impacts, displacements, and relocations on communities of concern in the City of Madera and Madera Acres will not be appreciably more severe or greater in magnitude than those effects on the general population. Therefore, impacts on these communities of concern are not considered disproportionate.

In the community of Fairmead, even with the implementation of mitigation measures, visual impacts, displacements, and relocations may result in significant impacts on

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communities of concern. Visual impacts of the elevated guideway may reduce property values due to the size of the structure and its proximity to the small community. In addition, residents may need to relocate outside of Fairmead because there are not enough replacement properties available within the community. The Authority will implement mitigation measures such as considering relocation of structures on existing properties or nearby vacant parcels, constructing replacement housing on vacant lots, and implementing design measures to minimize the potential for physical deterioration around and under the elevated HST structure.

The offsetting benefits associated with the Selected Alternative are considered as part of the environmental justice analysis. The Selected Alternative will provide benefits to all populations, including communities of concern. Because much of the study area population includes communities of concern, the benefits of the Selected Alternative are likely to accrue to a greater degree to the communities of concern. To offset any disproportionate effects, special recruitment, training, and job set-aside programs will be developed so that communities of concern are able to benefit from the jobs created by the Selected Alternative.

5.9 Station Planning, Land Use, and Development

The Selected Alternative will result in beneficial effects on regional land use and development. Increased density around the HST stations will minimize sprawl, promote transit-oriented development, and revitalize the downtown areas of Merced and Fresno. Concentrated and infill development may also assist in preserving agricultural lands and natural resources in the region. The Selected Alternative will fulfill local and regional plans that promote infill and redevelopment opportunities and encourage reduced automobile dependency and the use of alternative transportation modes.

The Selected Alternative will not cause significant adverse impacts on land use or development.

5.10 Agricultural Lands

The Selected Alternative will convert between 1,273 and 1,426 acres of important farmland to a transportation use, causing significant loss of farmland in the project area. Mitigation measures will preserve land for agriculture and consolidate remnant parcels so that they remain in agricultural production. To support farmland preservation, the Authority will enter into a contract with the California Department of Conservation (DOC) to provide agricultural land mitigation services. On behalf of the Authority, DOC's California Farmland Conservancy Program will establish permanent agricultural conservation easements on land of similar acreage, location, and quantity to that affected by the Selected Alternative. The new conservation easements will prevent the future loss of currently unprotected farmland to development. However, these mitigation measures will not create new farmland or replace the converted farmland in an area of high

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production agricultural soils that are threatened by development encroachment. Therefore, the farmland loss is considered a significant impact.

5.11 Parks, Recreation, and Open Space

Construction of the Selected Alternative will require permanent acquisition of 0.6 acre of the San Joaquin River Ecological Reserve property at Camp Pashayan to install piers for elevating the guideway, representing an impact of 2% of the Camp Pashayan total area. This impact, in addition to temporarily limiting access to a small portion of Camp Pashayan for up to four years, will result in significant impacts on the park. The Authority will compensate CDFG, the park owner, for construction staging in the park through an allowance or additional property to accommodate for displaced park use during construction. However, even with this mitigation, the impact on the park will remain significant in the context of the local region and due to the duration of the construction use.

The projected increase in noise to Roeding Park resulting from the Selected Alternative will be significant without mitigation. Construction of a sound barrier will reduce the noise impact on Roeding Park to less than significant.

5.12 Aesthetics and Visual Resources

The HST stations will improve visual quality in the Merced and Fresno downtown urban centers. The architecture of the HST stations and landscape improvements proximate to the stations will enhance visual quality. Indirect impacts of the HST stations could reach beyond the immediate station area and increase the overall visual quality of the larger downtown areas, which are areas of high viewer sensitivity in which the visual changes will be long in duration. These impacts will create beneficial visual effects in downtown Merced and Fresno.

The Selected Alternative will create significant adverse visual effects in certain areas west of SR 99 where elevated HST structures and road overcrossings of the HST will remove orchards and fields, block views, and degrade the visual quality in the area. Mitigation measures such as planting trees and other vegetation to screen the structures will reduce the visual effect, but the change will remain significant.

Traction power substations will potentially alter the visual character of adjacent lands and/or potentially block views toward areas beyond the HST alignment. Mitigation with physical or vegetative screening and location selection will result in less than significant visual impacts from the substations.

5.13 Cultural and Paleontological Resources

The Selected Alternative will affect resources in known archaeological sites and may affect archaeological sites that are presently unknown or undiscovered. Mitigation measures, such as halting construction if a previously undiscovered archaeological site is

Record of Decision for California High-Speed Train Merced to Fresno Section

revealed, conducting archaeological monitoring near identified or sensitive sites, and planning intentional site burial and preservation in place if avoidance is not feasible, will reduce impacts on archaeological resources to less than significant.

The Selected Alternative will physically affect built cultural resources, resulting in significant impacts on historic properties. Even with treatment measures such as relocating historic structures, preparing and submitting nominations for historic registers, documenting historic resources, preparing structural reports, creating interpretive exhibits, and planning to prepare for inadvertent damage, the impacts will remain significant.

Destruction of fossil deposits during construction will result in significant impacts on paleontological resources without mitigation. Mitigation measures such as monitoring, implementing a paleontological plan, and halting construction when paleontological resources are found will reduce impacts to less than significant.

6.0 Commitments

Consistent with 40 C.F.R. 1505.2(c), all practicable means to avoid or minimize environmental harm caused by the Selected Alternative have been identified and included as mitigation measures in the Mitigation Monitoring and Enforcement Plan (MMEP), included as Appendix C.[23] The MMEP describes mitigation measures that will avoid, minimize, or compensate for potential adverse environmental impacts that result from constructing and operating the Merced to Fresno Section of the California HST System. These measures were developed by FRA and the Authority in consultation with appropriate agencies, as well as with input from the public. The Authority has also proposed mitigation measures that were determined necessary to comply with CEQA. For the purposes of compliance with NEPA, measures that are specific to CEQA are described in the MMEP as "voluntary." The Authority adopted the measures listed as voluntary mitigation in the MMEP to comply with CEQA, and they are included in FRA's MMEP to provide the comprehensive mitigation strategy for the Selected Alternative. The Authority is required to comply with all mitigation measures adopted with the ROD, including those specific to CEQA and those addressing Federal laws and requirements.

The mitigation measures in the MMEP contain formal commitments required for project approval. Therefore, in designing, constructing, and operating the Selected Alternative, the Authority is required to adhere to and provide appropriate funding for all mitigation measures in Appendix C. The Authority will implement an Environmental Management System consisting of strategic planning, policies and procedures, organizational structure, staffing and responsibilities, milestones, schedule, and resources devoted to achieving the Authority's environmental commitments. The Environmental Management System will also track the implementation of environmental requirements

[23] FRA will monitor the implementation of environmental commitments in the MMEP consistent with CEQ regulations and guidance.

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and compliance reports. This system will rely on data from the design/build contractor, regional consultants, permitting activities, monitoring, inspections, and other compliance activities. This database will be managed by the Authority, and agency partners, including FRA, will receive regular updates from meetings and reports that will demonstrate compliance activities and progress relevant to their regulatory requirements.

In addition to mitigation measures, the Selected Alternative incorporates many design features and BMPs that are identified in the Final EIS and included in detail in the technical reports. As a result of applying these design features and BMPs, the Selected Alternative will avoid significant impacts in several resource areas. In addition, the regulatory requirements for many activities provide additional assurance that significant impacts on the environment will not occur. The applicable regulatory requirements and project design features that are part of the Selected Alternative are described in more detail in the MMEP (Appendix C). Like the mitigation measures (Appendix C), the project design features are a condition of project approval and must be implemented by the Authority during design, construction, and operation of the Selected Alternative.

7.0 Summary of Comments on the Final EIS

During the 30-day waiting period following publication of the Final EIS, FRA received 12 comment letters. In addition to the comment letters received by the FRA during the 30-day waiting period, the Authority received a combination of 26 comment letters and emails, as well as hearing from speakers at the Authority Board hearing held on May 2, 2012, focusing primarily on CEQA-related issues. Staff responses were prepared on May 3, 2012 for the comments received by the Authority. These staff responses are available for the public on the Authority's website: http://www.cahighspeedrail.ca.gov/final-eir-m-f.aspx. All substantive comments received in the waiting period referenced issues that were previously addressed in detail in Volume IV of the Final EIS or by the Authority staff responses and therefore do not require any further response here. No issues were identified in the comments that were not previously addressed.

The range and types of comments received during the waiting period included concerns and questions regarding the following topics:

- Range of alternatives considered
- Technology to be used for the project
- Notification of availability of the environmental document
- Process for decision making regarding the wye connections
- Coordination with UPRR and the associated impacts on freight service
- Location of barriers and walls and the required/adequate distances and clearances
- Right-of-way and relocation assistance

- Mitigation measures for agricultural lands
- Adequacy of the water analysis, specifically the demand during construction, water demand estimates, and the preparation of a water supply assessment
- Environmental Justice, specifically the determination of disproportionate impacts on environmental justice populations, construction duration estimates, residential and business displacements by community, mitigation measures, and implementation of Title VI of the Civil Rights Act
- Sprawl inducement, land use, station area development, and California Senate Bill 375
- Utility relocation and associated impacts
- Emissions from hauling materials outside SJVAB, specifically adequately addressing hauling from outside the project area, hauling ballast, and the inclusion of water trucks in construction emission calculations
- Mitigation measures for air quality
- Staging areas and batch plants
- Noise and vibration, specifically noise monitoring sites and mitigation measures
- Operation of Amtrak and the HST
- Project funding
- Biological performance standards, specifically wildlife surveys, baseline, and performance standards
- Forestiere Underground Gardens and historic property impacts
- Coordination with local school districts and associated impacts on school districts, school bus routes, and poverty-level students
- Road closures and detours
- Safety and security; derailment
- Maintenance access and emergency responses
- Independent utility

In issuing this ROD, FRA has considered all comments received on the Final EIS, as well as the comments previously received on the Draft EIS.

8.0 Corrections to the Final EIS

FRA and the Authority prepared an errata sheet to identify minor corrections to the Final EIS and issued it on April 27, 2012. The errata sheet identifies the location of the correction in the Final EIS, the incorrect text, the corrected text, and the reason for the correction. None of these corrections materially affected the FRA's decision. These corrections are noted in an errata sheet in Appendix D and pertain to the following chapters of the Final EIS: cover sheet; Summary; Alternatives; Transportation; Air Quality and Global Climate Change; Public Utilities and Energy; Biological Resources

and Wetlands; Hazardous Materials and Wastes; Socioeconomics, Communities, and Environmental Justice; Agricultural Lands; Parks, Recreation, and Open Space; Aesthetics and Visual Resources; Cultural and Paleontological Resources; Cumulative Impacts; Preferred Alternative and Station; and Public and Agency Involvement. Changes made to mitigation measures in the errata have been incorporated into the MMEP, included as Appendix C.

As discussed in Section 1.3, the Authority proposes to use the design/build method of project delivery. As the Selected Alternative proceeds into final design, project design modifications may occur. FRA and the Authority will consider whether project design modifications could result in new environmental impacts of a type or severity not analyzed in the EIS Documents. Where appropriate, FRA and the Authority will evaluate the modification to determine whether it would result in a substantial change that requires a supplemental Final EIS consistent with 40 C.F.R. 1502.9(c).

9.0 Decision

FRA finds that the Hybrid Alternative, Merced Downtown Station, and Fresno Mariposa Street Station Alternative best fulfill the purpose and need and objectives for the Project while balancing impacts on the natural and human environment. FRA considered the physical and operational characteristics and potential environmental consequences associated with the HST alternatives. FRA, as lead agency, consulted with the joint lead agency and cooperating agencies and considered the EIS Documents, including the analysis of the No Action Alternative, all action alternatives, and all public and agency comments received during the review periods in identifying the Selected Alternative. The cooperating agencies may issue their own decision documents, as appropriate, consistent with their statutory and regulatory responsibilities.

9.1 Section 106

Section 106 of the NHPA (16 U.S.C. 470f) requires that any Federal agency having direct or indirect jurisdiction over a proposed Federal or Federally assisted undertaking take into account the effect of the undertaking on any district, site, building, structure, or other object that is listed or eligible for listing on the NRHP.

FRA, the SHPO, the Authority, and the Advisory Council for Historic Preservation executed a Programmatic Agreement (PA) for the California High-Speed Rail Program on July 22, 2011. The PA sets forth a process for consistent application of Section 106, including consultation, for all project sections. The PA outlines a uniform approach for the identification of cultural resources located within the Area of Potential Effect (APE), as well as the evaluation, assessment of effects, and treatment of cultural resources potentially affected by each undertaking. The PA stipulates that Memoranda of Agreement (MOA) be developed for each undertaking where the FRA determines there would be an adverse effect to Historic Properties.

An MOA for the treatment of adverse effects to historic properties for the Merced to Fresno Section of the HST System was developed and executed among FRA, the Authority, and the SHPO on August 31, 2012 (Appendix A). The MOA summarizes the results of the Section 106 process and the treatment measures agreed to among the Selected Alternative's consulting and concurring parties. The treatment measures are elaborated upon in detail in two primary attachments to the MOA: the Archaeological Treatment Plan and the Built Environment Treatment Plan.

The City of Madera, City of Fresno, County of Fresno, California Valley Miwok Tribe, Cold Springs Rancheria of Mono Indians, North Fork Rancheria of Mono Indians, Santa Rosa Rancheria Tachi Tribe, North Fork Mono Tribe, and the Chowchilla Tribe of Yokuts were consulted in the development of the MOA and treatment plans. The City of Madera, the City of Fresno, and Fresno County, as well as the following Federally-recognized Native American tribes: Cold Springs Rancheria of Mono Indians, Santa Rosa Rancheria Tachi Tribe, the North Fork Rancheria of Mono Indians, and the California Valley Miwok Tribe; and the following non-Federally recognized Native American tribes: North Fork Mono Tribe and the Chowchilla Tribe of Yokuts, have accepted the Authority and FRA's invitations to be consulting parties to the MOA and treatment plans. [24]

9.2 Section 4(f) Determination

The Final EIS included an evaluation required by Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303). The alternatives evaluation process conducted as part of the Merced to Fresno Section EIS process concluded that in accordance with 49 U.S.C. 303(c), there was no feasible and prudent HST alternative within the study area that did not result in a use of a Section 4(f) resource. Further, the least harm analysis determined that the Selected Alternative is the alternative with the least overall harm to Section 4(f) resources. FRA also identified the appropriate measures to minimize harm to 4(f) properties as part of the EIS and 4(f) Evaluation in cooperation with the agencies that have jurisdiction over each 4(f) resource. These measures have been incorporated into the MMEP (Appendix C), and the Authority will implement them as a condition of project approval.

FRA finds that there is no feasible and prudent alternative to the permanent use of two historic resources, the Weber Avenue Overcrossing Bridge and the Belmont Avenue Subway and Traffic Circle in Fresno, because these sites will be permanently incorporated into the Selected Alternative.

- The Weber Avenue Overcrossing Bridge (NRHP-eligible) in Fresno is in the direct path of the Selected Alternative, the construction of which will result in the physical destruction, damage, or alteration of this historic property. This will be a permanent use under Section 4(f).
- The Belmont Avenue Subway and Traffic Circle (recommended as NRHP-eligible) in Fresno, which is located just southeast of Roeding Park, is in the

[24] Signatures of potentially concurring parties are currently being sought.

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direct path of the Selected Alternative and associated roadway improvements, and the construction of the Selected Alternative will result in the elimination of this historic property. This will be a permanent use under Section 4(f).

FRA found that the Selected Alternative resulted in a *de minimis* impact under 49 U.S.C. 303(d) to Camp Pashayan. FRA and the Authority worked with CDFG, the agency with jurisdiction over the resource, to develop mitigation measures and determine concurrence with FRA's findings. FRA received written concurrence with its *de minimis* determination about project effects on Camp Pashayan from CDFG on September 10, 2012, included as Appendix E.

9.3 General Conformity

As part of the environmental review of the Selected Alternative, FRA conducted a general conformity evaluation pursuant to 40 C.F.R. Part 51, Subpart W and 40 C.F.R. Part 93 Subpart B, which can be found in the Merced to Fresno Section project library at Authority's website.[25] The general conformity regulations apply to the Selected Alternative because the project area is located in an area that is designated as a severe nonattainment area for the 8-hour ozone standard, nonattainment for $PM_{2.5}$, and, in the urban areas of Fresno County, a maintenance area for CO. FRA conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with EPA, SJVAB, and the California Air Resources Board. As a result of this review, FRA concluded, based on the fact that project-generated emissions will either be fully offset (for construction phase) or less than zero (for operational phase), that the Selected Alternative's emissions can be accommodated in the State Implementation Plan (SIP) for the SJVAB. FRA has determined that the Selected Alternative as designed will conform to the approved SIP, based on the following findings:

- A commitment from the Authority that all construction-phase NO_x and VOC emissions for the years that the conformity applicability thresholds will be exceeded will be offset through a VERA with SJVAPCD.
- The Authority and the SJVAPCD will enter into a contractual agreement to mitigate the Selected Alternative's NO_x and VOC emissions (in the years of exceedance) by providing funds for the SJVAPCD's Emission Reduction Incentive Program to fund grants for projects that achieve the necessary emission reductions.
- The SJVAPCD will seek and implement the necessary emission reduction measures, using Authority funds.
- The SJVAPCD will serve in the role of administrator of the emissions reduction projects and verifier of the successful mitigation effort.

[25]The Authority library for the Merced to Fresno Section is located online at www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx.

Therefore, FRA concludes that the Selected Alternative, as designed, conforms to the purpose of the approved SIP and is consistent with all applicable requirements.

9.4 Section 7 Endangered Species Finding

Since the Selected Alternative will result in a "take" of special status fish species under Section 7 of the ESA, NMFS and USFWS prepared BOs to identify the effect and extent of the take and propose conservation measures to avoid and/or minimize potential adverse effects of the Selected Alternative.

Based upon these findings, summarized below, FRA determines that the Selected Alternative is consistent with Section 7 of the ESA.

9.4.1 Biological Opinion Issued by NMFS

NMFS cannot accurately estimate the number of individual fish subject to take from the Selected Alternative. Therefore, NMFS is using an environmental surrogate to estimate the level of take to Central Valley spring-run Chinook salmon or Central Valley steelhead that may occur. NMFS utilizes the area of sound pressure wave impacts extending into the water column during pile driving as a surrogate for the number of fish subject to take. Take may also occur during handling of stranded individuals during dewatering activities prior to construction work. This level of take is anticipated to be less than 10% of those individuals handled.

FRA and the Authority have proposed conservation measures including performing fish surveys, limiting the construction window, and measures to limit effects during construction. Given this, NMFS has determined that the level of take resulting from the construction of the Selected Alternative is not likely to jeopardize the continued existence of Central Valley spring-run Chinook salmon or Central Valley steelhead. However, NMFS has incorporated several reasonable and prudent measures to further minimize incidental take of Federally listed fish species. NMFS also proposes conservation recommendations including BMPs to protect aquatic and riparian habitat outside of the work zone including implementation of measures from the 1602 permit and the stormwater pollution prevention plan.

9.4.2 Biological Opinion Issued by USFWS

USFWS has determined that even with the implementation of the proposed conservation measures, there is a likelihood of take of San Joaquin kit fox, central California tiger salamander, conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, and valley elderberry beetle from the Selected Alternative. USFWS has also concluded that there will be adverse effects to the Colusa grass, San Joaquin Valley Orcutt grass, hairy Orcutt grass, Greene's tuctoria, and succulent owl's clover. USFWS has also stated that it cannot accurately estimate the number of individual listed species subject to take from the Selected Alternative. Therefore, USFWS is using the amount of habitat affected by the Selected Alternative as a surrogate to estimate the level of take.

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USFWS has concluded that the Selected Alternative is not likely to jeopardize the continued existence of any listed species because the amount of anticipated take is of such a limited scale, relative to the status of these species in and around the action area and range-wide. In addition, USFWS has concluded that the Selected Alternative will not result in adverse modification of designated critical habitat.

USFWS has incorporated terms and conditions and conservation recommendations to further minimize incidental take of listed plant and wildlife species affected by the Selected Alternative.

9.5 Wetlands Finding

In addition to NEPA and other environmental laws, FRA is also required to make findings pursuant to Executive Order 11990, Protection of Wetlands, and the U.S. Department of Transportation Wetlands Order, DOT Order 5660.1A.

It is anticipated that impacts on waters of the United States may occur as a result of the Selected Alternative. However, as noted in Section 2.2 above, in March 2012 USACE identified the Selected Alternative as the LEDPA. Design requirements and permit conditions will require contractors to avoid impacts on jurisdictional waters wherever feasible.

In addition to the Section 404 permit, the Authority will submit water quality certification applications, prepared pursuant to Section 401 to the State Water Resources Control Board (SWRCB) for the Selected Alternative. To the maximum extent practicable, the Authority will implement pre- and post-construction BMPs for sediment and erosion control. If avoidance of impacts on jurisdictional waters is not feasible, mitigation will be determined by USACE and SWRCB and reflected in permits and other authorizations issued for the Selected Alternative.

Based upon these findings, FRA determines that the Selected Alternative is consistent with Executive Order 11990 and DOT Order 5660.1A.

9.6 Floodplains

DOT Order 5620.2 implements Executive Order 11988, Floodplain Management. These orders state that FRA may not approve an alternative involving a significant encroachment on a floodplain unless FRA can make a finding that the proposed encroachment is the only practicable alternative. The major purposes of Executive Order 11988 are to avoid Federal support for floodplain development; to prevent uneconomic, hazardous, or incompatible use of floodplains; to restore and preserve the natural and beneficial floodplain values; and to be consistent with the standards and criteria of the National Floodplain Insurance Program.

FRA concludes that the Selected Alternative will not result in any substantial adverse impact on natural and beneficial values of the floodplains, will not result in a substantial change in flood risks or damage, and will not have a substantial potential for

interruption or termination of emergency service and evacuation routes. Based upon these findings, FRA determines that the Selected Alternative is consistent with requirements of Executive Order 11988.

9.7 Environmental Justice Finding

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. DOT Order 5610.2(a), "Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 77 FR 27534 (May 10, 2012), imposes similar obligations on DOT operating administrations to promote the principles of Executive Order 12898 and incorporate such principles in all programs, policies, and activities, including the NEPA process.

Moderate noise impacts and displacements and relocations in the cities of Merced and Fresno will be predominantly borne by communities of concern. With mitigation, the effects of displacements and relocations on communities of concern will not be substantial and will not be appreciably more severe or greater in magnitude than the adverse effect on the general population. Benefits will likely accrue to a greater degree to communities of concern because they comprise a large percentage of the population in the study areas and in the community. These benefits will include improved mobility within the region, improved traffic conditions on freeways, improvements in air quality within the region, and new employment opportunities during construction and operation. Jobs created by construction and operation of the Selected Alternative will likely be filled by workers in the region. The new jobs will not result in any benefits that will accrue to a greater degree to the communities of concern unless they have the necessary skills or they receive training or participate in some other type of program that enables employment.

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10.0 Conclusion

FRA has reached a decision that most closely aligns with FRA's statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors and based on the information contained in the EIS Documents. FRA selects the Hybrid Alternative, Merced Downtown Station, and Fresno Mariposa Street Station Alternative for the Project in this ROD. FRA has selected these alternatives because they: 1) best satisfy the Purpose, Need, and Objectives for the proposed action, and 2) minimize impacts on the natural and human environment by utilizing an existing transportation corridor where practicable and incorporating other mitigation measures. Accordingly, the Hybrid Alternative, Merced Downtown Station, and Fresno Mariposa Street Station Alternative have been selected based on processes in compliance with NEPA and other applicable requirements.

Joseph C. Szabo
Administrator
Federal Railroad Administration

Date: 9/18/12

Appendices:

Appendix A: Memorandum of Agreement for the Treatment of Adverse Effects on Historic Properties under Section 106 of the National Historic Preservation Act
Appendix B: Biological Opinion (USFWS and NMFS)
Appendix C: Mitigation Monitoring and Enforcement Plan (MMEP)
Appendix D: Corrections to the Final EIS (Errata Sheet)
Appendix E: CDFG Concurrence of FRA's Section 4(f) Finding of *De Minimis* Impact on Camp Pashayan

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California High-Speed Train Project

Request for Proposal for Design-Build Services

RFP No.: HSR 11-16
Book 2, Part C: Scope of Work

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Revision No.	Date	Description
0	01 Mar 12	Initial Release, R0
1	27 Apr 12	Addendum 1
2	04 Jun 12	Addendum 2
3	27 Jun 12	Addendum 3
4	22 Aug 12	Addendum 4

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California High-Speed Train Project RFP No. HSR 11-16

PART C – Scope of Work

This Scope of Work covers the technical aspects of the project. Other requirements are delineated elsewhere in this Procurement Package. Contractor shall refer to General Provisions for a list of general terms and definitions.

1 California High Speed Train Project (CHSTP) Standards and Manuals

The following technical documents are provided to Contractor in order to direct the development of final design drawings, construction drawings, and construction:

- **California High-Speed Train Project (CHSTP) Design Criteria** – Mandatory design guidance and criteria requirements Contractor shall follow and apply in the development of final design and construction documents.
- **Directive Drawings** – Directive Drawings provide mandatory design criteria in a graphical format Contractor shall follow and apply to ensure consistency during design for system-wide elements and features.
- **California High-Speed Train Project (CHSTP) CADD Manual** – Mandatory drawing standards and format Contractor shall follow and apply in the preparation of design, construction, and as-built drawings.
- **California High-Speed Train Project (CHSTP) Plan Preparation Manual** – Mandatory plans format Contractor shall follow and apply in the preparation of design and construction submittals, and as-built drawings.
- **Aesthetic Guidelines for Non-Station Structures** – Mandatory aesthetic guidelines Contractor shall follow and apply to the design of non-station structures.
- **Design Variance Request Process** – Mandatory process Contractor shall follow and apply in the identification, preparation, and submittal of design variance requests, as necessary to achieve approval.
- **Preliminary Ground Motion Data** – Preliminary ground motion data that the Authority has prepared and Contractor shall use in seismic and structural design included in the proposal.
- **Final Ground Motion Data** – Final ground motion data that the Authority will prepare and Contractor shall use in seismic and structural design for preparation of design submittals, construction, and as-built drawings.
- **Basis of Design** – Policy document prepared by the Authority that defines the major components and performance objective of the CHST System. Contractor shall use this document in the preparation of designs to ensure consistency with the components, objectives, processes, requirements, and assumptions governed by Authority policy.

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- **Record of Survey and Control Monument Data** – Survey control data that the Authority has completed to date and Contractor shall use in its topographic survey and mapping for its design.
- **Standard Specifications (for reference)** – Technical specifications for use in Authority construction contracts, and as determined applicable by the Contractor. Standard Specifications are not considered mandatory for this project, except for those sections or portions thereof identified in Attachment 5 "Mandatory Standard Specifications Listing" of this Scope of Work.
- **Standard Drawings (for reference)** – Standard project elements for use in the construction of the California High-Speed Train system, as determined applicable by the Contractor. Standard Drawings are not considered mandatory for this project. However, if Contractor chooses to use a Standard Drawing, the design as shown on that drawing shall be followed.

The Standard Specifications and Standard Drawings indicate a standard of quality to be achieved by the Contractor for the construction of the Project.

The identified technical documents are found in Book 3 and Book 4 of this Procurement Package.

2 Preliminary Engineering Documents

Preliminary design documents have been prepared to support environmental assessment and approval, and demonstrate technical feasibility and constructability.

The following preliminary engineering documents are provided to the Contractor for reference:

a. **Design Plans:**

Excerpts from 15 percent design plans for Construction Package 1A Option 1 (Hybrid Alternative) – Initial design prepared by the Authority with the intent of supporting environmental assessment and approval.

Preliminary design plans for Construction Package 1A, exclusive of the Hybrid Alternative, Construction Package 1B, and Construction Package 1C (Alignment F1) – Proposed preliminary design prepared by the Authority with the intent of demonstrating technical feasibility and constructability.

b. **Preliminary Technical Reports** – Technical reports prepared by the Authority to document data collection efforts completed to date and document the basis of the design for the proposed preliminary design and environmental documents.

- Floodplain Impacts Assessment and Hydraulics and Hydrology Report
- Stormwater Management Report
- Geotechnical Data Report
- Structures Report
- Design Variances

c. **Special Specifications** – Proposed technical specifications with specific reference to the Preliminary Design Plans for Construction Package 1, and as determined applicable by the Contractor. Special Specifications are not considered mandatory for this project, except for those sections or portions thereof identified in Attachment 6 "Mandatory Special Specifications Listing" of this Scope of Work.

d. **Electronic Files** – Available electronic files used in the preparation of the preliminary design documents.

- Design Files
  - Topographic Mapping
  - Digital Terrain Model (DTM)
  - Alignment Geometry Files
  - Design Cross Sections
  - Sheet DGN Files
- Existing Utility Data
- GIS Files for Environmentally Sensitive Areas
- Geotechnical Electronic Data

The Design Variance Report is found in Book 3 of this Procurement Package. The remaining above-identified Preliminary Engineering documents can be found in Book 4 of this Procurement Package.

The Preliminary Engineering Plans, Reports, and Special Specifications are based on preliminary design efforts and investigations and are provided for reference, unless otherwise specified for specific elements in this Scope of Work. If Contractor chooses to use the proposed preliminary design, Contractor shall review and validate that design meets CHSTP design criteria, directive drawings, local jurisdictional authorities' design criteria, and/or other requirements before advancing design to a baseline level (see Design Services section of this Scope of Work).

3 Project Description and Limits

Construction Package 1 (CP1) is located within the counties of Madera to the north and Fresno to the south, and the City of Fresno in the southern area. It is composed of four segments: Hybrid Alternative of Construction Package 1A, the remaining alignment of Construction Package 1A, Construction Package 1B, and Construction Package 1C.

General Project limits, from north to south, are described below. Refer to Attachment 1 "Limits and Extents of Work Table", Attachment 2 "Limits of Work Map", and Attachment 2a "Caltrans Limits of Work Map" for additional information.

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- Construction Package 1A (CP1A), Hybrid Alternative – South of Avenue 17 to North of Veterans Boulevard (alignment generally along the existing BNSF Railway)
- Construction Package 1A (CP1A), Remaining alignment: North of Veterans Boulevard to north of Stanislaus Street. The limits within this package include a portion of work that is being performed by Caltrans.
- Construction Package 1B (CP1B): North of Stanislaus Street to South of Santa Clara Street
- Construction Package 1C (CP1C), Alignment F1: South of Santa Clara Street to South of East American Avenue

Description and major elements of each segment are described in the following sections.

3.1 CP1A, Hybrid Alternative Segment– South of Avenue 17 to North of Veterans Boulevard (alignment generally along the existing BNSF Railway)

The northern terminus of Hybrid Alternative is near Avenue 17 in Madera County. Traversing southward, the alignment parallels the west side of the BNSF tracks for approximately four miles before turning towards the Union Pacific Railroad (UPRR) south of Madera. The alignment follows the east side of the UPRR and transitions from at-grade to an elevated section to cross over the San Joaquin River. South of the river crossing, the elevated section continues over the UPRR tracks and transitions to an at-grade configuration west of the UPRR near Herndon Avenue. This segment terminates at the north side of Veterans Boulevard and is approximately 14 miles in length.

The majority of the construction will be on embankment approximately 4 to 5 feet high. Major structural elements for consideration are three major bridges at the Fresno River and SR145, Cottonwood Creek, and the San Joaquin River. The work will be subject to seasonal construction constraints as defined in the Final Environmental Documents. In addition, there are nine 2-lane grade separated structures. The San Joaquin River Bridge is approximately 2.3 miles long. Construction includes demolition, site clearing, utility relocations, roadway construction, and compliance with the applicable requirements, mitigation measures identified in the Final Environmental Documents, and master agreements between the Authority and applicable Third Parties.

3.2 CP1A, Remaining Alignment Segment – North of Veterans Boulevard to North of Stanislaus Street

This segment is approximately eight miles in length and runs adjacent to the west side of the UPRR. From Veterans Boulevard to approximately Olive Avenue, the alignment runs nominally at-grade. In the vicinity of Olive Avenue, the alignment begins its descent into a below-grade section, approximately 1.7 miles in length. Between Olive Avenue and Belmont Avenue, the below-grade section is further constrained by Roeding Park to the west, UPRR to the east, and an existing 96-inch storm drain pipe. On the south side of Belmont Avenue, the below-grade section is also constrained by a drainage basin. Continuing south of Belmont Avenue, the below-grade section passes under two active San Joaquin Valley Railroad (SJVR) spurs, Dry

Creek Canal, and SR-180 before returning to a nominal at-grade section through to the end of CP1A just north of Stanislaus Street. The proposed design to cross under SR-180 is a 2-track box approximately 300 to 400 feet in length.

Additional major construction elements include five grade separated structures, realignment of Golden State Boulevard, demolition, site clearing, and utility relocations, and compliance with the applicable requirements, mitigation measures identified in the Final Environmental Documents, and master agreements between the Authority and applicable Third Parties.

Portion of work to be performed by Caltrans includes, realignment of SR-99 from Station A92+20 to A237+30, including new interchanges at West Clinton Avenue and Ashlan Avenue, on and off ramps to and from Golden State Boulevard, plus the portion of High-Speed Rail infrastructure from Station S10691+50 to S10825+60. Refer to Attachment 2b "Caltrans Scope of Work Map".

3.3 CP1B Segment – North of Stanislaus Street to South of Santa Clara Street

This section is approximately one mile in length and runs nominally at-grade, from the north side of Stanislaus Street to south of Santa Clara Street. It includes the future High-Speed Train Fresno Station and must accommodate the future 4-track and 6-track section(s), which include two storage tracks immediately south of the future Fresno station (one on each side of the station tracks), necessary for operation of the CHST.

Major work elements for this section include necessary civil work for the at-grade track section and four (4) grade separations at Stanislaus Street, Tulare Street, Fresno Street, and Ventura Street, demolition of existing Tuolumne Street overcrossing, reconfiguration of local streets per City of Fresno requirements, as well as demolition, site clearing, and utility relocations, and compliance with the applicable requirements, mitigation measures identified in the Final Environmental Documents, and master agreements between the Authority and applicable Third Parties.

3.4 CP1C, Alignment F1, Segment – South of Santa Clara Street to South of East American Avenue

This segment is approximately five miles in length and runs adjacent to the west side of the UPRR after crossing SR-99, via an aerial structure, and adjacent to the west side of BNSF. From south of Santa Clara Street, the alignment passes under SR-41 and runs nominally at-grade to approximately East Belgravia Avenue. In the vicinity of East Belgravia Avenue, the alignment begins to descend into a shallow cut section, approximately one mile in length, to pass under existing East Jensen Bypass. As it approaches South Orange Avenue, the alignment transitions to a 1.2 mile aerial structure, passes over Golden State Boulevard, SR-99, and South Cedar Avenue, before returning to grade to cross under East Central Avenue and through to the end of CP1C, south of East American Avenue.

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Major construction elements for this segment include civil works for the at-grade track sections and three grade separations. Close coordination with Caltrans will be required on the planned improvements for South Cedar Avenue and impacts of the CHSTP aerial structure to SR-99.

The construction effort will also include demolition, site clearing, utility relocations, and compliance with the applicable requirements, mitigation measures identified in the Final Environmental Documents, and master agreements between the Authority and applicable Third Parties.

3.5 Limits of Work for Enabling Facilities

As described above, Contractor's scope of work includes a number of grade separations, and associated roadway reconstructions, railroad relocations, and utility works owned by Third-Party Entities. These include the following:

- California Department of Transportation (Caltrans)
- City of Fresno
- County of Madera
- County of Fresno
- Union Pacific Railroad (UPRR)
- San Joaquin Valley Railroad (SJVR)
- BNSF Railway
- Utility companies
- Flood Control Districts (Fresno Metropolitan Flood Control District, Fresno Irrigation District, Fresno County Flood Protection Board)
- Other permitting agencies as noted in Book 3 of this Procurement Package

Contractor shall be responsible for coordinating and confirming the limits of work described above to ensure conformance with:

- Final Environmental Documents
- Local jurisdictional entity requirements
- Third-Party Agreements
- Direct coordination with the impacted third parties
- Other works required to support future CHSTP elements through Interface Coordination and Design Integration Workshops with the Authority.

Based on preliminary engineering and Third-Party coordination efforts achieved to date, Contractor shall be aware of the following local conditions that have informed the preliminary

design included in Book 4 of this Procurement Package. As delineated in this Scope of Work, Contractor shall be responsible for confirming these and all other design and location issues with the impacted Third Parties through the course of final design and construction. These include but are not limited to the following items:

- Maintenance and access provisions as required by the local irrigation and flood control districts.
- Compliance with most recent and published general plans for/by Caltrans and the cities and counties of Madera and Fresno.
- Consider local and state regulations with regard to impacts to sensitive areas, such as campgrounds and schools.
- Veterans Boulevard – do not preclude future Veterans Boulevard work.
- S. Cedar Ave – consider future 2-lane widening and profile raise of 2.5 feet.
- SR99 in South Fresno – do not preclude future Caltrans widening in median or outside shoulders.
- Fresno St. underpass - preserve existing UPRR grade separation to minimize disruption to freight operations.
- Belmont Ave and Olive Ave - offset proposed grade separations to maintain traffic on the existing roadways as long as possible.
- Jensen Ave - identified as Extra Legal Load Network roadway; traffic must be maintained at all times.
- Box under SR180 - extend under entire Caltrans ROW for SR180 to preserve future Caltrans improvements.
- Avoid impacts (temporary and permanent) to Roeding Park.
- Work in the vicinity of the existing Golden State Boulevard ramps will require coordination with the City of Fresno. The City of Fresno is responsible for the demolition of these ramp structures just north of SR41.

4 Project Scope of Work

4.1 General

Contractor's Work is defined as all services, labor, materials, equipment, and other efforts to be provided and performed by the Contractor including the following general categories:

- Scheduling
- Utility protection and relocation
- Demolition
- Permitting

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- Survey
- Mapping
- Geotechnical
- Design
- Environmental mitigation
- Construction
- Quality control and quality assurance for design and construction
- Community relations
- Quality inspection and testing
- Verification and validation
- Construction safety and security
- Preparation of CADD As-Built and Consolidated Services Drawings
- Implementation of Contractor's extended warranty for the Project after construction completion
- Coordination with jurisdictional authorities (governments, public, and private entities), utility companies, railroad companies, and local communities
- Other efforts necessary or appropriate to complete the design and construction of the Project, and to ensure the Project's ultimate readiness for high-speed rail passenger operations

The exceptions to this list include those efforts that the Contract specifies will be performed by the Authority or other Persons.

Contractor shall provide design and construction for CHSTP trackway civil infrastructure, complete in place with the exception of CHSTP trackway from Station S10691+50 to S10825+60 which will be performed by Caltrans. While Caltrans performs the design and construction of this portion of the CHSTP trackway civil infrastructure, Contractor shall be responsible for establishing and controlling the plan and profile of CHSTP alignment in Caltrans portion of the work. Contractor shall identify, design, install, and maintain a temporary protective layer over the trackway subgrade to protect the subgrade from degradation through the warranty service period. Degradation refers not only to erosion of fill/existing soils as a result of rainfall and wind, but also to potential damage caused by animal burrowing, vandalism, and other environmental factors (such as flooding) not evident at the time of construction.

Contractor shall design and install structural embedments such as anchor bolts, embeds, grounding, and bonding, foundations, etc., as needed, in structures, walls and subsurface infrastructure to accommodate future CHSTP systems components not in the Project scope.

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Contractor shall design and construct enabling works, such as grade separations and intrusion protection, complete in place. The enabling work shall be coordinated, designed, and constructed in accordance with the Third-Party Entity's requirements (i.e., City of Fresno, County of Fresno, California Department of Transportation, railroads, etc.). If the enabling work such as grade separations and intrusion protection are located above or below or immediately adjacent to the CHSTP alignment, in no case shall the enabling work be constructed to standards less stringent than the CHSTP Design Criteria if their failure would have the potential for damaging or otherwise interrupting HST service.

The Scope of Work does not include construction of the portion of CHSTP trackway performed by Caltrans as stated above; trackwork itself; passenger stations; buildings; right-of-way engineering, negotiations, and acquisition; soundwalls; and systems work (i.e., Overhead Contact System poles, foundations, and wires; Traction Power Facilities; Automatic Train Control; etc.). The Scope of Work excludes civil/site works for said future CHSTP systems facilities and ancillary sites, unless noted otherwise (i.e., civil preparatory works are generally limited to the improvements required for the CHSTP trackway only). However, while these elements are not included in the Scope, Contractor shall coordinate interfaces with the portion of work performed by Caltrans and ensure accommodation and integration of future CHSTP work elements via the Interface Coordination and Design Integration Workshops with the Authority.

Contractor is further responsible for the following:

- Design and construction of the civil infrastructure elements as generally described above and identified in further detail in Attachment 3 "Scoping Typical Sections" and Attachment 4 "Scope Elements Matrix". The Work shall be performed and completed in accordance with the documents as defined in Sections 1 and 2 of this Scope of Work, as well as Master Agreements, design criteria, standards, and permits by Third Parties for facilities within their jurisdictions. Contractor shall refer to the Project Elements section of this Scope of Work.
- Contractor's design and construction shall be completed such as to ensure the ultimate operation of the CHSTP system to operate at speeds of at least 220 miles per hour. Note that design speed shall be 250 miles per hour (see 4.2.1.1 in this Scope of Work).
- Accommodation of future CHSTP elements and facilities to be designed and constructed by others that affect the civil infrastructure as identified in this Scope of Work and through the Interface Coordination and Design Integration Workshops, including the following:
  - Trackwork
  - Traction Power Facilities
  - Overhead Contact System
  - Automatic Train Controls Facilities
  - Communications

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- Rolling Stock
- Operations
- Maintenance Access/Emergency Access/Egress from Trackway (Ladders and Stairs)

- Preparation of design and construction submittals in accordance with this Scope of Work.
- Preparation of Construction Specifications in accordance with this Scope of Work.
- Coordination with Third-Party Entities, including the following:
  - Local, Regional, State, and Federal Agencies
  - Railroads
  - Utility Companies
  - Other Permitting and Regulatory Agencies

4.2 Design Services

4.2.1 Review of Design Criteria, Drawings, Reports and Specifications

Contractor is responsible for review of the CHSTP Design Criteria, Preliminary Engineering Drawings and Reports, Standard Drawings, Directive Drawings, Standard Specifications, and Special Specifications for completion of design and construction of the Project.

4.2.1.1 CHSTP Design Criteria

Design Criteria has been prepared to direct the development of Contractor's final design and construction drawings for the Project. Contractor shall develop the alignment to ensure an initial operating speed of at least 220 miles per hour and future operation at 250 miles per hour.

Contractor shall document the applicability assessment in the Requirements Verification Traceability Matrix (RVTM), including identification of each criterion that is determined by the Contractor to not be applicable to the Project. RVTM is described in more details in Verification, Validation and Self-Certification in Book 3.

Contractor shall review the CHSTP Design Criteria and determine applicability of each criterion.

Contractor shall refer to the Authority's Design Variance Guidelines and CHSTP Design Criteria in Book 3 of this Procurement Package for definition on design variance process and criteria thresholds, respectively. Design Variance Requests are location-specific. Design Variance Requests are subject to Configuration Management and Change Control. Contractor shall not assume that additional Design Variance Requests, beyond those included in the Preliminary Design Variance Report provided in Book 3 of this Procurement Package, will be approved. Refer to Design Variances (Section 4.14) in this Scope of Work.

4.2.1.2 Preliminary Engineering Documents: Drawings and Reports

The 15% Design and Preliminary Engineering Drawings are at various design levels and are provided for Contractor's reference.

Contractor shall review the Preliminary Engineering Design Drawings and Technical Reports and confirm technical feasibility and constructability within the requirements of the approved Final Environmental Documents and the applicable CHSTP Design Criteria and Directive Drawings as described in this Scope of Work.

Contractor shall substantiate the technical feasibility and constructability of the design in the Baseline Design Report. This report will serve as a baseline document for configuration management, and will be subject to change control.

Contractor shall be responsible for the preparation of Construction Drawings and Reports.

4.2.1.3 Specifications

Contractor shall be responsible for the preparation of Construction Specifications.

CHSTP Standard Specifications were developed to support design and construction and are provided for Contractor's reference. Standard Specifications are not considered mandatory for this project, except for those sections or portions thereof as identified in Attachment 5 "Mandatory Standard Specifications Listing" of this Scope of Work.

Contractor shall review CHSTP Standard Specifications and Special Specifications, and determine applicability of each specification section to Contractor's final design and construction methods, and determine what additional specifications are required.

Where Contractor has confirmed applicability of CHSTP Standard and Special Specifications sections, with or without modification, Contractor shall incorporate each into its Draft Construction Specifications in track change format, as needed, in accordance with the format of CHSTP Standard Specifications, which are based on Construction Specifications Institute (CSI) MasterFormat™ 2011 edition and SectionFormat™ 2009 edition. For Contractor-added specifications not included as part of the CHSTP Standard and/or Special Specifications, shall include "NEW" in bold capital letters in the top margin of the new Contractor-developed Construction Specifications.

4.2.1.4 Fresno Street Construction Plans and Specifications by Caltrans

Caltrans has prepared construction plans and specifications for the Fresno Street roadway undercrossing. These plans have been included in Book 4 for Contractor's reference. Contractor shall be responsible for achieving an integrated design and construction, inclusive of the Fresno Street improvements, the high-speed rail infrastructure, and securing concurrence, permits, and approvals. Contractor may choose to use the reference plans prepared by Caltrans at its sole discretion, and shall not rely on them without completing due diligence per Contractor's design-build responsibilities.

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4.2.2 Review of Environmental Documents

Before completing its technical and engineering reports and construction drawings, Contractor shall conduct a review of and ensure compliance with all environmental documents. Contactor shall be responsible for obtaining required permits for construction of the project, as indicated in Approach for Obtaining ICS Environmental Approvals/Permits.

4.3 Additional Data

Contractor shall be responsible for obtaining additional data, including:

- Final identification, confirmation, and potholing for existing utilities.
- Survey and topographic mapping for final design, including site surveys as required. Available photogrammetric data used for preliminary design is provided for Contractor's reference.
- Collecting additional geotechnical information to complete the Project, support the finalization of ground motions work and fault rupture data, and prepare technical reports, construction drawings, and construction specifications. Contractor shall store, maintain, and make available its acquired geotechnical core samples until final acceptance and close out of contract.

4.4 Design and Code Analysis

Contractor shall review and analyze current design, industry and regulatory design and construction codes, including those referenced in the Final Environmental Document, and third parties' requirements for applicability to its design and construction of the project.

Contractor shall identify applicable design, industry, and regulatory construction codes by resource from the EIR/EIS and by affected Third-Party Entities in a Design and Code Analysis Report.

4.5 Safety and Security Certification Program

Contractor shall be responsible for safety and security certification activities during the Final Design and Construction phases of the Project. Contractor shall develop a Safety and Security Certification Plan that describes in detail how they will identify, mitigate, verify/validate, and certify safety and security requirements. The Safety and Security Certification Plan requirements are described in detail in the CHSTP Safety and Security Management Plan in Book 3 of this Procurement Package.

4.6 Interface Coordination and Design Integration

Contractor shall be responsible for coordinating the interfaces and performing design integration with adjacent contracts, third parties, and the Authority, as specified in the General Provisions.

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4.7 Verification and Validation and Self Certification

Contractor shall develop and implement a verification and validation (V&V) process to confirm to the Authority that by examination and provision of objective evidence the technical contract requirements and the particular requirements for specific intended use have been fulfilled. With every submittal to the Authority, Contractor shall provide a V&V submittal self-certifying compliance with the Contract requirements and fitness for purpose. Every submittal shall be fully checked and certified by an Independent Checking Engineer (ICE) and Independent Site Engineer (ISE) before they are submitted to the Authority.

Refer to Book 3 for V&V and Self-Certification requirements.

4.8 Value Engineering

Contractor shall initiate, conduct, complete, and implement a value engineering task upon approval of its Design Baseline Report. Value engineering shall comply with methodologies and procedures adopted by Caltrans and shall be performed in coordination with the Authority. Contractor shall refer to value engineering process requirements specified in the General Provisions of this Procurement Package.

Further contractor-initiated value engineering opportunities can be initiated, conducted, and implemented through final design and construction efforts.

4.9 Design Reports

4.9.1 Design Baseline Report

Contractor shall prepare a Design Baseline Report that defines the major design elements to be progressed to design and construction, and confirms technical feasibility, constructability, and compliance with the approved Final Environmental Documents, including the following:

- **Final Track Alignment and Limits of Construction Activities**
  - Plan and profile for the CHSTP track alignment for the entire limits of the Project, including the portion of the work within Caltrans Scope of Work and location of all special trackwork. The limits of track alignment shall extend beyond Contractor's construction limits to the nearest point of tangency in plan and profile to ensure consistency, interface, and integration requirements with future work and in full support of High-Speed Train operations.
  - Typical sections for CHSTP trackway for at-grade, grade separated structures, and trenches, third-party facilities, as well as facilities constructed by others that affect Contractor's design. Typical sections shall identify and address future traction power, overhead contact system, communications, train controls, operations, and maintenance equipment. CHSTP facilities by others shall be confirmed during the Interface Coordination and Design Integration Workshops. CHSTP facilities by others shall be identified as "NIC" (Not in Contract) on the drawings.

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- **Clearances at Structures and Restricted Locations** – Proper clearances in conformance with CHSTP Design Criteria at all grade separations and future CHSTP facilities by others that affect the design, including substation locations, radio antenna sites, special trackwork, signal houses, access and egress, and location of the system's undertrack ductbank and manholes.
- **Geotechnical Conditions** – See Geotechnical Reports requirements elsewhere in this Scope of Work.
- **Structure Plans, Elevations, and Typical Sections** – For grade separated structures, trenches, tunnels, and retaining walls. Drawings shall include nominal dimensions of the structures subject to final design calculations.
- **Railroads** - For relocation of, or modification to, existing railroad trackways and other facilities per Master Agreements with such entities.
- **Utilities** – Relocation of utilities within Authority's and state and local jurisdictions' right-of-way in accordance with applicable state and federal regulations.
- **Geometric Approval Drawings** – For relocation of, or modification to, state highway facilities and local roadways, as agreed with the affected third-party agency.
- **Storm Water Pollution and Protection Plan (SWPPP) and Best Management Practices (BMP)**
- **Consistency with Final Environmental Document**s – describing whether and to what extent the Baseline Design remains consistent with the project described in the Final EIR/S and the environmental analysis provided therein.
- **Aesthetic Design and Review for Non-Station Structures** – See Aesthetic Design and Review for Non-Station Structures Report requirements as delineated elsewhere in this Scope of Work.
- **Other information that establishes the baseline for the project**

Contractor shall prepare Design Baseline Report, submit for review, coordinate comment resolution, and ensure approval by Authority within 180 days of NTP. Authority's nominal review period for the design baseline report is twenty business days.

Drawings shall include dimensions that demonstrate the intent and boundaries of the design to be advanced into final design. Design assumptions for elements identified as future CHSTP facilities by others will be provided by the Authority for incorporation into the Design Baseline Report documents, and reviewed with Contractor during the Interface Coordination and Design Integration Workshops.

Upon receipt of approval, the Design Baseline Report will be subject to the Authority's configuration management and change control process.

4.9.2 Hydrology and Hydraulics Reports

Contractor shall prepare Hydrology and Hydraulics reports to support the drainage design of the full build-out of CHSTP trackway as well as temporary drainage system for the interim condition.

Contractor shall contact and coordinate with State and local jurisdictions to obtain necessary information for preparation of its reports.

4.9.3 Geotechnical Reports

Contractor shall prepare a Geotechnical Data Report and Geotechnical Engineering Design Reports to support its design calculations and requirements for design and construction of the full build-out of trackway and trackwork, embankment, excavation, soundwalls, retaining walls, trenches, tunnel structures, grade separation, roadways, and all other facilities constructed by Contractor or to be constructed by others per the requirements of the Design Criteria as well as the requirements of State and local jurisdictions. These Geotechnical Reports shall include and address additional geotechnical explorations performed by the Contractor through its design and construction phases.

Contractor shall contact and coordinate with State and local jurisdictions to obtain all necessary information for preparation of its reports.

4.9.4 Structures Reports

Contractor shall prepare Structures Reports providing the basis for its selection of structure for the retaining walls, U-Walls, cut-and-cover boxes, jacked boxes, bridges, and aerial structures. The report shall provide all necessary information such as General Plan, Typical Sections, foundation type, member sizes, and seismic and other geotechnical information to support Contractor's design.

Structure Reports for other jurisdictional authorities such as Caltrans, cities, counties, and railroads shall comply with requirements of that jurisdiction. Contractor shall coordinate with these jurisdictional authorities to obtain their approval prior to the design and construction of these structures.

4.9.5 Aesthetic Design and Review for Non-Station Structures Report

As the project takes form, a consistent system-wide image for the California High Speed Train Project is expected through the introduction of common elements associated with selected bridges and overpasses. Curvilinear forms can be effective for the following reasons:

- Image: Recognizable, consistent bridge and overpass forms can contribute toward establishing an aesthetic image for the CHSTP.
- Structural Precedents: Curvilinear forms such as arches and trusses have been successfully implemented for medium-span high-speed rail bridges internationally.

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- Materials: Either concrete or steel would be appropriate materials. Designers have the latitude to propose materials, details, connections, abutments, etc.

Interfaces between major bridges, overpasses, and adjacent aerial structures shall be carefully and systemically coordinated to ensure smooth and appropriate transitions in accordance with the aesthetic design guidance (Aesthetic Guidelines for Non-Station Structures included in Book 3 of the Procurement Package), as well as the aesthetics mitigation measures in the Final EIR/EIS and the Mitigation Monitoring and Reporting Program.

Contractor shall follow such aesthetic design guidance to implement aesthetic design and visual resource mitigations and enhancements to structures. The Aesthetic Design and Review Report shall describe Contractor's approach to implementing the guidelines.

Structures and other elements included in CP1 for aesthetic design and review preliminarily include the items below (subject to confirmation by the Contractor in its coordination as required herein).

- Aerial structures – approximately 3.7 miles in length
- Bridges, such as the one spanning across the San Joaquin River
- Overpasses, such as the ones crossing Highway 99, approximately 315 feet in length, and Golden State Boulevard, approximately 420 feet in length
- Retaining walls
- Trenches
- Local street lighting
- Access control fence
- Intrusion protection barrier

4.9.6 Certifiable Elements and Hazards Log

Contractor shall update and expand the Certifiable Elements and Hazards Log during the Design and Construction phases. Hazards associated with each certifiable element that can reasonably be expected to occur within Contractor's scope of work shall be identified on the Certifiable Elements and Hazards Log as defined in the CHSTP Safety and Security Management Plan found in Book 3.

4.9.7 Safety and Security Certification Package

Contractor shall compile a Safety and Security Certification Package when all Certifiable Items Lists for a particular element or infrastructure component are completed for applicable milestone payment. The Safety and Security Certification Plan shall consist of a signed Certificate of Conformance for the project element, all completed Certifiable Items Lists, a

completed Certifiable Elements and Hazards Log (see Section 4.9.6), and all supporting documentation such as hazard analysis, drawings, and design element descriptions.

4.9.8 Final Design Report

Contractor shall prepare a Final Design Report that includes all changes and revisions made to the Design Baseline Report, including the portion of the work within Caltrans Scope of Work. This report shall be supported by all variances and design exceptions granted by the Authority or other third parties that support the changes to the Design Baseline Report. The Final Design Report shall represent a conformed configuration of the design.

4.10 Preparing Construction Drawings and Construction Specifications for CHSTP Facilities Third-Party Entities

Contractor shall be responsible for preparation of the complete design and certification that construction drawings, construction specifications, reports, and calculations meet the requirements of Authority, and Third-Party Entities.

The Project includes modification of facilities owned by Third-Party Entities, and construction in and around facilities owned by Third-Party Entities as shown in Section 3.5.

Contractor shall identify the design and construction requirements and codes of affected Third-Party Entities; and document the requirements and codes in the Design and Code Analysis Report. Contractor shall perform this assessment taking into account signed agreements, permits, or MOUs between the Authority and the Third-Party Entities, or draft agreement, permit, or MOU language in process, as provided by the Authority.

Agreements, Permits, and MOUs are included in Book 3 of this Procurement Package.

4.11 CHSTP Design Submittals

Contractor shall provide Design Submittals to the Authority as specified in this Scope of Work, the CHSTP Design Criteria and other mandatory documents included in the Procurement Package.

Design Submittals require issuance of a SONO or SONO with incorporation of comments to meet the requirements of this Procurement Package.

Contractor shall include in the schedule each Design Submittal and Authority review period, including breakdown by Construction Package Segment and/or structure.

Contractor shall include hard copies and an electronic file posted in accordance with the CHSTP Document Control Manual.

At minimum, submittals shall identify the following:

- Location including Construction Package Segment (CP1A, CP1B, CP1C)
- Preparer and date

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- Checker and date
- Signed and sealed by Engineer of Record, in accordance with State regulation
- Issue date and revision number
- Main point of contact, phone number, and company contact details

Contractor shall provide the following submittals to the Authority:

- Design Reports
  - Design Baseline Report (subject to Authority approval as noted in Section 4.9.1)
  - Design and Code Analysis Report
  - Aesthetic Design and Review for Non-Station Structure Report (as part of Design Baseline Report)
  - Value Engineering Report
  - Hydrology and Hydraulics Report
  - Geotechnical Reports
  - Structures Reports
  - Certifiable Elements and Hazards Log (included in Safety and Security Certification Package)
  - Final Design Reports
  - Certificate of Conformance Package
- Construction Drawings
  - Nominal 60 percent design, all sheets represented
  - Nominal 90 percent design, all sheets included

  Civil and Structure Construction Drawings may be submitted in segments or by structure and shall include identification of future facilities by others for reference as determined in the Interface Coordination and Design Integration Workshops. These include facilities for traction power, overhead contact system, communications, train controls, location of special trackwork, and CHSTP facilities by others, and shall be identified as "NIC".
- Construction Specifications
  - Nominal 60 percent: an outline of construction specifications shall be submitted
  - Nominal 90 percent: all applicable construction specifications shall be submitted
- Ready for Construction (RFC) Submittals (subject to Authority approval as noted in Section 4.13)

- Electronic Submittal Files (certified as representing the designs in the Construction Packages). Drawing Submittals shall be in accordance with the CHSTP CADD and Plan Preparation Manuals. All other electronic design files shall be in PDF.
- Engineering Calculations (certified as representing the designs in the Construction Packages)
- Survey Reports (signed and sealed) as defined in CHSTP Design Criteria and Standard Specifications.

4.12 Third-Party Entity Design Submittals

Contractor shall provide Third-Party Submittals to respective Third-Party Entity and a copy to the Authority unless otherwise noted. Contractor shall be responsible for determining and providing submittal quantities required by Third-Party Entities.

Submittals shall identify the following information:

- Location including Construction Package Segment (CP1A, CP1B, CP1C)
- Preparer and date
- Checker and date
- Signed and sealed by Engineer of Record, in accordance with State regulation
- Issue date and revision number
- Main point of contact, phone number, and company contact details

Contractor shall include in the schedule each Third–Party Entity Submittal and review period.

4.13 Ready for Construction (RFC) Submittals

Contractor shall provide Ready for Construction Submittals to the Authority. These shall be submitted to the Authority for approval. Authority's nominal review period for RFC submittals is twenty business days. Contractor's attention is directed to Section 61.2 of the General Provisions.

Submittals shall include hard copies and an electronic file posted in accordance with the CHSTP CADD Manual.

Submittals shall identify the following information:

- Construction Package Segment (CP1A, CP1B, CP1C)
- Preparer and date
- Checker and date
- Engineer of Record (signed and sealed for Construction Packages)
- Issue date and revision number

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- Main point of contact, phone number, and company contact details

Contractor shall provide the following submittals to the Authority:

- Civil and Structure Construction Drawings
- Engineering Calculations (certified as representing the designs in the Construction Packages)
- Testing and Commissioning Plans
- Certificate of Conformance Package
- Maintenance Manuals and Training
- Maintainability Demonstration Plan and Procedures
- Maintainability Demonstration Report

Contractor shall include in its schedule each Submittal, including breakdown by section or structure.

4.14 Design Variances

Design variances have been preliminarily approved for specific conditions and locations based on preliminary engineering studies, and are identified in the Preliminary Design Variance Report(s) included in Book 3 of this Procurement Package. Final approval of these Preliminary Design Variances will occur upon Contractor's Design Variance Request submittal(s) during final design, if still applicable.

Contractor shall review the Preliminary Design Variance Report and determine if design modifications can be incorporated into the Design Baseline Report to achieve the design criteria and not require a design variance. Regardless of previous approvals during preliminary engineering studies, Contractor shall submit a request for each preliminary and/or new design variance needed to support design and construction. Contractor shall obtain final approval of Design Variances prior to incorporation of a design variance into a Construction Package. Design Variance Requests are subject to the Authority's change control process. Contractor shall not assume that additional Design Variance Requests will be approved beyond those included in the Design Variance Report provided in Book 3 of this Procurement Package.

Contractor shall refer to the Authority's Design Variance Guidelines and CHSTP Design Criteria in Book 3 of this Procurement Package for definition on design variance process and criteria thresholds, respectively.

4.15 Construction Services

Contractor shall provide Construction Services including but not limited to those described below.

4.15.1 Safety and Security

Contractor shall be responsible for all work-site safety and security activities. Contractor shall submit a Site-Specific Health and Safety Plan and Site-Specific Security Plan as described in the CHSTP Safety and Security Management Plan in Book 3 of this Procurement Package.

4.15.2 Hazardous Material Handling

Contractor shall remove all Hazardous Material in accordance with previously completed Phase I and II work. Prior to performing the hazardous material removal work, Contractor shall submit a Hazardous Materials Remediation Plan per the requirements of the regulatory agency having jurisdiction over the site, as well as other requirements delineated in this Procurement Package.

4.15.3 Utility Work and Coordination with Utility Companies

Contractor shall be responsible for utility work as delineated in the General and Special Provisions in this Procurement Package. Coordination with utility companies shall be conducted as described in the CHSTP Design Criteria, Master Agreements, and other requirements specified in the Special and General Provisions.

4.15.4 Shop Drawings

Contractor shall prepare and submit construction and material shop drawings in accordance with mandatory CHSTP Standard Specifications, or portions thereof, as noted in Attachment 5 of this Scope of Work and in accordance with Contractor's construction specifications.

4.15.5 As-Builts

Contractor shall prepare and submit as-built drawings, signed and sealed, in accordance with CHSTP CADD and Plan Preparation Manuals. As-built drawings shall fully reflect the final, completed, as-built condition, inclusive of works completed by others in support of the Project and verified by the Contractor. As-built plans shall include Consolidated Service Drawings that fully address utility services designed and constructed by Contractor and/or others in support of the Project. Contractor shall survey the installed utilities to verify the actual placement.

4.15.6 Environmental Mitigations

Contractor shall be responsible for the review, coordination, permitting, design, construction, and monitoring of the applicable mitigations and commitments consistent with the limits and scope of work for CP1. Contractor is expected to review the mitigations and commitments included in the Environmental Documents, verify against Scope of Work, and submit a list of mitigation measures to allow the Authority to verify completeness and concurrence in the list. Contractor's attention is further referred to other requirements as specified in the General/Special Provisions and the Mitigation Monitoring and Reporting Program.

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5 Project Work Elements

The following is a summary of major work elements of the Project. For a more comprehensive list of Work Elements refer to Attachment 3 "Scoping Typical Sections" and Attachment 4 "Scope Elements Matrix" of this Scope of Work.

5.1 Demolition, Clearing, and Grubbing of the Construction Site

Existing buildings and structures within the limits of the construction shall be removed, and the site shall be cleared and grubbed to ensure the successful installation of the Project per the applicable requirements of regulatory and jurisdictional authorities. The construction site shall include the entire Authority right-of-way and construction areas required for the construction of grade separations and the relocation of waterways and utilities. Contractor shall prepare and submit a demolition plan prior to its demolition activities. For recycling requirements, refer to Sustainability Requirements in the General Provisions.

Removal, relocation, and/or purchase of existing billboards will be completed by others through the ROW Appraisal/Acquisition process (not-in-scope for CP01 Contractor). However, Contractor shall remove the billboard foundations, as required.

5.2 Railroad Relocation and Reconstruction

The Authority is working with the railroads to draft and execute design, construction, and maintenance agreement(s) with the railroads. These agreements will establish roles, scope, and responsibilities of the parties during each phase of project development such as railroad's review and approval of contractor's design, the railroad's review period, permitting, inspection, safety, insurance requirements, and flagging.

If the agreements with the railroads assign the scope of design and construction of railroad relocation to the Authority, the Contractor shall design and/or construct railroad relocation to accommodate the CHSTP per the requirements of the agreements. Contractor shall coordinate its railroad design and construction activities with railroads directly and comply with railroad requirements when working within or adjacent to railroad right-of-way.

If the railroads perform the design and/or construction of their relocation to accommodate the CHSTP, Contractor shall coordinate with the railroads directly to ensure railroad activities accommodate Contractor's Work and schedule. Contractor shall comply with railroad requirements when working within or adjacent to railroad right-of-way.

5.3 Roadway Construction

Work within or affecting the State Highway System (SHS) or within the SHS right-of-way shall be coordinated with and performed per Caltrans requirements.

Work within or affecting local jurisdictions shall be coordinated with and performed per the requirements of the jurisdictional authorities.

Contractor shall design, construct, and maintain temporary access roads for its needs and those that may be required by local jurisdictions and emergency response authorities. Contractor shall also design, construct, and maintain permanent CHSR access roads required by the project per the requirements of the CHSTP Design Criteria and Directive Drawings. Contractor shall coordinate with the Authority Representative and local jurisdictions for the location of permanent access roads. Permanent access roads are required as indicated in the Design Criteria Manual and shall coincide with the location of future CHSR wayside systems/operations facilities as shown on the Preliminary Design Plans. Additional permanent access roads may be required by emergency response authorities. Contractor shall coordinate the design of access roads through Interface Coordination and Design Integration Workshops with the Authority.

Lighting and landscaping of roadway facilities that are within Caltrans and other jurisdictional authorities shall be coordinated with and performed per the requirements of the jurisdictional authorities.

Work in the vicinity of the existing Golden State Boulevard ramps will require coordination with the City of Fresno. The City of Fresno is responsible for the demolition of these ramp structures just north of SR-41.

5.4 Trackway

Final horizontal and vertical alignments for the trackway shall be designed by Contractor for the entire Project limits, including the portion of the work within Caltrans Scope of Work and location of all special trackwork. The limits of track alignment shall extend beyond Contractor's construction limits to the nearest point of tangency in plan and profile to ensure consistency, interface, and integration requirements with future work and in full support of ultimate CHSR operations.

Contractor's design of the trackbed shall not preclude the eventual design and installation of either a ballasted or non-ballasted track section, unless local conditions warrant a more specific determination. In this case, Contractor shall submit its analysis and results to the Authority for review. Specifically, at-grade sections and shorter aerial structures (less than 1,000FT) shall be designed to accommodate either track section, including the more stringent structural loading requirements. Contractor shall assume the eventual design and construction of a non-ballasted track section for longer aerial structures (greater than 1,000FT) and below-grade structure. Contractor shall consider the long-term settlement criteria of the constructed trackway in the design and shall monitor the settlement of the constructed trackway to ensure conformity with the most stringent CHSTP Design Criteria to accommodate either track section. Contractor shall coordinate and implement track section homogeneity as well as operations and maintenance considerations through the Interface Coordination and Design Integration workshops with the Authority.

Trackway shall include the cut and fill, temporary protective layer, and the surface and underground drainage, with the exception of the underdrain system along the trackbed. The

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installation of underdrain system along the trackbed will be performed by the follow-on contractor(s).

5.5 Retaining Walls

Contractor shall design and construct retaining walls necessary for the CHSTP trackway, State Highway System, and local roadways. Design and construction of retaining walls shall include the drainage system for the walls.

5.6 Concrete Barriers

Intrusion protection barriers shall be designed and constructed by Contractor where required to protect the High-Speed Train Operating Infrastructure from intrusion by automotive vehicles and/or railroad locomotives and cars per CHSTP Design Criteria, railroad, and Caltrans requirements. Contractor shall reference Proposed Preliminary Design plans for intrusion protection barrier preliminary locations between High-Speed Train Operating Infrastructure and existing railroads. Final locations of intrusion protection barriers between High-Speed Train Operating Infrastructure and existing railroads will be based on preliminary risk assessment and hazard analysis prepared by the Authority.

At locations where the CHSTP will be located adjacent to an existing railroad and/or highway facility and an intrusion protection barrier is required, said barrier shall be located as close as possible to the right-of-way line that delineates the bounds between both entities. The intrusion protection barrier shall be designed and constructed to ensure maintenance and constructability from within Authority's right-of-way.

For concrete barriers on grade separated structures over CHSTP trackway, Contractor shall design the barriers to accommodate future protective screen with solid plate.

5.7 Cut Sections and Walls (Trench Structures)

In areas where CHSTP trackway alignment is below grade, Contractor shall design and construct cut or cut wall sections to accommodate CHSTP trackway. Trenches are defined as below grade structures with a concrete retaining structure on both sides. When the bottom of a trench is below the water table or flood plains, the retaining structures shall be joined by a common reinforced concrete foundation (known as U-Wall).

Other cut walls that can be used when the CHSTP trackway alignment is above the existing ground water table (or flood plains), including but not limited to soil nail walls, cantilever soldier-pile walls, slurry walls, secant pile/tangent pile walls, and ground anchored walls (other than nail walls), depending on local site conditions. Space for access/egress shall be designed and constructed within the depressed alignment sections at nominal 2,500-foot intervals. Staircases shall be designed by Contractor as future accommodation and will be installed by others. Future installation of staircases shall not be precluded by Contractor's design and/or construction.

5.8 Tunnels

In areas where CHSTP trackway alignment is sufficiently below final grade and/or the local conditions require third-party crossings over the depressed CHSTP trackway, Contractor may design and construct a short tunnel (or other tunnel type) to accommodate CHSTP trackway. Tunnels shall be waterproofed and be independent of temporary excavation support. CHSTP structures shall be designed and constructed independent of third-party facilities. Fire/Life/Safety codes (NFPA 130) and CHSTP Design Criteria requirements shall be followed.

5.9 Bridges/Aerial Structures

Contractor shall design and construct grade separated structures such as bridges, aerial structures, and grade separations that are required for the Project in accordance with CHSTP Design Criteria requirements.

Grade separated structures owned by Third-Party Entities to be built as part of the CHSTP project shall be designed and constructed in conformity with the requirements of said Third-Party Entities. In the event of conflicting requirements between the CHSTP Design Criteria and other standards and codes of practice, the more stringent requirements shall take precedence. Grade separated structures that span high-speed train trackways and have the capability to influence operability of high-speed trains in the event of failure, shall be designed per provisions in the CHSTP Design Criteria.

Contractor shall design the CHSTP grade separated structures, including the parapet walls, to accommodate the future installation of soundwalls (by others).

Contractor shall make an independent interpretation of the geotechnical information from previous site investigations, and shall carry out such additional geotechnical and subsurface investigations and surveys as are necessary to design and construct the grade separated structures or other elements of the Project, in conformity with the Contract requirements.

The Authority will review the seismic analysis and design to ensure the successful application of said criteria, as specified in the CHSTP Design Criteria. This effort shall be coordinated through the Interface Coordination and Design Integration Workshops with the Authority.

5.10 Drainage

Contractor is responsible for the design to accommodate the full build-out of CHSTP trackway and facilities. However, in lieu of constructing CHSTP trackbed underdrains (closed drainage system) and the drainage system inside the CHSTP trench or tunnel sections, Contractor shall design and construct a temporary drainage system for CHSTP trackbed and trench or tunnel sections to accommodate the drainage of these facilities until the follow-on Contractor installs the final drainage system. Contractor shall design and construct all other permanent drainage systems, such as drainage laterals, to ensure the successful drainage of the Project in the interim and final conditions, complete in place.

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Contractor is responsible for the design and construction of permanent drainage systems for Third-Party facilities being impacted by the Project.

At locations where the CHSTP will be located adjacent to an existing railroad and/or highway facility, a separate drainage system shall be designed and constructed to capture the runoff from each facility independently. The drainage system for each entity (Authority or Third-Party) shall be located within its right-of-way. Contractor shall also reference intrusion protection barrier location requirements as noted elsewhere in this Scope of Work.

In addition to the requirements of the Construction General Permit, the Project is subject but not limited to FMFCD Ordinance 96-1, "Urban Storm Water Quality Management and Discharge Control". Compliance with Ordinance 96-1 requires that Contractor implement the measures included in the FMFCD's "Fresno-Clovis Storm Water Quality Management Program Construction Site Storm Water Quality Management Guidelines".

5.10.1 Reliability of the Drainage Subsystem

Each pump station site shall be dimensioned to accommodate a redundant set of pumps and control equipment in the full build-out condition.

5.11 Utilities

Contractor shall ensure that existing and planned future utilities are not in conflict with CHSTP, State, and local improvements. Contractor shall relocate and/or protect the existing utilities in accordance with the requirements specified in the Special and General Provisions, CHSTP Design Criteria, and the requirements of utility owners and local jurisdictions. Contractor shall coordinate with local jurisdictions and the utility owners throughout the Project and shall design and construct the relocation of utilities in conflict with the Project, including future CHSTP facilities to be designed and constructed by others (i.e., relocation of existing overhead utilities that will conflict with future design and installation of CHSTP overhead contact system). Contractor is responsible for protection of utilities to remain in place during and after the performance of the Work.

Agreements executed to date between the Authority and utility owners are included in Book 3 of this Procurement Package. Contractor shall support the Authority for utility relocation agreements that may need to be finalized and/or executed for the project.

Contractor is responsible for providing temporary utilities required for the performance of its work.

5.12 Grounding and Bonding

Contractor is responsible for design, installation, and testing, which includes providing the testing procedures for acceptance of all grounding and bonding for the facilities it is constructing, and shall install provisions for grounding and bonding of facilities constructed by third party or future contractors, per the requirements of Attachment 3 "Scoping Typical

Sections," Attachment 4 "Scope Elements Matrix," CHSTP Design Criteria, and Directive Drawings.

5.13 Access Control

Contractor shall design, construct, and maintain permanent access control including fences, gates, walls, and doorways.

5.14 Low Voltage Systems, Underground and Undertrack Ductbank, and Manholes

Contractor shall refer to and coordinate between CHSTP Design Criteria, Preliminary Design Plans, and Directive Drawings to locate, design, and install underground undertrack ductbanks and supporting manholes for future CHSTP Systems facilities along the Authority right-of-way, as delineated in Attachment 4 "Scope Elements Matrix" and shown on the Preliminary Engineering Plans. Final locations and designs for the underground and undertrack conduit ductbanks shall be coordinated with Contractor at the Interface Coordination and Design Integration Workshops with the Authority.

5.15 25 kV Traction Power Underground Ductbank and Manholes

Contractor shall refer to and coordinate between the CHSTP Design Criteria, Preliminary Design Plans, and Directive Drawings to locate, design, and install underground undertrack ductbanks and supporting manholes for future CHSTP Traction Power Facilities that are located away from the Authority right-of-way (e.g., when the relocated Golden State Boulevard separates the Authority right-of-way from a future Traction Power facility site). Final locations and designs for the underground and undertrack conduit ductbanks shall be coordinated with through the Interface Coordination and Design Integration Workshops with the Authority.

5.16 Temporary Lighting and Pumps

Contractor shall be responsible for design and installation of temporary lighting and pump facilities for the Project. Contractor shall leave the temporary lighting and pump facilities for trenches and tunnels in place after completion of the contract.

5.17 Reliability, Availability and Maintainability (RAM)

5.17.1 General

The Contractor shall design, build, and document the Project to achieve the required reliability, availability, maintainability (RAM) and accessibility of the Work, so that no aspect of Work causes a failure or condition which can affect passenger service or make the Work unavailable during the hours of operation, and so that no aspect of the Work precludes the future operating railroad system from achieving the requirement of no service-affecting failures caused by the Work.

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RAM shall be ensured through application of federal, state, and city codes and the best practices per the Design Criteria, directive drawings, other contract documents, and quality control and assurance processes.

Accessibility for inspection and maintenance activities of the Work shall be ensured per Design Criteria, directive drawings, other contract documents, and quality control and assurance processes.

The contractor shall assure and demonstrate the RAM requirements per the Contractor's RAM Program Plan required by the CHSTP RAM Program Plan (RAMPP). Refer to Book 3 for the CHSTP RAMPP.

5.17.2 Reliability

Reliability criteria for the Work include design life, and codes and standards to be applied. Reliability criteria include seismic design standards; flood level considerations; and maintainability features to achieve the required service life of the equipment and structures per the Design Criteria, directive drawings, other contract documents, and quality control and assurance processes.

5.17.3 Availability

Contractor shall design, build, and document the Project so that the availability of Work during the hours of operation of the railroad for the duration of its design life is 100%, and so that any planned unavailability of the Work for inspection and maintenance can be performed outside the hours of operation in one or more consecutive days. For the hours of operation of the CHST System and the available maintenance window during non-operating hours, refer to Book 3: Basis of Design.

This requirement excludes unavailability of the Work caused by natural disasters which cause climatic or seismic conditions in excess of the limits defined by this Procurement package, or caused by the third parties.

The Contractor shall identify the influences on the availability of the Work and shall demonstrate that these influences have been mitigated.

5.17.4 Maintainability

The Contractor shall provide the Work to minimize preventive and corrective maintenance requirements. The Contractor shall ensure that all required maintenance can be performed during the maintenance window outside the operating hours of the CHST System.

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The following additional maintainability requirements shall be ensured in the design and construction:

- **Design Life and Maintainability –** Components which have a shorter design/service life than the whole structure or system, for example bridge bearings and expansion joints, shall be replaceable or maintainable within the maintenance window of non-operating hours. The contractor shall conduct all necessary analysis and submit reports per the RAM Program Plan requirements, identifying all such elements which are part of the Work. Contractor shall assure and demonstrate these requirements as per the Maintainability Demonstration Plan and Procedures and demonstrate verification through the Maintainability Demonstration Report.
- **Accessibility –** Accessibility provisions include inspection points, hatches, doors, swing out racks, quick release covers and similar features aimed at providing rapid access to equipment and structural elements which requires routine maintenance inspection, cleaning or replacement (such as gratings and filters), without the need for special tools or equipment. Contractor shall ensure ease of access for inspection and for replacement of components.
  - Other accessibility requirements include physical access into confined spaces; access that does not require dismantling of components and structures; access that minimizes a need for isolation of the OCS; and maximizing access and repair activities that can be completed within the non-operating maintenance window, including set-up of equipment, scaffolding and lifting platforms needed for inspections and work, and final inspections and tests to allow the return of the works to operational status.
  - Special attention shall be given to minimizing the need to access the underside of bridges and viaducts above the tracks, given the proximity of the future high voltage OCS, including feeder and static wires and the supporting poles, portals, and headspans. Inspection access shall avoid to the maximum extent possible the need for special equipment, the isolation of OCS, and the occupation of the tracks themselves.
  - Access shall not require the removal and/or deconstruction of any part of the works in order to inspect bearings, expansion joints and other sensitive elements of the structures that require inspection as part of the regular preventive maintenance program.
  - Necessity for isolation of the OCS and/or tracks for passenger and work train operations to perform maintenance activities shall be minimized.
  - Visible fault indicators shall be provided to assist in the physical monitoring or repair of structural elements and equipment.

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- Handling provisions shall be provided, including lifting lugs for removal/replacement of heavy items or assemblies, fork-lift compatibility, and lifting limitations for manual handling.

- **Adjustment and Alignment –** Provisions shall allow for adjustment or alignment of equipment without isolation or occupation of the future operating tracks.

The contractor shall assure and demonstrate these requirements as per the Contractor's RAM Program Plan and Contractor's Maintainability Demonstration Plan and Procedures and demonstrate verification through the Contractor's Maintainability Demonstration Report as outlined in the CHSTP RAMPP.

5.18 Durability

Contractor shall prepare design and Construction Specifications to meet the Design Life and Durability goals of various elements of the project as stated in CHSTP Design Criteria. Contractor shall submit documentation indicating how design meets the requirements of the Design Life and Durability of various elements of the work to the Contracting Officer for concurrence. Documentation shall include analysis, engineering data or research, and test reports, as applicable. Documentation shall include citing which Construction Specifications requirements and which design details address specific Design Life and Durability issues. Documentation shall explain design and Construction Specifications provisions that address Design Life and Durability for typical elements in specific locations and those design and Construction Specifications provisions, which address Design Life and Durability.

As an example, the following aspects for concrete design are among those that shall be addressed to achieve the required service life:

- Design shall develop concrete mixes with cement contents, cement type and water/cement ratios that are compatible with achieving the required chemical resistance as well as producing a workable concrete.
- Admixtures that enhance the durability shall be used.
- Contractor shall identify methodology for assessing the characteristics of the environment, the properties of the concrete required to resist the environment, and the requirements for trials to demonstrate that the concrete being produced is of a suitable standard and has the necessary properties.
- Contractor shall assess the environment and determine what the appropriate value (or values) of permeability would be to achieve the service life.
- Contractor shall develop crack control criteria in accordance with the Design Criteria, AASHTO Bridges and ACI standards and guidelines.

6. Attachments

- Attachment 1 – Limits and Extents of Work Table

- Attachment 2 – Limits of Work Map
- Attachment 2a – Caltrans Limits of Work Plan
- Attachment 2b – Caltrans Scope of Work Map
- Attachment 3 – Scoping Typical Sections
- Attachment 4 – Scope Elements Matrix
- Attachment 5 – Mandatory Standard Specifications Listing
- Attachment 6 – Mandatory Special Specifications Listing

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CALIFORNIA
High-Speed Rail Authority

March 7, 2012

County: Madera
APN(s): 034-210-049, 034-210-045, 034-190-031, 035-232-003, 035-232-002, 035-211-006

SUBJECT: Merced to Fresno High-Speed Train Field Surveys

To Whom It May Concern:

The California High-Speed Rail Authority (Authority) is continuing preliminary activities in support of the next steps in the right of way process for the Merced to Fresno section of the California High-Speed Train Project. As part of this project, land surveyors will be visiting your area in the coming days or weeks on behalf of the Authority to collect survey data. You are receiving this letter because your property is within a study area for the designated preferred alignment for the Merced to Fresno section. However, this letter does not indicate that your property will necessarily be directly affected by the project. It is anticipated the surveyors will collect data south of Avenue 17 in Madera County.

The Professional Land Surveyors will attempt to notify the owner or tenant of the proposed time of entry where practicable, although prior notice of access is not required under statute. This work is important for establishing property boundaries as the project moves to construction. As part of their normal course of work, land surveyors will be mindful of gates, fences, stock and crops, equipment, etc. Professional Land Surveyors are legally allowed reasonable access to enter onto property for survey related purposes under Section 846.5 of the Civil Code and Section 8774 of the Business and Professions Code.

You are being contacted because you may be approached by land surveyors working on behalf of the Authority seeking access to your property in order to collect survey data. A survey notification door hanger may also be placed on your property.

If you have any questions or concerns about this field work please contact:

Kim Christensen
415 955 2938
Kim.Christensen@aecom.com

For more information about the Merced to Fresno section of the California high-speed train and its environmental review process, please visit http://www.cahighspeedrail.ca.gov/Merced_-_Fresno.aspx.

Sincerely,

Jeff Abercrombie
Area Program Manager Central Valley

Craig Schmidt
2037 W. Bullard #320
Fresno, CA 93711
Cell Phone: 559-906-4098
craigoschmidt@comcast.net

CRAIG SCHMIDT
& ASSOCIATES, LLC
POLITICAL CONSULTING · GOVERNMENT RELATIONS · PUBLIC ADVOCACY

CALIFORNIA
High-Speed Rail Authority

July 11, 2012

Curran Family Limited Partnership
PO Box 553
Madera, CA 93639
APN Numbers 034-210-045,047,049; 034-190-031; 035-232-002,003

Dear Sir or Madam:

As you know, the California High-Speed Rail Authority (Authority) has identified that several of your properties are located within the Merced-Fresno project footprint and will be affected by the train alignment. The high-speed train alignment and right-of-way (ROW) will run generally parallel from Avenue 17 to Avenue 13 along the BNSF corridor. I've included maps from the Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) that show the location of the train alignment relative to your properties.

Construction on the southern portion of the Merced-Fresno alignment, which includes Madera County, will begin in 2013. To meet this timeline, the Authority has begun to do preliminary work to ensure that the construction teams have accurate information. One of the first steps is to conduct on-the-ground surveys to verify property boundaries.

We want to make sure that you understand the purpose and importance of this work before they begin. O'Dell Engineering, professional land surveyors, are legally allowed reasonable access to enter onto property for survey-related purposes under Section 846.5 of the Civil Code and Section 8774 of the Business and Professions Code. The survey teams will not be collecting any information about the property other than verifying legal boundaries. They will be mindful of gates, fences, stock, crops, equipment, etc. You are welcome to join the survey team as they conduct work on your property.

Please feel free to contact me at 916-324-1541 or pjones@hsr.ca.gov if you have any additional questions.

Sincerely,

Patricia L. Jones, SR/WA
Director of Real Property
California High-Speed Rail Authority

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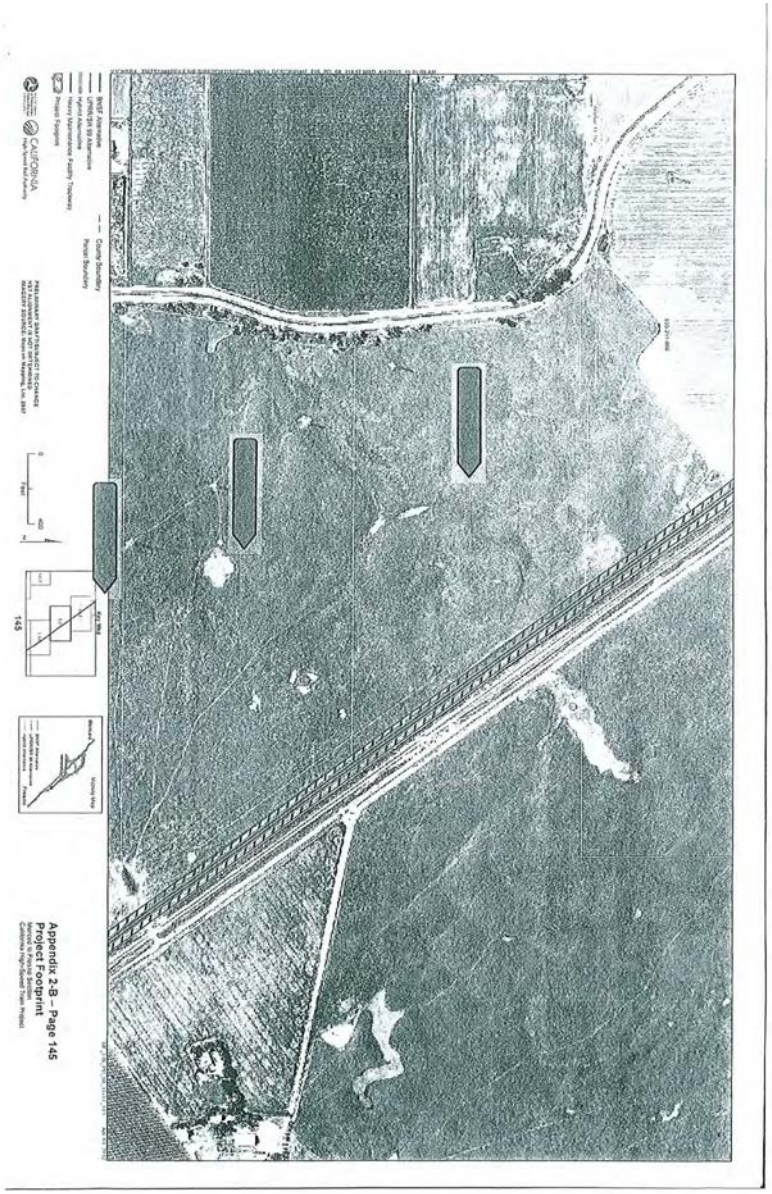

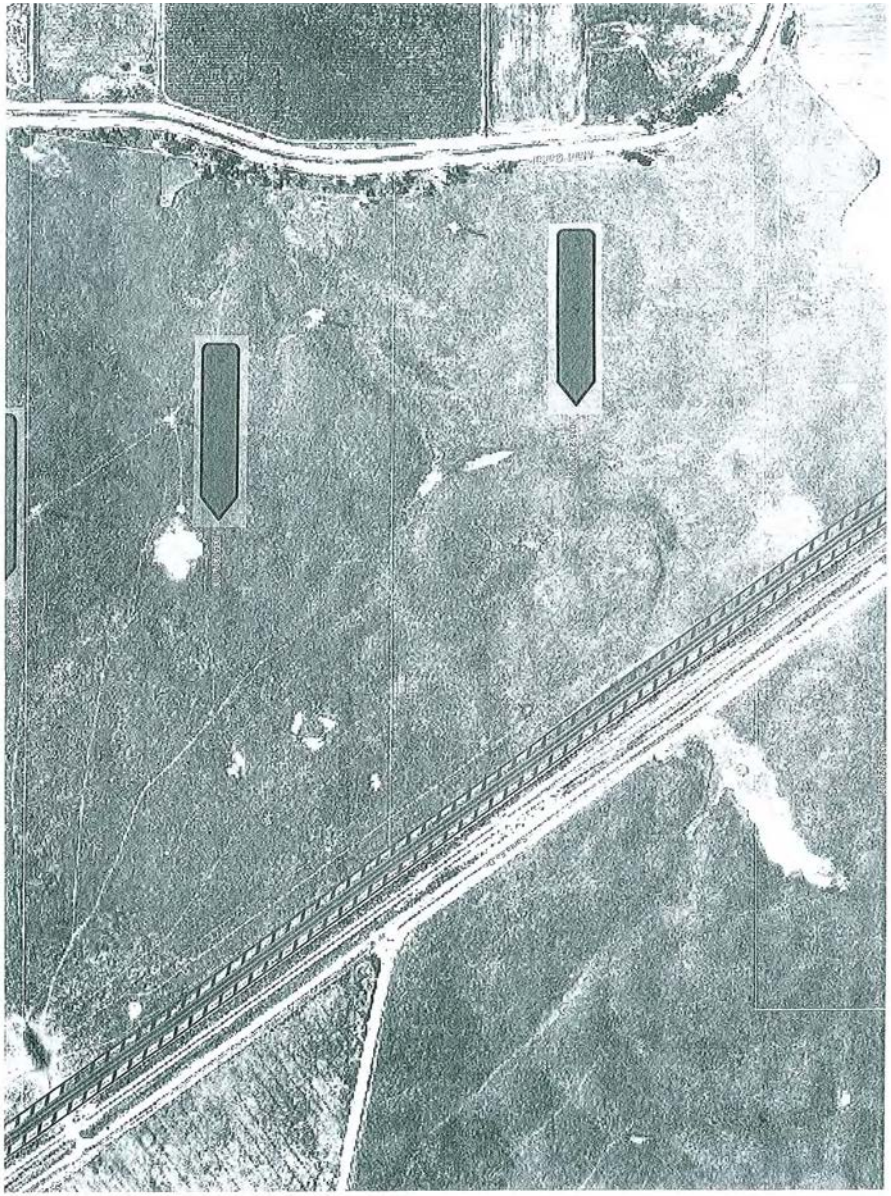

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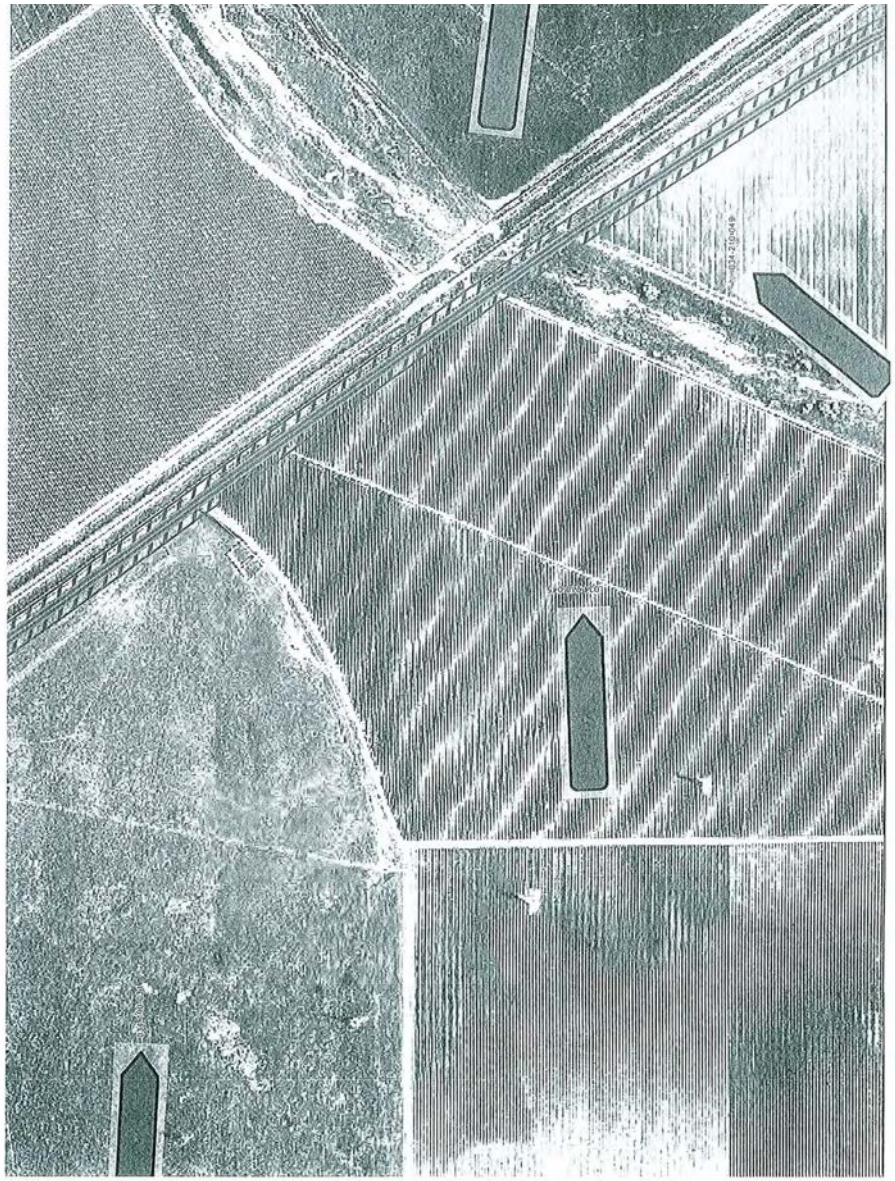

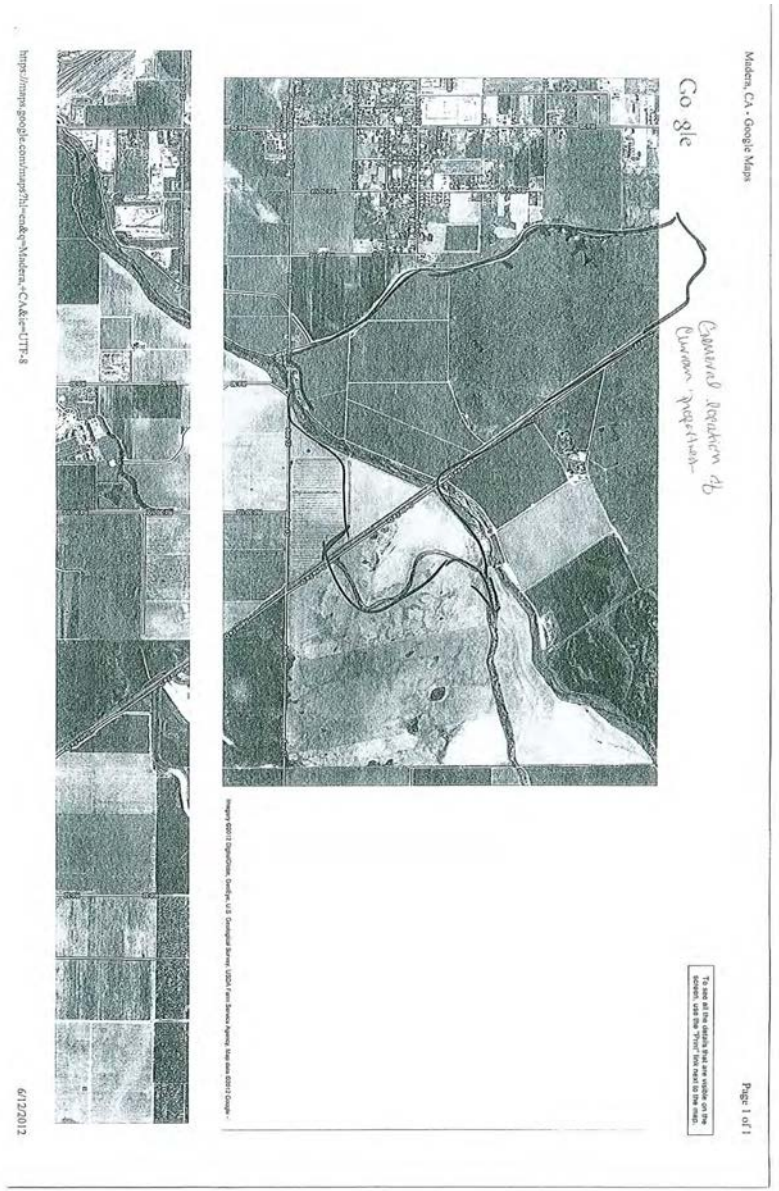

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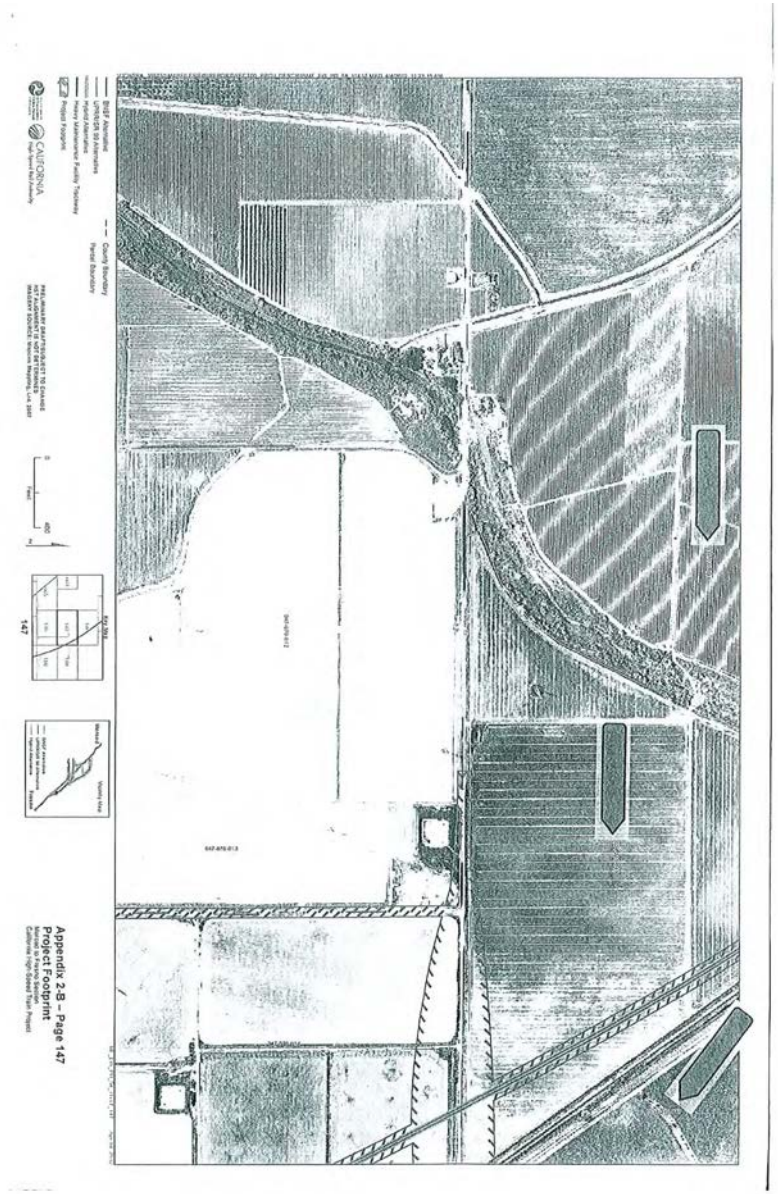
Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued



Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

California High-Speed Train Project

Request for Proposal for Design-Build Services

RFP No.: HSR 11-16
Right-of-Way Acquisition Plan

Addendum No. 4

July 30, 2012

Explanatory Notes for CP-01 A and B Right-of-Way Acquisition Plans:

The following contains updates to the Full and Partial Acquisitions for CP-01 A and B.

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
AVENUE 17 TO AVENUE 7		
037-030-006	Partial Acquisition	NTP + 240-270
037-030-007	Partial Acquisition	NTP + 210-240
037-030-008	Partial Acquisition	NTP + 210-240
037-030-012	Partial Acquisition	NTP + 210-240
037-030-013	Partial Acquisition	NTP + 210-240
037-030-016	Partial Acquisition	NTP + 210-240
037-060-016	Partial Acquisition	NTP + 210-240
037-060-017	Partial Acquisition	NTP + 210-240
037-060-018	Full Acquisition	NTP + 240-270
037-060-019	Partial Acquisition	NTP + 210-240
037-111-023	Partial Acquisition	NTP + 210-240
037-111-024	Partial Acquisition	NTP + 210-240
037-111-025	Partial Acquisition	NTP + 210-240
037-111-033	Full Acquisition	NTP + 240-270
037-111-032	Partial Acquisition	NTP + 210-240
037-112-003	Partial Acquisition	NTP + 210-240
037-112-004	Partial Acquisition	NTP + 210-240
035-030-015	Partial Acquisition	NTP + 210-240
035-030-003	Partial Acquisition	NTP + 210-240
035-030-016	Partial Acquisition	NTP + 210-240
035-030-017	Partial Acquisition	NTP + 210-240
035-091-016	Partial Acquisition	NTP + 240-270
035-092-001	Partial Acquisition	NTP + 240-270
035-092-002	Partial Acquisition	NTP + 210-240
035-092-010	Partial Acquisition	NTP + 210-240
035-092-009	Partial Acquisition	NTP + 210-240
035-092-008	Partial Acquisition	NTP + 210-240
035-092-012	Full Acquisition	NTP + 240-270
035-092-011	Partial Acquisition	NTP + 210-240
035-092-013	Full Acquisition	NTP + 210-240
035-102-042	Partial Acquisition	NTP + 210-240
035-102-030	Partial Acquisition	NTP + 240-270
035-102-031	Partial Acquisition	NTP + 210-240
035-102-018	Partial Acquisition	NTP + 210-240
035-102-040	Partial Acquisition	NTP + 210-240
035-102-020	Full Acquisition	NTP + 210-240
035-102-039	Partial Acquisition	NTP + 210-240
035-102-038	Partial Acquisition	NTP + 210-240
035-102-037	Partial Acquisition	NTP + 210-240
035-102-024	Partial Acquisition	NTP + 210-240
035-102-023	Partial Acquisition	NTP + 210-240
035-102-015	Partial Acquisition	NTP + 210-240
035-110-021	Partial Acquisition	NTP + 210-240
035-110-020	Partial Acquisition	NTP + 210-240
035-110-029	Partial Acquisition	NTP + 210-240
035-171-005	Partial Acquisition	NTP + 210-240
035-171-013	Full Acquisition	NTP + 240-270
035-171-003	Full Acquisition	NTP + 210-240
035-171-012	Partial Acquisition	NTP + 210-240
035-162-033	Partial Acquisition	NTP + 210-240
035-162-034	Partial Acquisition	NTP + 810-840
035-162-024	Partial Acquisition	NTP + 210-240
035-162-032	Partial Acquisition	NTP + 210-240

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APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
035-162-025	Partial Acquisition	NTP + 210-240
035-162-003	Partial Acquisition	NTP + 210-240
035-171-001	Partial Acquisition	NTP + 210-240
035-171-011	Partial Acquisition	NTP + 210-240
035-211-006	Partial Acquisition	NTP + 210-240
035-212-002	Partial Acquisition	NTP + 210-240
035-232-002	Partial Acquisition	NTP + 210-240
035-232-003	Partial Acquisition	NTP + 210-240
034-190-031	Partial Acquisition	NTP + 210-240
034-210-045	Partial Acquisition	NTP + 210-240
034-210-049	Partial Acquisition	NTP + 210-240
034-210-047	Partial Acquisition	NTP + 210-240
047-070-014	Partial Acquisition	NTP + 210-240
047-080-001	Partial Acquisition	NTP + 210-240
047-070-013	Partial Acquisition	NTP + 210-240
047-070-007	Partial Acquisition	NTP + 210-240
047-130-020	Partial Acquisition	NTP + 210-240
047-120-004	Partial Acquisition	NTP + 210-240
047-120-013	Partial Acquisition	NTP + 210-240
047-120-014	Partial Acquisition	NTP + 210-240
047-130-026	Partial Acquisition	NTP + 210-240
047-130-016	Partial Acquisition	NTP + 210-240
047-130-023	Partial Acquisition	NTP + 210-240
047-130-027	Partial Acquisition	NTP + 210-240
047-120-017	Partial Acquisition	NTP + 210-240
047-130-028	Partial Acquisition	NTP + 210-240
047-130-029	Partial Acquisition	NTP + 210-240
047-130-030	Partial Acquisition	NTP + 210-240
047-130-022	Partial Acquisition	NTP + 210-240
047-230-016	Partial Acquisition	NTP + 210-240
047-240-006	Partial Acquisition	NTP + 210-240
047-240-007	Partial Acquisition	NTP + 300-330
047-240-004	Partial Acquisition	NTP + 210-240
047-240-005	Partial Acquisition	NTP + 210-240
047-240-003	Partial Acquisition	NTP + 210-240
047-320-009	Partial Acquisition	NTP + 210-240
047-320-010	Partial Acquisition	NTP + 300-330
047-320-005	Partial Acquisition	NTP + 300-330
047-320-004	Partial Acquisition	NTP + 210-240
047-330-005	Partial Acquisition	NTP + 210-240
048-070-008	Partial Acquisition	NTP + 210-240
048-080-001	Partial Acquisition	NTP + 300-330
048-080-003	Partial Acquisition	NTP + 510-540
048-080-004	Partial Acquisition	NTP + 510-540
048-190-011	Partial Acquisition	NTP + 510-540
048-190-028	Partial Acquisition	NTP + 600-630
048-190-029	Partial Acquisition	NTP + 600-630
048-190-014	Partial Acquisition	NTP + 600-630
048-200-002	Partial Acquisition	NTP + 210-240
048-200-006	Partial Acquisition	NTP + 210-240
048-200-008	Partial Acquisition	NTP + 210-240
048-200-007	Partial Acquisition	NTP + 210-240

CHSRA ROW Acquisition Plan Summary, Construction Package 1A and 1B July 2012

APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
AVENUE 7 TO SR- 41		
458-240-33	Full Acquisition	NTP + 30-60
458-240-32	Full Acquisition	NTP + 120-150
458-240-10	Full Acquisition	NTP + 30-60
458-250-07	Full Acquisition	NTP + 120-150
458-250-08	Full Acquisition	NTP + 120-150
450-271-12	Full Acquisition	NTP + 60-90
450-273-26	Full Acquisition	NTP + 120-150
508-020-25	Full Acquisition	NTP + 30-60
510-070-63	Full Acquisition	NTP + 30-60
510-050-05	Full Acquisition	NTP + 90-120
505-080-16	Full Acquisition	NTP + 30-60
465-040-23	Full Acquisition	NTP + 570-600
465-040-05	Full Acquisition	NTP + 720-750
465-040-31	Full Acquisition	NTP + 570-600
467-063-18	Full Acquisition	NTP + 120-150
467-063-19	Full Acquisition	NTP + 120-150
467-030-29	Full Acquisition	NTP + 30-60
467-071-02	Full Acquisition	NTP + 120-150
467-040-07	Full Acquisition	NTP + 30-60
467-040-05	Full Acquisition	NTP + 30-60
467-050-23	Full Acquisition	NTP + 120-150
450-155-18	Full Acquisition	NTP + 30-60
450-155-16	Full Acquisition	NTP + 30-60
467-081-07	Full Acquisition	NTP + 120-150
504-050-34	Full Acquisition	NTP + 240-270
504-070-33	Full Acquisition	NTP + 120-150
504-070-51	Full Acquisition	NTP + 120-150
504-106-02	Full Acquisition	NTP + 30-60
504-106-04	Full Acquisition	NTP + 210-240
504-106-05	Full Acquisition	NTP + 180-210
504-060-70	Full Acquisition	NTP + 240-270
504-140-11	Full Acquisition	NTP + 240-270
458-250-37	Full Acquisition	NTP + 210-240
465-020-23	Full Acquisition	NTP + 210-240
465-020-13	Full Acquisition	NTP + 120-150
465-030-18	Full Acquisition	NTP + 210-240
465-030-16	Full Acquisition	NTP + 570-600
450-271-18	Full Acquisition	NTP + 150-180
450-272-28	Full Acquisition	NTP + 60-90
450-272-27	Full Acquisition	NTP + 60-90
450-272-14	Full Acquisition	NTP + 30-60
450-272-13	Full Acquisition	NTP + 60-90
450-272-12	Full Acquisition	NTP + 60-90
450-273-13	Full Acquisition	NTP + 240-270
450-273-12	Full Acquisition	NTP + 240-270
459-023-55	Full Acquisition	NTP + 120-150
508-020-14	Full Acquisition	NTP + 30-60
508-020-15	Full Acquisition	NTP + 300-330
508-020-16	Full Acquisition	NTP + 300-330
508-101-19	Full Acquisition	NTP + 30-60
508-102-09	Full Acquisition	NTP + 30-60
508-110-07	Full Acquisition	NTP + 30-60
508-110-08	Full Acquisition	NTP + 30-60

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

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APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
510-070-53	Full Acquisition	NTP + 120-150
510-470-01	Full Acquisition	NTP + 240-270
510-470-02	Full Acquisition	NTP + 240-270
510-470-03	Full Acquisition	NTP + 240-270
510-470-04	Full Acquisition	NTP + 240-270
510-470-05	Full Acquisition	NTP + 240-270
510-470-10	Full Acquisition	NTP + 240-270
510-470-06	Full Acquisition	NTP + 240-270
510-470-07	Full Acquisition	NTP + 240-270
510-470-08	Full Acquisition	NTP + 240-270
510-470-09	Full Acquisition	NTP + 240-270
510-470-11	Full Acquisition	NTP + 240-270
510-470-12	Full Acquisition	NTP + 240-270
510-100-49	Full Acquisition	NTP + 30-60
442-122-03	Full Acquisition	NTP + 30-60
449-180-08	Full Acquisition	NTP + 30-60
449-180-09	Full Acquisition	NTP + 30-60
449-180-10	Full Acquisition	NTP + 30-60
450-280-01	Full Acquisition	NTP + 30-60
510-050-02	Full Acquisition	NTP + 30-60
465-040-06	Full Acquisition	NTP + 570-600
465-040-04	Full Acquisition	NTP + 120-150
465-040-03	Full Acquisition	NTP + 120-150
465-040-22	Full Acquisition	NTP + 120-150
465-040-21	Full Acquisition	NTP + 120-150
467-030-23	Full Acquisition	NTP + 30-60
467-030-19	Full Acquisition	NTP + 30-60
467-030-25	Full Acquisition	NTP + 30-60
467-061-15	Full Acquisition	NTP + 120-150
467-062-11	Full Acquisition	NTP + 240-270
467-030-17	Full Acquisition	NTP + 210-240
467-030-04	Full Acquisition	NTP + 210-240
467-063-37	Full Acquisition	NTP + 240-270
467-030-03	Full Acquisition	NTP + 570-600
467-071-01	Full Acquisition	NTP + 150-180
467-040-12	Full Acquisition	NTP + 60-90
467-040-06	Full Acquisition	NTP + 30-60
467-040-04	Full Acquisition	NTP + 30-60
442-122-05	Full Acquisition	NTP + 120-150
449-161-02	Full Acquisition	NTP + 210-240
449-162-01	Full Acquisition	NTP + 30-60
449-162-02	Full Acquisition	NTP + 30-60
449-162-03	Full Acquisition	NTP + 30-60
449-162-04	Full Acquisition	NTP + 30-60
449-162-05	Full Acquisition	NTP + 30-60
450-280-31	Full Acquisition	NTP + 150-180
450-154-08	Full Acquisition	NTP + 30-60
450-155-17	Full Acquisition	NTP + 120-150
450-155-15	Full Acquisition	NTP + 30-60
467-081-19	Full Acquisition	NTP + 60-90
467-081-06	Full Acquisition	NTP + 150-180
467-081-05	Full Acquisition	NTP + 150-180
467-082-01	Full Acquisition	NTP + 60-90
465-020-22	Full Acquisition	NTP + 570-600

APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
048-270-009	Partial Acquisition	NTP + 210-240
048-270-008	Partial Acquisition	NTP + 210-240
504-130-22	Partial Acquisition	NTP + 90-120
504-130-20	Partial Acquisition	NTP + 120-150
504-130-08	Partial Acquisition	NTP + 90-120
504-010-15	Partial Acquisition	NTP + 120-150
504-010-09	Partial Acquisition	NTP + 120-150
504-010-16	Partial Acquisition	NTP + 120-150
504-070-41	Partial Acquisition	NTP + 90-120
504-070-39	Partial Acquisition	NTP + 90-120
504-060-73	Partial Acquisition	NTP + 90-120
504-060-71	Partial Acquisition	NTP + 90-120
504-060-75	Partial Acquisition	NTP + 90-120
504-140-12	Partial Acquisition	NTP + 180-210
504-080-47	Partial Acquisition	NTP + 90-120
504-080-66	Partial Acquisition	NTP + 90-120
504-080-67	Partial Acquisition	NTP + 90-120
504-080-32	Partial Acquisition	NTP + 90-120
504-080-39	Partial Acquisition	NTP + 90-120
504-080-38	Partial Acquisition	NTP + 90-120
504-080-37	Partial Acquisition	NTP + 30-60
458-133-15	Partial Acquisition	NTP + 120-150
458-010-05	Partial Acquisition	NTP + 120-150
458-240-31	Partial Acquisition	NTP + 30-60
458-250-10	Partial Acquisition	NTP + 30-60
458-010-19	Partial Acquisition	NTP + 120-150
458-010-17	Partial Acquisition	NTP + 120-150
458-131-17	Partial Acquisition	NTP + 120-150
458-131-21	Partial Acquisition	NTP + 120-150
459-023-56	Partial Acquisition	NTP + 120-150
459-023-18	Partial Acquisition	NTP + 120-150
459-023-59	Partial Acquisition	NTP + 120-150
459-023-51	Partial Acquisition	NTP + 120-150
504-080-33	Partial Acquisition	NTP + 30-60
508-020-04	Partial Acquisition	NTP + 90-120
508-020-01	Partial Acquisition	NTP + 120-150
508-030-12	Partial Acquisition	NTP + 90 - 120
508-101-18	Partial Acquisition	NTP + 30-60
508-102-04	Partial Acquisition	NTP + 30-60
508-102-07	Partial Acquisition	NTP + 30-60
508-102-08	Partial Acquisition	NTP + 30-60
508-102-10	Partial Acquisition	NTP + 30-60
508-110-45	Partial Acquisition	NTP + 240-270
508-110-09	Partial Acquisition	NTP + 30-60
510-050-26	Partial Acquisition	NTP + 30-60
510-060-32	Partial Acquisition	NTP + 30-60
510-060-33	Partial Acquisition	NTP + 30-60
510-070-62	Partial Acquisition	NTP + 30-60
510-090-45	Partial Acquisition	NTP + 30-60
510-090-46	Partial Acquisition	NTP + 30-60
510-090-43	Partial Acquisition	NTP + 30-60
510-090-40	Partial Acquisition	NTP + 30-60
510-460-15	Partial Acquisition	NTP + 30-60
510-100-15	Partial Acquisition	NTP + 180-210

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APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
510-100-36	Partial Acquisition	NTP + 30-60
433-040-25	Partial Acquisition	NTP + 30-60
442-122-02	Partial Acquisition	NTP + 30-60
442-122-15	Partial Acquisition	NTP + 90-120
449-161-04	Partial Acquisition	NTP + 30-60
449-161-05	Partial Acquisition	NTP + 30-60
450-280-02	Partial Acquisition	NTP + 30-60
450-280-03	Partial Acquisition	NTP + 30-60
450-280-11	Partial Acquisition	NTP + 30-60
450-280-12	Partial Acquisition	NTP + 30-60
508-110-48	Partial Acquisition	NTP + 30-60
508-120-18	Partial Acquisition	NTP + 30-60
508-130-01	Partial Acquisition	NTP + 30-60
509-050-05	Partial Acquisition	NTP + 30-60
509-050-06	Partial Acquisition	NTP + 30-60
509-080-11	Partial Acquisition	NTP + 90 - 120
509-080-13	Partial Acquisition	NTP + 30-60
509-080-45	Partial Acquisition	NTP + 30-60
510-050-01	Partial Acquisition	NTP + 30-60
510-050-06	Partial Acquisition	NTP + 30-60
424-042-22	Partial Acquisition	NTP + 120-150
424-042-05	Partial Acquisition	NTP + 120-150
433-040-44	Partial Acquisition	NTP + 120-150
504-080-69	Partial Acquisition	NTP + 30-60
504-080-74	Partial Acquisition	NTP + 30 - 60
504-080-71	Partial Acquisition	NTP + 30-60
504-080-14	Partial Acquisition	NTP + 30-60
504-080-46	Partial Acquisition	NTP + 30-60
504-010-20	Partial Acquisition	NTP + 120-150
504-010-21	Partial Acquisition	NTP + 120-150
504-080-44	Partial Acquisition	NTP + 30-60
504-080-08	Partial Acquisition	NTP + 30-60
504-080-09	Partial Acquisition	NTP + 30-60
506-130-28	Partial Acquisition	NTP + 30-60
506-130-21	Partial Acquisition	NTP + 30-60
505-080-17	Partial Acquisition	NTP + 30-60
505-080-21	Partial Acquisition	NTP + 90-120
465-040-36	Partial Acquisition	NTP + 120-150
467-030-22	Partial Acquisition	NTP + 120-150
467-030-32	Partial Acquisition	NTP + 120-150
467-071-03	Partial Acquisition	NTP + 120-150
467-040-21	Partial Acquisition	NTP + 120-150
467-050-24	Partial Acquisition	NTP + 120-150
467-020-50	Partial Acquisition	NTP + 120-150
442-122-37	Partial Acquisition	NTP + 120-150
442-122-33	Partial Acquisition	NTP + 120-150
442-122-36	Partial Acquisition	NTP + 120-150
442-122-34	Partial Acquisition	NTP + 120-150
442-122-35	Partial Acquisition	NTP + 120-150
449-020-16	Partial Acquisition	NTP + 210-240
442-123-04	Partial Acquisition	NTP + 120-150
442-123-05	Partial Acquisition	NTP + 120-150
442-123-03	Partial Acquisition	NTP + 120-150
449-162-20	Partial Acquisition	NTP + 30-60

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

CHSRA ROW Acquisition Plan Summary, Construction Package 1A and 1B July 2012

APN	ACQUISITION TYPE	PROPOSED ACCESS DATE RANGE
450-280-08	Partial Acquisition	NTP + 30-60
450-155-21	Partial Acquisition	NTP + 120-150
450-155-12	Partial Acquisition	NTP + 120-150
467-084-22	Partial Acquisition	NTP + 30-60
467-050-28 (old APN 467-050-19)	Partial Acquisition	NTP + 120-150
468-294-05	Partial Acquisition	NTP + 120-150
468-294-06	Partial Acquisition	NTP + 120-150
508-110-14	Partial Acquisition	NTP + 30-60
508-110-13	Partial Acquisition	NTP + 30-60
510-050-03	Partial Acquisition	NTP + 30-60
510-050-30	Partial Acquisition	NTP + 30-60
510-050-31	Partial Acquisition	NTP + 30-60
510-050-25	Partial Acquisition	NTP + 30-60
459-111-14	Partial Acquisition	NTP + 30-60
449-162-22	Partial Acquisition	NTP + 120-150
458-250-15	Partial Acquisition	NTP + 120-150
458-250-25	Partial Acquisition	NTP + 120-150
458-250-27	Partial Acquisition	NTP + 120-150
458-250-09	Partial Acquisition	NTP + 120-150
458-250-23	Partial Acquisition	NTP + 120-150
508-020-13	Partial Acquisition	NTP + 690-720
508-020-21	Partial Acquisition	NTP + 300-330
508-020-23	Partial Acquisition	NTP + 330-360
510-460-14	Partial Acquisition	NTP + 90-120
467-062-03	Partial Acquisition	NTP + 30-60
504-091-04	Partial Acquisition	NTP + 510-540
510-100-41	Partial Acquisition	NTP + 420-450
467-030-31	Partial Acquisition	NTP + 30-60
504-070-52	Partial Acquisition	NTP + 330-360
504-091-02	Partial Acquisition	NTP + 510-540
504-091-03	Partial Acquisition	NTP + 510-540
508-020-17	Partial Acquisition	NTP + 300-330
508-102-35	Partial Acquisition	NTP + 30-60
508-110-46	Partial Acquisition	NTP + 120-150
508-110-06	Partial Acquisition	NTP + 240-270
510-050-39	Partial Acquisition	NTP + 420-450
510-460-05	Partial Acquisition	NTP + 120-150
510-100-14	Partial Acquisition	NTP + 690-720
510-470-0X	Partial Acquisition	NTP + 180-210
449-161-08	Partial Acquisition	NTP + 150-180
450-280-34	Partial Acquisition	NTP + 60-90
510-050-04	Partial Acquisition	NTP + 420-450
510-100-42	Partial Acquisition	NTP + 240-270
424-045-01	Partial Acquisition	NTP + 240-270
505-080-25	Partial Acquisition	NTP + 210-240
467-081-08	Partial Acquisition	NTP + 60-90
510-460-16	Partial Acquisition	NTP + 210-240
510-100-12	Partial Acquisition	NTP + 210-240
505-080-22	Partial Acquisition	NTP + 690-720
458-240-30	Partial Acquisition	NTP + 630-660
508-020-10	Partial Acquisition	NTP + 390-420
508-020-11	Partial Acquisition	NTP + 390-420
508-020-12	Partial Acquisition	NTP + 390-420

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

BRIEFING: MARCH 2012 BOARD MEETING AGENDA ITEM #3

TO: **Chairman Richard and Board Members**

FROM: **Thomas Fellenz, Chief Counsel**

DATE: **March 1, 2012**

RE: **Terms and Conditions, Stipend and RFP Scoring criteria applicable to the Design Build [DB] construction for the Central Valley Initial Construction Section**

Background/Discussion:

The initial operating segment (IOS) of the California High Speed Train System will run through the Central Valley and includes the initial construction section (ICS) from Fresno to Bakersfield. Construction of the ICS will involve four design build contracts for the final design and construction of all High Speed Rail (HSR) trackway civil infrastructure up to the top of the ballast. A fifth ICS design build contract will be entered into for the trackwork along the entire length of the ICS.

The Authority has started a two-phase best value procurement process for the first of the five ICS design build contracts, designated Construction Package #1. The first Request for Qualifications (RFQ) phase is complete, resulting in the shortlisting of five qualified design build teams which are now invited to participate in the second Request for Proposal (RFP) phase. The proposals submitted by the teams in response to the RFP will be evaluated and scored resulting in a recommendation to the Board to enter into a $1.5 to $2.0 billion design build contract with the selected team, expected to take place in early 2013.

To aid the HSR Authority in the final development of the Request for Proposals documents, a term sheet containing a summary of the major material terms and conditions for the Construction Package #1 design build contract was developed and is presented to the Board for approval.

To partially compensate for the cost of the preparation of the Proposals submitted, the HSR Authority can pay a stipend to those proposer teams not awarded the contract. HSR staff recommends a stipend be paid for each acceptable proposal submitted to the Authority by any shortlisted Offeror that is not awarded the contract or in case of termination of the RFP, proven costs not to exceed $2 million.

In the evaluation of the proposals it is in the best interests of the HSR Authority to assure technically competent proposals and assure the best value is received. HSR staff is recommending a two-step RFP evaluation process that includes a technical evaluation resulting in the qualification of three of the five proposer teams followed by a combined technical/price evaluation of these top three proposer teams.

Recommendations:

Approve the term sheet, the RFP scoring criteria, and the stipend for Construction Package #1 per the terms in the attached Board resolution.

Attachments:
Construction Package #1 Term Sheet
Resolution # HSRA 12-04

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

CHSRA TASK ORDERS
Summary of Estimated Costs for Identified Subtasks Within the 29-Mile "Construction Package 1" Area

Entity	Task Order No.	Estimated Cost
City of Fresno	COF00001	$14,600,824.00
	COF00002	$16,227,866.00
	COF00003	$1,224,400.00
	COF00004	$1,323,471,007.00
County of Fresno	FC00001	$6,982,966.00
Fresno Irrigation District	FID00001	$7,973,567.00
	FID00002	$3,066,863.00
County of Madera	MC00001	$99,133,788.00
Madera Irrigation District	MID00001	$4,342,500.00
Fresno Metropolitan Flood Control District	SD00001	$22,881,087.00
AT&T	AT&T 001	$11,236,000.00
	AT&T 002	$1,261,000.00
Pacific Gas & Electric Co.	PG&E 001	$17,200,000.00
	PG&E 002	$7,478,996.00
	PG&E 003	$8,823,744.00
	TOTAL:	**$1,545,904,608.00**

California High-Speed Rail

Agreement Status

RFP No.: HSR 11-16
Addednum No. 4
July 31, 2012

Entity: City of Fresno

Entity Role: City of Fresno will review and approve Facility Plans and have a reasonable number of representatives on site of Project to verify that the Facility Work is being properly performed by Authority's Contractor and approve that work.

Cooperative Agreement: Cooperative Agreement technical review is 95% complete. Cooperative Agreement is expected to be executed by September 14, 2012.

Task Orders: Draft Task Order 1, 2, 3 and 4 have been prepared and forwarded to the City of Fresno for review. Draft Task Orders are pending City of Fresno input.

DISCLAIMER: **Because the Master Agreement has not yet been approved by the Council of the City of Fresno, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although City of Fresno staff has reviewed the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. COF00001
CHSRP Interaction Removal or Relocation Plan

Date: July 19, 2012
CITY: City of Fresno
Agreement No: 0000000
Task Order No: COF00001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for CITY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. Master Agreement

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing FACILITIES):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. CITY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

TASK ORDER NO. COF00001
CHSRP Interaction Removal or Relocation Plan

- **Subtask S1.01**
  Scope: Design, secure permits, traffic control, remove sanitary sewer FACILITIES from the existing Golden State Blvd and install new sanitary sewer FACILITIES to the new Golden State Blvd. Work includes furnishing and installing new sanitary sewer man holes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES, excavation and removal of existing sanitary FACILITIES which includes pipe, manholes, cleanouts, etc. FACILITY WORK is shown on Drawing UT-C4001.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $204,000

- **Subtask S1.02**
  Scope: Design, secure permits, traffic control, protect in place sanitary sewer FACILITIES and adjust sanitary sewer manhole rim elevation to finish grade. FACILITY WORK is shown on Drawing UT-C4004, UT-C4028 and UT-C4029.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $57,682

- **Subtask S1.03**
  Scope: Design, secure permits, traffic control and reconstruct sanitary sewer FACILITIES within an RCP casing and provide new sanitary sewer man holes. Work includes reconnecting all existing sewer laterals to new sanitary sewer FACILITIES, excavation and removal of existing sanitary FACILITIES which includes pipe, manholes, cleanouts, etc. FACILITY WORK is shown on Drawing UT-C4006.
  Estimated Period of Performance: 1 Month
  The estimated Value for this FACILITY WORK: $435,000

- **Subtask S1.04**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES from the existing Golden State Blvd to the new Golden State Blvd. Work includes excavation and removal of existing sanitary sewer FACILITIES, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4008, UT-C4009 and UT-C4010.
  Estimated Period of Performance: 6 Months
  The estimated Value for this FACILITY WORK: $850,476

- **Subtask S1.05**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES from the existing Golden State Blvd to the new Golden State Blvd. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4011 and UT-C4012.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $317,016

- **Subtask S1.06**
  Scope: Design, secure permits, traffic control, reconstruct sanitary sewer FACILITIES within an RCP casing, extend existing sanitary sewer manholes and adjust rim elevations. Work includes

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reconnecting all existing sewer laterals to new sanitary sewer FACILITIES, excavation and removal of existing sanitary FACILITIES which includes pipe, manholes, cleanouts, etc. FACILITY WORK is shown on Drawing UT-C4012.
Estimated Period of Performance: 1 Month
The estimated Value for this FACILITY WORK: $118,750

- **Subtask S1.07**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES from the existing Golden State Blvd to the new Golden State Blvd. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4014, UT-C4015, UT-C4016, UT-C4017 and UT-C4018.
  Estimated Period of Performance: 8 Months
  The estimated Value for this FACILITY WORK: $1,292,952

- **Subtask S1.08**
  Scope: Design, secure permits, traffic control and protect in place sanitary sewer FACILITIES. FACILITY WORK is shown on Drawing UT-C4019.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $29,356

- **Subtask S1.09**
  Scope: Design, secure permits, traffic control, reconstruct sanitary sewer FACILITIES within an RCP casing, adjust existing sewer manholes and rim elevations. Work includes reconnecting all existing sewer laterals to new sanitary sewer FACILITIES, excavation and removal of existing sanitary sewer FACILITIES. FACILITY WORK is shown on Drawing UT-C4022.
  Estimated Period of Performance: 1 Month
  The estimated Value for this FACILITY WORK: $535,000

- **Subtask S1.10**
  Scope: Design, secure permits, traffic control and protect in place sanitary sewer FACILITIES. FACILITY WORK is shown on Drawing UT-C4022.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $41,492

- **Subtask S1.11**
  Scope: Design, secure permits, traffic control and protect in place and relocate sanitary sewer FACILITIES from the existing Parkway Drive to the new Parkway Drive. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4024.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $66,024

- **Subtask S1.12**

TASK ORDER NO. COF00001
CHSRP Interaction Removal or Relocation Plan

Scope: Design, secure permits, traffic control, protect in place sanitary sewer FACILITIES, extend sanitary sewer manholes and adjust sanitary sewer manhole rim elevation to finish grade. FACILITY WORK is shown on Drawing UT-C4030 and UT-C4031.
Estimated Period of Performance: 2 Months
The estimated Value for this FACILITY WORK: $123,778

- **Subtask S1.13**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES at Santa Ana Ave and Cornelia Ave. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4032.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $348,161

- **Subtask S1.14**
  Scope: Design, secure permits, traffic control, remove and relocate sanitary sewer FACILITIES at McKinley Ave and Golden State Blvd. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4036, UT-C4037 and UT-C4046.
  Estimated Period of Performance: 3 Months
  The estimated Value for this FACILITY WORK: $436,764

- **Subtask S1.15**
  Scope: Design, secure permits, traffic control and protect in place sanitary sewer FACILITIES at Pine Ave and Golden State Blvd. FACILITY WORK is shown on Drawing UT-C4038.
  Estimated Period of Performance: 2 Month
  The estimated Value for this FACILITY WORK: $282,500

- **Subtask S1.16**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES at McKinley Ave and Golden State Blvd. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4039 and UT-C4048.
  Estimated Period of Performance: 1 Month
  The estimated Value for this FACILITY WORK: $122,400

- **Subtask S1.17**
  Scope: Design, secure permits, traffic control, remove and relocate sanitary sewer FACILITIES near Belmont Ave and Golden State Blvd. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4041, UT-C4042, UT-C4050 and UT-C4051.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $576,708

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

- **Subtask S1.18**
  Scope: Design, secure permits, traffic control and remove sanitary sewer FACILITIES near Belmont Ave and H St. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4042.
  Estimated Period of Performance: 1 Month
  The estimated Value for this FACILITY WORK: $66,300

- **Subtask S1.19**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES near H St and SR 180. Work includes excavation and removal of sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4043 and UT-C4053.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $441,307

- **Subtask S1.20**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES near Divisadero St and H St. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4044, UT-C4045 and UT-C4054.
  Estimated Period of Performance: 3 Months
  The estimated Value for this FACILITY WORK: $794,784

- **Subtask S1.21**
  Scope: Design, secure permits, traffic control, protect in place sanitary sewer FACILITIES at G St and Fresno St. FACILITY WORK is shown on Drawing UT-C4055.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $96,432

- **Subtask S1.22**
  Scope: Design, secure permits, traffic control, protect in place and relocate sanitary sewer FACILITIES near G St and Tulare St. Work includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4055 and UT-C4056.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $395,592

- **Subtask S1.23**
  Scope: Design, secure permits, traffic control, relocate and protect in place sanitary sewer FACILITIES near G St and Ventura St. FACILITY WORK includes excavation and removal of existing sanitary sewer FACILITIES, removal of existing sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4057 and UT-C4059
  Estimated Period of Performance: 6 Months
  The estimated Value for this FACILITY WORK: $663,702

- **Subtask S1.24**
  Scope: Design, secure permits, traffic control and protect in place sanitary sewer FACILITIES near G St and Ventura St. FACILITY WORK is shown on Drawing UT-C4057.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $91,800

- **Subtask S1.25**
  Scope: Design, secure permits, traffic control, remove, relocate and protect in place sanitary sewer FACILITIES near G St and SR 41. FACILITY WORK includes excavation and removal of existing sanitary sewer FACILITIES and reconnecting all existing sewer laterals to new sanitary sewer FACILITIES. FACILITY WORK is shown on Drawing UT-C4060.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $294,284

- **Subtask S1.26**
  Scope: Design, secure permits, traffic control, remove, relocate and install sanitary sewer FACILITIES along Railroad Ave between SR 41 and SR99. FACILITY WORK includes excavation and removal of existing sanitary FACILITIES and reconnecting all existing sewer laterals to new sanitary sewer FACILITIES. FACILITY WORK is shown on Drawing UT C4061, UT-C4062, UT-C4063, UT-C4064, UT-C4065, UT-C4078, UT-C4079, UT-C4080, UT-C4081 and UT-C4082.
  Estimated Period of Performance: 12 Months
  The estimated Value for this FACILITY WORK: $4,322,964

- **Subtask S1.27**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES within a near Jensen Ave and Railroad Ave. FACILTITY WORK includes excavation and removal of existing sanitary sewer FACILITIES, removal of sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4065, UT-C4066 and UT-C4084.
  Estimated Period of Performance: 6 Months
  The estimated Value for this FACILITY WORK: $612,000

- **Subtask S1.28**
  Scope: Design, secure permits, traffic control and relocate sanitary sewer FACILITIES within a near Orange Ave and Golden State Blvd. FACILITY WORK includes excavation and removal of existing sanitary sewer FACILITIES, removal of sanitary sewer manholes, reconnecting all existing sewer laterals to new sanitary sewer FACILITIES and new sanitary sewer manholes. FACILITY WORK is shown on Drawing UT-C4068.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $61,200

- **Subtask S1.29**

TASK ORDER NO. COF00001
CHSRP Interaction Removal or Relocation Plan

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Scope: Design, secure permits, traffic control and protect in place FACILITIES near Hardy Ave and Cedar Ave. FACILITY WORK is shown on Drawing UT-C4069.
Estimated Period of Performance: 36 Months
The estimated Value for this FACILITY WORK: $122,400

- **Subtask S1.30**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse the CITY for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only) in accordance with the Master Fee Schedule. AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $800,000

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

TASK ORDER NO. COF00001
CHSRP Interaction Removal or Relocation Plan

PEFORMANCE OF THE FACILITY WORK

1. Design

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, CITY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY CITY: CITY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. Construction

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, CITY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $14,600,824

Cost Allocation

AUTHORITY pays 100 % and CITY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. For Work by CITY

CITY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. COF00001
CHSRP Interaction Removal or Relocation Plan

2. For Work by AUTHORITY'S CONTRACTOR

AUTHORITY has prepared an initial cost estimate in the amount of $14,600,824 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

CITY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

CITY: Scott Mozier

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

TASK ORDER NO. COF00002
CHSRP Interaction Removal or Relocation Plan

Date: April 12, 2012
CITY: City of Fresno
Agreement No: 0000000
Task Order No: COF00002
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for CITY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. Master Agreement

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing FACILITIES):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. CITY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work. AUTHORITY'S CONTRACTOR is to coordinate with CITY for water connections and water connection fees.

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

- **Subtask W2.01**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES from the existing Golden State Blvd to the new Golden State Blvd. FACILITY WORK includes removing & replacing water valves, remove & replace fire hydrants, disconnect existing water facilities, connections to new water FACILITIES, blow offs, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4000 and UT-C4001.
  Estimated Period of Performance: 3 Months
  The estimated Value for this FACILITY WORK: $536,123

- **Subtask W2.02**
  Scope: Design, secure permits, traffic control, relocate, remove and reconstruct water FACILITIES from the existing Golden State Blvd to the new Golden State Blvd and Veterans Blvd at Golden State Blvd. FACILITY WORK includes removing & replacing water valves, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4007, UT-C4008, UT-C4009, UT-C4010, UT-C4011 and UT-C4012.
  Estimated Period of Performance: 10 Months
  The estimated Value for this FACILITY WORK: $2,187,093

- **Subtask W2.03**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES from the existing Golden State Blvd to the new Golden State Blvd, relocate water FACILITIES near Shaw Ave and Golden State Blvd, reconstruct water facilities near Ashlan Ave and Golden State Blvd. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4012, UT-C4013, UT-C4014, UT-C4015, UT-C4016 and UT-C4017.
  Estimated Period of Performance: 10 Months
  The estimated Value for this FACILITY WORK: $2,474,566

- **Subtask W2.04**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES from the existing Parkway Drive and Dakota Ave. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4018 and UT-C4019.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $198,625

- **Subtask W2.05**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES adjacent to SR 99 between Dakota Ave and Clinton Ave. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4019, UT-C4020, UT-C4021 and UT-C4022.
  Estimated Period of Performance: 3 Months
  The estimated Value for this FACILITY WORK: $612,255

- **Subtask W2.06**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES at Clinton Ave and Parkway Dr. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4024.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $386,860

- **Subtask W2.07**
  Scope: Design, secure permits, traffic control and protect in place and relocate water FACILITIES at Shaw Ave and Golden State Blvd. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4030.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $75,440

- **Subtask W2.08**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES at Cornelia Ave and Santa Ana Ave. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4024.
  Estimated Period of Performance: 1 Month
  The estimated Value for this FACILITY WORK: $95,130

- **Subtask W2.09**
  Scope: Design, secure permits, traffic control and protect in place water FACILITIES at Golden State Blvd and Clinton Ave. FACILITY WORK is shown on Drawing UT-C4035.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $57,400

- **Subtask W2.10**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES at McKinley Ave and Golden State Blvd. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4037, UT-C4046 and UT-C4047.
  Estimated Period of Performance: 2 Months

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The estimated Value for this FACILITY WORK: $449,834

- **Subtask W2.11**
  Scope: Design, secure permits, traffic control and protect in place water FACILITIES at Golden State Blvd and Pine Ave. FACILITY WORK is shown on Drawing UT-C4038.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $24,600

- **Subtask W2.12**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES at Olive Ave and Golden State Blvd. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4039, UT-C4048 and UT-C4049.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $437,229

- **Subtask W2.13**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES at Belmont Ave and Golden State Blvd. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4041 and UT-C4042.
  Estimated Period of Performance: 3 Months
  The estimated Value for this FACILITY WORK: $678,422

- **Subtask W2.14**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES at Belmont Ave and H St. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4042 and UT-C4052.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $248,248

- **Subtask W2.15**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES near Divisadero and H St. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4044 and UT-C4053.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $248,864

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- **Subtask W2.16**
  Scope: Design, secure permits, traffic control and protect water FACILITIES at Fresno St and G St. FACILITY WORK is shown on Drawing UT-C4055.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $41,000

- **Subtask W2.17**
  Scope: Design, secure permits, traffic control, relocate and protect in place water FACILITIES a near Tulare St and G St. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4056
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $140,462

- **Subtask W2.18**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES near Ventura St and H St. Work includes removing & replacing water valves, adjusting valve boxes, removing & replacing fire hydrants, disconnect existing water FACILITIES, connections to new water FACILITIES, blow offs, reducers, casings, hangers, thrust blocks, blind flanges, tees, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4057 and UT-C4059.
  Estimated Period of Performance: 3 Months
  The estimated Value for this FACILITY WORK: $624,907

- **Subtask W2.19**
  Scope: Design, secure permits, traffic control, protect in place and remove water facilities near G St and SR 41. Work includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4060.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $63,600

- **Subtask W2.20**
  Scope: Design, secure permits, traffic control, protect in place, relocate, water FACILITIES near California Ave and Railroad Ave. FACILITY WORK includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4061.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $166,200

- **Subtask W2.21**
  Scope: Design, secure permits, traffic control, remove, relocate and protect in place water FACILITIES near Florence Ave and Sarah St. FACILITY WORK includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4062.

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Estimated Period of Performance: 36 Months
The estimated Value for this FACILITY WORK: $142,176

- **Subtask W2.22**
  Scope: Design, secure permits, traffic control, remove, relocate, reconstruct and install water FACILITIES along Railroad Ave near Church Ave and East Ave. FACILITY WORK includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4063, UT-C4064 and UT-C4081.
  Estimated Period of Performance: 6 Months
  The estimated Value for this FACILITY WORK: $616,000

- **Subtask W2.23**
  Scope: Design, secure permits, traffic control, relocate water FACILITIES near Orange Ave and Golden State Blvd. Work includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4068.
  Estimated Period of Performance: 1 Month
  The estimated Value for this FACILITY WORK: $46,200

- **Subtask W2.24**
  Scope: Design, secure permits, traffic control and protect in place water FACILITIES near Hardy Ave and Cedar Ave. FACILITY WORK is shown on Drawing UT-C4069.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $57,400

- **Subtask W2.25**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES near North Ave and Cedar Ave. FACILITY WORK includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4070.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $77,000

- **Subtask W2.26**
  Scope: Design, secure permits, traffic control and protect in place water FACILITIES near Muscat Ave and Cedar Ave. FACILITY WORK is shown on Drawing UT-C4070.
  Estimated Period of Performance: 36 Months
  The estimated Value for this FACILITY WORK: $30,750

- **Subtask W2.27**
  Scope: Design, secure permits, traffic control, relocate the water well at Pump Station 162 near Muscat Ave and Cedar Ave. Replacement well site shall be a minimum of 12,000 SF and capable of producing an equivalent production yield to the well it is replacing. FACILITY WORK shall include, but not be limited to the following; deactivating existing well site, site selection by the City Water Division, test bore and monitoring well to identify potential well yield and water

TASK ORDER NO. COF00002
CHSRP Interaction Removal or Relocation Plan

quality, production well drilling, piping and onsite improvement design, and construction, inspection and well head treatment if applicable.
FACILITY WORK is shown on Drawing UT-C4072.
Estimated Period of Performance: 12 Months
The estimated Value for this FACILITY WORK: $1,500,000

- **Subtask W2.28**
  Scope: Design, secure permits, traffic control and relocate water FACILITIES near Central Ave and Cedar Ave. FACILITY WORK includes disconnecting existing water FACILITIES, connections to new water FACILITIES, excavation and removal of existing water FACILITIES. FACILITY WORK is shown on Drawing UT-C4073, UT-C4085 and UT-C4086.
  Estimated Period of Performance: 4 Months
  The estimated Value for this FACILITY WORK: $369,600.

- **Subtask W2.29**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse the CITY for all costs resulting from plan check review, permits, water connection fees, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only) in accordance with the Master Fee Schedule. AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $900,000

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

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PEFORMANCE OF THE FACILITY WORK

1. **Design**

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, CITY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY CITY: CITY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. **Construction**

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, CITY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $16,227,866.

Cost Allocation

AUTHORITY pays 100 % and CITY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. **For Work by CITY**

CITY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

TASK ORDER NO. COF00002
CHSRP Interaction Removal or Relocation Plan

2. **For Work by AUTHORITY'S CONTRACTOR**

AUTHORITY has prepared an initial cost estimate in the amount of $16,227,866 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

CITY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

CITY: Scott Mozier

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

COF - Task Order 2 (Water) - Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. COF00003
CHSRP Interaction Removal or Relocation Plan

Date: July 20, 2012
CITY: City of Fresno
Agreement No: 0000000
Task Order No: COF00003
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for CITY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. Master Agreement

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing FACILITIES):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. CITY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

TASK ORDER NO. COF00003
CHSRP Interaction Removal or Relocation Plan

- **Subtask F3.01**
  Scope: Design, secure permits, traffic control and relocate fiber optic FACILITIES near G St and Fresno St. Work includes disconnect, new connections, excavate and remove existing fiber optic FACILITIES. FACILITY WORK is shown on Drawing UT-C4055.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $286,000

- **Subtask F3.02**
  Scope: Design, secure permits, traffic control and relocate fiber optic FACILITIES near G St and Tulare St. Work includes disconnect, new connections, excavate and remove existing fiber optic FACILITIES. FACILITY WORK is shown on Drawing UT-C4056.
  Estimated Period of Performance: 2 Months
  The estimated Value for this FACILITY WORK: $200,000

- **Subtask F3.03**
  Scope: Design, secure permits, traffic control and relocate fiber optic FACILITIES along the UPRR ROW between Tulare St and Santa Clara St. Work includes disconnect, new connections, excavate and remove existing fiber optic FACILITIES. FACILITY WORK is shown on Drawing UT-C4056 and UT-C4057.
  Estimated Period of Performance: 4 Months
  The estimated Value for this FACILITY WORK: $658,400

- **Subtask F3.04**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse the CITY for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $80,000

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013

Construction:
Start Date: June 2013

COF - Task Order 3 (Fiber Optic) - Add 4.docx
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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Completion Date: June 2013 **Completion Date:** February 2016

PEFORMANCE OF THE FACILITY WORK

1. **Design**

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, CITY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY CITY: CITY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. **Construction**

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, CITY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $1,224,400.

Cost Allocation

AUTHORITY pays 100 % and CITY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. **For Work by CITY**

CITY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

TASK ORDER NO. COF00003
CHSRP Interaction Removal or Relocation Plan

2. **For Work by AUTHORITY'S CONTRACTOR**

AUTHORITY has prepared an initial cost estimate in the amount of $1,224,400 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

CITY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

CITY: Scott Mozier

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

COF - Task Order 3 (Fiber Optic) - Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Date: July 18, 2012
CITY: City of Fresno
Agreement No: 0000000
Task Order No: COF00004
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for CITY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. Master Agreement

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing FACILITIES):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. CITY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

TASK ORDER NO. COF00004
CHSRP Interaction Removal or Relocation Plan

- **Subtask R4.01**
  Scope: Design, secure permits, traffic control, construct a double track elevated viaduct, retained fill walls on both sides to allow HST to go over Road 33 in Madera County, San Joaquin River, Union Pacific Rail Road Tracks, Motel Drive, Golden State Blvd, Katherine Way and Herndon Ave in Fresno County and roadway modifications. Roadway modifications include the realignment of NB 99 on ramp, SB 99 off ramp, Golden State Blvd, Katherine Way, and Herndon Ave. FACILITY WORK is shown on Drawing SV1885, SV1886, SV1887, SV1888, SV1889, SV1890, SV1891, SV1892, SV1893 and SV1894
  Estimated Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $144,413,567

- **Subtask R4.02**
  Scope: Design, secure permits, traffic control, construct a bridge at Veterans Blvd and roadway modifications in the City of Fresno. Roadway modifications include Veterans Blvd connector and realignment of Bullard Ave. FACILITY WORK is shown on Drawing CV-R1005-GSB, CV-R1013-GSB, ST-I1024 and ST-I1025.
  Estimated Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $27,783,849

- **Subtask R4.03**
  Scope: Design, secure permits, traffic control, dewatering, construct a traffic bridge crossing over the Herndon Canal adjacent to Barstow Ave and Golden State Blvd. Construction of traffic bridge includes PC/PS box girders, concrete barriers, concrete channel lining, rock slope protection, structure approach slab, metal beam guard railing, abutments, CIP/PS concrete slab, ¾" polyester concrete overlay, PC/PS piles, pile caps and any other facilities required to meet the intent of the basis of design. FACILITY WORK is shown on drawing ST-I1001, ST-I1002 and ST-I1003.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $1,238,672

- **Subtask R4.04**
  Scope: Design, secure permits, traffic control, construct a bridge at Shaw Ave and roadway modifications in the City of Fresno. Roadway modifications include realignment of Cornelia Ave, realignment of Weber Ave, realignment of Mission Ave, realignment of Santa Ana Ave and realignment of Jennifer Ave. FACILITY WORK is shown on Drawing CV-R1009-GSB, CV-R1014-GSB-A3, CV-R1015-GSB-A3, CV-R1016-GSB-A3, CV-R1017-GSB-A3, CV-R3007-GSB, CV-G1002-GSB, CV-G1007-A3, CV-G1008-GSB-A3, CV-J1007-GSB-A3, CV-J1018-GSB-A3, CV-J1022-A3, ST-I1004-A3, ST-I1005-A3, ST-I1006 and ST-I1007
  Estimated Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $26,771,084

- **Subtask R4.05**
  Scope: Design, secure permits, traffic control, construct a bridge at Ashlan Ave and roadway modifications in the City of Fresno. Roadway modifications include realignment of Ashlan Ave/ Marty Ave and Golden State Blvd/Ashlan Ave. FACILITY WORK is shown on Drawing ST-I1008, ST-I1009, ST-I1010 and ST-I1011
  Estimated Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $36,093,649

COF - Task Order 4 (Roads) - Add 4.docx
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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

- **Subtask R4.06**
  Scope: Design, secure permits, traffic control, construct roadway modifications in the City of Fresno. Roadway modifications include the realignment of Golden State Blvd between SR 99 on Ramp located near Herndon Ave to Ashlan Ave, realignment of Kathryn Way, realignment of Bryan Ave, realignment of Bullard Ave, Carnegie Ave closure, realignment of Barstow Ave, realignment of Market Ave, realignment of State Ave, realignment of Cornelia Ave, realignment of Santa Ana Ave, realignment of Richert Ave, realignment of Swift Ave, realignment of Motel Dr. FACILITY WORK is shown on Drawing CV-R1001-GSB-A3, CV-R1002-GSB-A3, CV-R1003-GSB, CV-R1004-GSB, CV-R1005-GSB, CV-R1006-GSB, CV-R1007-GSB, CV-R1008-GSB, CV-R1009-GSB, CV-R1010-GSB, CV-R1011-GSB, CV-R1012-GSB, CV-R1013-GSB, CV-R1014-GSB, CV-R1015-GSB, CV-R1016-GSB, CV-R1017-GSB, CV-R3001-GSB, CV-R3002, CV-R3010-GSB-A3, CV-R3011-GSB-A3, CV-J1002-GSB-A3, CV-J1013-GSB-A3, CB1662 and CB1663.
  Estimated Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $47,170,000

- **Subtask R4.07**
  Scope: Design, secure permits, traffic control, construct approximately roadway modifications in the City of Fresno. Roadway modifications include the realignment of Golden State Blvd between Ashlan Ave and Belmont Ave, realignment of Valentine Ave, realignment of Parkway Dr, realignment of Cortland Ave and Golden State Blvd closure near Roeding Park. FACILITY WORK is shown on DrawingTT-D1006, TT-D1007, TT-D1008, TT-D1009, TT-D1010, TT-D1011, TT-D1012 and TT-D1013.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $16,072,00

- **Subtask R4.08**
  Scope: Design, secure permits, traffic control, construct a bridge at Clinton Ave and roadway modifications in the City of Fresno. Roadway modifications include the realignment of Parkway Dr, realignment of Cortland Ave, realignment of Valentine Ave, realignment of Clinton Ave Connector, realignment of Vassar Ave, realignment of Weber Ave/Clinton Ave, realignment of Woodson Ave, realignment of Pleasant Ave, realignment of Shields Ave, realignment of Princeton Ave, realignment of Vassar Ave, realignment of SR 99 SB off ramp, realignment of SR 99 SB, realignment of SR 99 NB off ramp and realignment of SR 99 NB on ramp. FACILITY WORK is shown on Drawing CV-R1010-R99, CV-R1012-R99, CV-R1013-R99, CV-R1016-R99, CV-R1017-R99, ST-I1012, ST-I1013, ST-I1014, ST-I1015, ST-I1016, ST-I1017, ST-I1018, ST-I1019 and ST-I1020.
  Estimated Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $42,924,618

- **Subtask R4.09**
  Scope: Design, secure permits, traffic control, construct an undercrossing at McKinley Ave in the City of Fresno. FACILITY WORK is shown on Drawing ST-I1021, ST-I1022 and ST-I1023.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $1,687,500

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CHSRP Interaction Removal or Relocation Plan

- **Subtask R4.10**
  Scope: Design, secure permits, traffic control, construct a bridge at McKinley Ave roadway modifications in the City of Fresno. Roadway modifications include McKinley Ave Connector, realignment of Weber Ave, realignment of Golden Sate Blvd and West Ave/McKinley Ave intersection. FACILITY WORK is shown on Drawing CV-T1001-A3, CV-T1002-A3, CV-T1003-A3, CV-T1004-A3, CV-T1005-A3, CV-T1006-A3 and ST-K1026-A3, CV-T3001-A3, CV-T3002-A3, CV-T1012-A3.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $16,787,866

- **Subtask R4.11**
  Scope: Design, secure permits, traffic control and construct a bridge at Olive Ave and roadway modifications in the City of Fresno. Roadway modifications include realignment of Golden State Blvd, realignment of West Ave, realignment of Brooks Ave, realignment of Weber Ave, realignment of Pine Ave, realignment of Olive Ave/Roeding Park entrance, realignment of Carruth Ave/Olive Ave and Delno Ave closure. FACILITY WORK is shown on Drawing CV-T1007, CV-T1004-A3, CV-T1006-A3, CV-T1007-A3, CV-T1008-A3, CV-T1012-A3, CV-T3003-A3, CV-T3004-A3, and ST-K1027-A3.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $19,036,725

- **Subtask R4.12**
  Scope: Design, secure permits, traffic control, remove existing bridge structure and construct a bridge at Belmont Ave and roadway modifications in the City of Fresno. Roadway modifications include Golden State Blvd closure, Harrison Ave closure, Thorne Ave closure, realignment of the intersection at Thorne Ave/Weber Ave, realignment of the intersection at Farris Ave/H St, realignment of Safford Ave/Belmont Ave, realignment of H St and realignment of Wesley Ave FACILITY WORK is shown on Drawing CV-T1009-A3, CV-T1010-A3, CV-T1011-A3, CV-T1012-A3, CV-T3005-A3, CV-T3006-A3, ST-K1028-A3 and ST-K1029-A3.
  Estimated Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $23,400,088

- **Subtask R4.13**
  Scope: Design, secure permits, traffic control, replace existing box culvert crossing at Thorne Ave/ Dry Creek Canal and roadway modifications in the City of Fresno. Roadway modifications include aprons for new box culvert. FACILITY WORK is shown on Drawing CV-R1001-THN.
  Estimated Period of Performance: 8 Months
  The estimated value for this FACILITY WORK is $801,421

- **Subtask R4.14**
  Scope: Design, secure permits, traffic control, construct modifications in the City of Fresno. Roadway modifications include the realignment of H St, realignment of Roosevelt Ave/ Divisadero St, realignment of Divisadero St/H St, realignment of Divisadero/G St and Divisadero St Closure. FACILITY WORK is shown on Drawing CV-T5001.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $4,280,000

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- **Subtask R4.15**
  Scope: Design, secure permits, traffic control, construct a double track underground trench between Olive Ave and Stanislaus Ave. FACILITY WORK is shown on Drawing ST-Y1001, ST-Y1002, ST-Y1003, ST-Y1004, ST-Y1005, ST-Y1006, ST-Y1007, ST-Y1008 and ST-Y1009.
  Estimated Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $374,000,000

- **Subtask R4.16**
  Scope: Design, secure permits, traffic control, construct a bridge at Stanislaus St and roadway modifications in the City of Fresno. Roadway modifications include new intersection at Broadway St and Stanislaus St and F St and Stanislaus St. FACILITY WORK is shown on Drawing TT-D1016, CV-T1013-A3, CV-T1014-A3, CV-T3007-A3, CV-T3008-A3, ST-K1030-A3 and ST-K1031-A3.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $8,217,365

- **Subtask R4.17**
  Scope: Design, secure permits, traffic control, construct a bridge at Tuolumne St and roadway modifications in the City of Fresno. Roadway modifications include new intersection at Broadway St and Tuolumne St and F St and Tuolumne St. FACILITY WORK is shown on Drawing TT-D1016, CV-T1013, CV-T1015-A3, CV-T3009-A3, ST-K1032 and ST-K1033.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $7,579,300

- **Subtask R4.18**
  Scope: Design, secure permits, traffic control, construct a pedestrian bridge between Stanislaus St and Tuolumne St in the City of Fresno. FACILITY WORK is shown on Drawing ST-K1043-A3 and ST-K1044-A3.
  Estimated Period of Performance: 18 Months
  The estimated value for this FACILITY WORK is $2,100,000

- **Subtask R4.19**
  Scope: Design, secure permits, traffic control, construct an underpass at Fresno St and roadway modifications in the City of Fresno. Roadway modifications include the realignment of the intersection at Fresno St/G St and realignment of G St between Merced St to Mariposa St. FACILITY WORK is shown on Drawing CV-T3011-A3, CV-T1024-A3, CV-T1025-A3, CV-T1026-A3, TT-D1016, CV-T1024, ST-K1004 and ST-K1041-A3.
  Estimated Period of Performance: 24 months
  The estimated value for this FACILITY WORK is $7,218,492

- **Subtask R4.20**
  Scope: Design, secure permits, traffic control, construct a bridge at Tulare St and roadway modifications in the City of Fresno. Roadway modifications include F St closure at Tulare St, Kern St closure and remove existing at grade crossing at Kern St and UPRR Crossing. FACILITY WORK is shown on Drawing CV-T3011-A3, ST-K1034 and ST-K1035.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $14,878,307

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- **Subtask R4.21**
  Scope: Design, secure permits, traffic control, construct an underpass at Tulare St and roadway modifications in the City of Fresno. Roadway modifications include a road structure at G St and Tulare St, new intersection at H St and Tulare St and F St and Tulare St. FACILITY WORK is shown on Drawing CV-T3011-A3, CV-T1018, ST-K1005, ST-K1006 and ST-K1036.
  Estimated Period of Performance: 18 Months
  The estimated value for this FACILITY WORK is $2,672,657

- **Subtask R4.22**
  Scope: Design, secure permits, traffic control and roadway modifications in the City of Fresno. Roadway modifications include Kern St closure and Mono St closure. FACILITY WORK is shown on Drawing TT-D1017.
  Estimated Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $1,220,000

- **Subtask R4.23**
  Scope: Design, secure permits, traffic control, construct a bridge at Ventura St and road way modifications in the City of Fresno. Road modifications include realignment of Broadway St/Ventura St and Ventura St/F St. FACILITY WORK is shown on Drawing CV-T1021, CV-T1027-A3, CV-T1028-A3, CV-T1029-A3, CV-T3010-A3, CV-T3012-A3, CV-T3013-A3, ST-K1007-A3, ST-K1008-A3, ST-K1036-A3, ST-K1037 and ST-K1038.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $19,078,991

- **Subtask R4.24**
  Scope: Design, secure permits, traffic control, construct a pedestrian bridge at Ventura St in the City of Fresno. FACILITY WORK is shown on Drawing ST-K1040.
  Estimated Period of Performance: 18 Months
  The estimated value for this FACILITY WORK is $2,100,000

- **Subtask R4.25**
  Scope: Design, secure permits, traffic control, construct roadway modifications in the City of Fresno. Roadway modifications include the removal of Golden State Blvd Ramps at SR 41, California Ave closure, Rail Road Ave closure, Cherry Ave closure and Lorena St closure. FACILITY WORK is shown on Drawing CB1662, CB1663, TT-D3012, TT-D1018, TT-D1019 and CV-T5005.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $8,912,000

- **Subtask R4.26**
  Scope: Design, secure permits, traffic control, construct a double track underground trench between Lorena St and Orange Ave and roadway modifications in the City of Fresno. Roadway modifications include Florence Ave closure, Belgravia Ave closure, East Ave closure and Railroad Ave closure. FACILITY WORK is shown on Drawing CB1663, CB1664, CB1665, SV2191, SV2192, SV2193, SV2194, SV2195, SV2196, SV2197, SV2198, TT-D1019, TT-D1020, TT-D1021, ST-Y1010,

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ST-Y1011, ST-Y1012, ST-Y1013, ST-Y1014, ST-Y1015, ST-Y1016, ST-Y1017, CV-T1031, CV-T1032, CV-T1033, CV-T1034, CV-T1035, CV-T5006 and CV-T5007.
Estimated Period of Performance: 36 Months
The estimated value for this FACILITY WORK is $317,776,000

- **Subtask R4.27**
  Scope: Design, secure permits, traffic control, construct a double track elevated viaduct, aerial steel truss bridges and retained fill walls on both sides to allow HST to go over Golden State Blvd, Burlington Northern Santa Fe Railroad Tracks, Fresno Colony No 24 Canal, Hardy Ave, North Ave, Cedar Ave, SR 99, North Central No 26 Canal and Muscat Ave and roadway modifications in the City of Fresno. Roadway modifications include Orange Ave closure and Malaga Ave closure. FACILITY WORK is shown on Drawing SV2201, SV2202, SV2203, SV2204, SV2205, SV2206, SV2207, SV2208, CB1665, CB1666, CB1667, CB1668, CB1669, TT-D1021, TT-D1022, TT-D1023, TT-D1024, TT-D1025, ST-J3012, ST-J3013, ST-J3014, ST-J3015, ST-J1001, ST-J1002, ST-J1003, ST-J1004, ST-J1005, ST-J1006, ST-J1007, ST-J1008, ST-J1009, CV-T5007 and CV-T5008
  Estimated Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $89,696,489

- **Subtask R4.28**
  Scope: Design, secure permits, traffic control, construct a bridge and a pedestrian bridge at Church Ave and roadway modifications in the City of Fresno. Roadway modifications include the relocation and modification of the existing railroad crossing gates, closure of Railroad Ave, realignment of G St, realignment of Golden State Blvd, realignment of Old Church Ave, closure of East Ave. FACILITY WORK is shown on Drawing CB1664, CT1021, TT-D1019, TT-D1020, CV-T1031, CV-T1032, CV-T1033, CV-T1034, CV-T1035, ST-K1045 and ST-K1046.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $23,180,206

- **Subtask R4.29**
  Scope: Design, secure permits, traffic control, construct a bridge at Central Ave and roadway modifications in the City of Fresno. Roadway modifications include a new intersection at Central Ave and Cedar Ave. FACILITY WORK is shown on Drawing CB1669, CT1025, TT-D1025, CV-T1036, CV-T1037, CV-T1038, CV-T3013 and ST-K1047.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $18,580,206

- **Subtask R4.30**
  Scope: Design, secure permits, traffic control, construct a bridge at American Ave and roadway modifications in the City of Fresno. Roadway modifications include new intersections at American Ave and Maple Ave and American Ave and Cedar Ave. WORK is shown on Drawing CB1671, CT1028, TT-D1027, CV-T1039, CV-T1040, CV-T3013 and ST-K1048.
  Estimated Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $15,859,955

- **Subtask R4.31**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse the CITY for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality

TASK ORDER NO. COF00004
CHSRP Interaction Removal or Relocation Plan

Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout. The estimated value does not include plan check review and inspection costs for false work since CITY will require AUTHORITY'S CONTRACTOR to review and certify.
Period of Performance: 36 Months
The estimated value for this FACILITY WORK is $2,000,000

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

PEFORMANCE OF THE FACILITY WORK

1. **Design**

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, CITY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY CITY: CITY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. **Construction**

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, CITY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $1,323,471,007.

Cost Allocation

AUTHORITY pays 100 % and CITY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. **For Work by CITY**

CITY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

TASK ORDER NO. COF00004
CHSRP Interaction Removal or Relocation Plan

2. **For Work by AUTHORITY'S CONTRACTOR**

AUTHORITY has prepared an initial cost estimate in the amount of $1,323,471,007 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

CITY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

CITY: Scott Mozier

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

California High-Speed Rail

Agreement Status

RFP No.: HSR11-16
Addendum No. 4
July 31, 2012

Entity: County of Fresno

Entity Role: The County of Fresno will review and approve Facility Plans and have a reasonable number of representatives on site of Project to verify that the Facility Work is being properly performed by Authority's Contractor and approve that work.

Master Agreement: Master Agreement technical review is 100% complete. County of Fresno is conducting final MA legal review. Master Agreement is expected to be executed by September 14, 2012.

Task Orders: Draft Task Order 1 has been prepared and forwarded to the County of Fresno for review. Draft Task Order is pending County of Fresno comments

DISCLAIMER: **Because the Master Agreement has not yet been approved by the County of Fresno Board of Supervisors, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although the County of Fresno staff has reviewed the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

TASK ORDER NO. FC00001
CHSRP Interaction Removal or Relocation Plan

Date: July 19, 2012
LOCAL AGENCY: The County of Fresno
Agreement No: 0000000
Task Order No: FC00001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for LOCAL AGENCY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. **Master Agreement**

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. **Scope of Work**

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. LOCAL AGENCY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

- **Subtask R1.01**
  Scope: Design, secure permits, traffic control, construct a bridge at American Ave and roadway modifications in the City of Fresno. Roadway modifications include new intersections at American Ave and Maple Ave and American Ave and Cedar Ave. WORK is shown on Drawing CB1671, CT1028, TT-D1027, CV-T1039, CV-T1040, CV-T3013 and ST-K1048.
  Period of Performance: 24 Months
  The estimated value for this FACILITY WORK is $6,942,966

- **Subtask R1.02**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse the LOCAL AGENCY for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout. The estimated value does not include plan review and inspection costs for false work since LOCAL AGENCY will require AUTHORITY'S CONTRACTOR to review and certify.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $40,000

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

TASK ORDER NO. FC00001
CHSRP Interaction Removal or Relocation Plan

PEFORMANCE OF THE FACILITY WORK

1. Design

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, LOCAL AGENCY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY LOCAL AGENCY: LOCAL AGENCY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. Construction

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, LOCAL AGENCY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $6,982,966

Cost Allocation

AUTHORITY pays 100 % and LOCAL AGENCY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. For Work by LOCAL AGENCY

LOCAL AGENCY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

FC - Task Order 1 (Roads) - Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. FC00001
CHSRP Interaction Removal or Relocation Plan

2. For Work by AUTHORITY'S CONTRACTOR

AUTHORITY has prepared an initial cost estimate in the amount of $6,982,966 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

LOCAL AGENCY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

LOCAL AGENCY: Alan Weaver

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

FC - Task Order 1 (Roads) - Add 4.docx

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

California High-Speed Rail

Agreement Status

RFP No.: HSR 11-16
Addendum No. 4
July 31, 2012

Entity: Fresno Irrigation District

Entity Role:	The Fresno Irrigation District will review and approve Facility Plans and have a reasonable number of representatives on site of Project to verify that the Facility Work is being properly performed by Authority's Contractor and approve that work.
aster Agreement:	Master Agreement technical review is 100% complete. The Fresno Irrigation District is conducting a final legal review. Master Agreement is expected to be executed by September 14, 2012.
Task Orders:	Draft Task Order 1 and 2 has been prepared. The Fresno Irrigation District has provided comments to Draft Task Order 1 and has provided no comments to Draft Task Order 2.
DISCLAIMER:	**Because the Master Agreement has not yet been approved by the Fresno Irrigation District Board of Directors, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although the Fresno Irrigation District staff has reviewed the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Date: July 18, 2012
Local Agency: Fresno Irrigation District
Agreement No: 0000000
Task Order No: FID00001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Master Agreement Regarding High Speed Rail Crossings of Fresno Irrigation District Facilities dated _____, 2012. The purpose of this TASK ORDER is to authorize the FACILITY WORK for FID. Each FACILITY that requires RELOCATION will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. **MASTER AGREEMENT**

This TASK ORDER is issued in order to authorize the FID FACILITY WORK described herein. This TASK ORDER does not express all of the terms and conditions relevant to the FID FACILITY WORK; accordingly, the MASTER AGREEMENT and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the MASTER AGREEMENT. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FID FACILITY WORK shall be performed in accordance with the requirements of the MASTER AGREEMENT and, in the event of any inconsistency between the provisions of this TASK ORDER and the MASTER AGREEMENT, the provisions of the MASTER AGREEMENT shall prevail unless expressly provided otherwise.

2. **Scope of Work**

Each separate FID FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the RELOCATION of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FID FACILITY WORK. FID will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FID FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

TASK ORDER NO. FID00001
CHSRP Interaction Removal or Relocation Plan

- **Subtask I1.01**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering, removal and disposal of the existing Herndon Canal bridge crossing. Construct a rail bridge crossing over the Herndon Canal adjacent to Barstow Ave and Golden State Blvd. Construction of rail bridge includes PC/PS box girders, concrete channel lining, rock slope protection, parapet wall barriers, CIDH concrete piles, pile caps, waterproofing membrane, drilled shafts, drains and any other facilities required to meet the intent of the basis of design. FID FACILITY WORK is shown on drawing ST-K1001, ST-K1002 and ST-K1003.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $1,205,584

- **Subtask I1.02**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering and construct a traffic bridge crossing over the Herndon Canal adjacent to Barstow Ave and Golden State Blvd. Construction of traffic bridge includes PC/PS box girders, concrete barriers, concrete channel lining, rock slope protection, structure approach slab, metal beam guard railing, abutments, CIP/PS concrete slab, ¾" polyester concrete overlay, PC/PS piles, pile caps and any other facilities required to meet the intent of the basis of design. FID FACILITY WORK is shown on drawing TT-3002, TT-D1002, ST-K1001, ST-K1002, ST-K1003, ST-I1001, ST-I1002, ST-I2003, CV-R1007-GSB, CV-G1006-GSB, UT-C4010 and CV-G1002.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $1,094,672

- **Subtask I1.03**
  Scope: Deign, secure proper permits, construct bypass facilities, traffic control, dewatering, removal and relocation of irrigation FACILITIES at the Lisenby No 45 facility near Shaw Ave and Golden State Blvd. Irrigation FACILITIES include RGRCP ASTM C-361, casings, stand -pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FID FACILITY WORK is shown on Drawing CV-G1009-GSB, CV-R1009-GSB, CV-G1010-R99 and UT-C4015.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $1,383,216.

- **Subtask I1.04**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering, remove and relocate irrigation FACILITIES near Dakota and Hwy 99. Irrigation FACILITIES include RGRCP ASTM C-361, casings, stand-pipes, concrete boxes, gates, metal covers, vents and other

Task Order 1 (1A and 1B) Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

connections that are required to complete the work in accordance with FID standards. FID FACILITY WORK is shown on Drawings CV-41009-R99, CV-G1010-R99, CV-G1009-R99, CV-1017-R99, CV-G1007, CV-R1017-R99, UT-C4019, UT-C4020 and C4033.
Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
The estimated value for this FID FACILITY WORK is $776,820.

- **Subtask I1.05**
  Scope: Design secure proper permits, construct bypass facilities, traffic control, dewatering and remove and relocate irrigation FACILITIES at the Victoria Colony No 43 facility near Dakota and Hwy 99. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FID FACILITY WORK is shown on Drawings CV-41009-R99, CV-G1010-R99, CV-G1009-R99, CV-1017-R99, CV-G1007, CV-R1017-R99, UT-C4019, UT-C4020 and UT-C4033.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $191,420.

- **Subtask I1.06:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control and relocation of irrigation FACILITIES at the Tracy No 44 facility near Dakota and Hwy 99. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FID FACILITY WORK is shown on Drawing UT-C4019.
  Estimated Period of Performance: 1 Month
  The estimated value for this FID FACILITY WORK is $225,599.

- **Subtask I1.07:**
  Scope: Design, secure proper permits, traffic control, dewatering, removal, cap and dispose of irrigation FACILITIES at Cole West Branch No 40 facility near Clinton and Hwy 99. FID FACILITY WORK is shown on Drawings CV-G1004-R99, CV-G1004A-R99, CV-G1012-R99, CV-G1013-R99, UT-C4024 and CV-G1009.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $1,081,250.

- **Subtask I1.08:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering, removal and relocation of irrigation FACILITIES at Cole South Branch No 40 facility near Pine Ave and Golden State Blvd. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FID FACILITY WORK is shown on Drawing UT-C4038.

TASK ORDER NO. FID00001
CHSRP Interaction Removal or Relocation Plan

Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
The estimated value for this FID FACILITY WORK is $217,710

- **Subtask I1.09:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering, construct a canal culvert at Dry Creek No 75 facility near H St and Hwy 180 to allow HST to go underneath this facility as well as remove and replace in-kind the culvert at Thorne Avenue near the intersection of Divisadero Street and Thorne Avenue. Construction of canal culvert shall include shoring, separation layer, inlet and outlet structures which include a slot for "stop planks", access roads and any other facilities required to meet the basis of design. FID FACILITY WORK is shown on Drawing CV-R1001-THN, TT-D3007, TT-D1014, ST-Y3003, ST-Y1006, UT-C4053, CV-G1014.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $593,875.

- **Subtask I1.10:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering, remove and replace in-kind the culvert at Thorne Avenue near the intersection of Divisadero Street and Thorne Avenue. Construction of canal culvert shall include shoring, separation layer, inlet and outlet structures which include a slot for "stop planks", access roads and any other facilities required to meet the basis of design. FID FACILITY WORK is shown on Drawing CV-R1001-THN, TT-D3007, TT-D1014, ST-Y3003, ST-Y1006, UT-C4053, CV-G1014.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $483,421.

- **Subtask I1.11:**
  Scope: Design, secure proper permit, construct bypass facilities, traffic control, dewatering and to construct/install a travelling water screen and related structures or appurtenances to the Herndon Canal at a location within the existing FID easement or ROW footprint upstream East of UPRR ROW. Design and technical specification of the travelling water screen shall conform to FID standard.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FID FACILITY WORK is $500,000

- **Subtask I1.12:**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse FID for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.

Task Order 1 (1A and 1B) Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

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Period of Performance: 36 Months
The estimated value for this FACILITY WORK is $220,000

3. Project Schedule

Deadlines for the completion of FID FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR. Notwithstanding the foregoing, all FID FACILITY WORK must be completed prior to the commencement of FID's irrigation season unless FID-approved full bypass facilities are timely constructed to convey the irrigation water that would otherwise flow through the FID FACILITY in question. FID will determine the minimum flow rate if a bypass is required

4. Schedule for FID FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. All construction must occur outside of FID's irrigation season. The permitted construction window is typically October 1 through February 22, however it is determined each year by the FID Board of Directors based on hydrologic conditions. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix A – Design Build Procedures of the MASTER AGREEMENT.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: The permitted construction window is typically October 1 through February 22, however it is determined each year by the FID Board of Directors based on hydrologic conditions. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.)
Completion Date: February 2016

PERFORMANCE OF THE FID FACILITY WORK. AUTHORITY'S CONTRACTOR shall perform all design and construction services for FID FACILITY WORK.

1. Design

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Exhibit A– Design Build Procedures of the MASTER AGREEMENT) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FID FACILITY WORK are subject to review by AUTHORITY, FID, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Exhibit A – Design Build Procedures of the MASTER AGREEMENT. FID will be entitled to have a reasonable

TASK ORDER NO. FID00001
CHSRP Interaction Removal or Relocation Plan

number of representatives on site of PROJECT to verify the FID FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR in accordance with the PLANS AND SPECIFICATIONS.

2. Construction

AUTHORITY'S CONTRACTOR will perform all FID FACILITY WORK in substantially and material compliance with the final PLANS AND SPECIFICATIONS. Deviations from the final PLANS AND SPECIFICATIONS may occur only in conformity with the MASTER AGREEMENT. FID FACILITY WORK shall not be deemed complete until accepted by FID as provided in Section 3.7 of the MASTER AGREEMENT as subject to LOCAL AGENCY approval.

LIABILITY FOR THE COST OF THE WORK

In accordance with Article III of the MASTER AGREEMENT, FID and AUTHORITY shall each be responsible for the cost of the FID FACILITY WORK as specified herein. The total estimated cost for the FID FACILITY WORK is $7,973,567

Cost Allocation

AUTHORITY pays 100 % and FID pays 0 % of cost of FID FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FID FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the MASTER AGREEMENT.

AUTHORITY has prepared an initial cost estimate in the amount of $7,973,567 for the FID FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FID FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

CREDITS TO AUTHORITY FOR CERTAIN COSTS

FID shall credit AUTHORITY for BETTERMENT and other costs as provided in Section 3.17 of the MASTER AGREEMENT, and pay the AUTHORITY'S CONTRACTOR for such costs (if any) as provided in Section 3.18 of the MASTER AGREEMENT.

The FID FACILITY WORK in this TASK ORDER does not include any BETTERMENT or other credits described in Section 3.17 of the MASTER AGREEMENT.

CONTACTS

The contacts for this TASK ORDER will be as follows:

FID: William R. Stretch

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

Task Order 1 (1A and 1B) Add 4.docx
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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. FID00002
CHSRP Interaction Removal or Relocation Plan

Date: July 18, 2012
Local Agency: Fresno Irrigation District
Agreement No: 0000000
Task Order No: FID00002
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Master Agreement Regarding High Speed Rail Crossings of Fresno Irrigation District Facilities dated _____, 2012. The purpose of this TASK ORDER is to authorize the FACILITY WORK for FID. Each FACILITY that requires RELOCATION will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. **MASTER AGREEMENT**

This TASK ORDER is issued in order to authorize the FID FACILITY WORK described herein. This TASK ORDER does not express all of the terms and conditions relevant to the FID FACILITY WORK; accordingly, the MASTER AGREEMENT and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the MASTER AGREEMENT. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FID FACILITY WORK shall be performed in accordance with the requirements of the MASTER AGREEMENT and, in the event of any inconsistency between the provisions of this TASK ORDER and the MASTER AGREEMENT, the provisions of the MASTER AGREEMENT shall prevail unless expressly provided otherwise.

2. **Scope of Work**

Each separate FID FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the RELOCATION of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FID FACILITY WORK. FID will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FID FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

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TASK ORDER NO. FID00002
CHSRP Interaction Removal or Relocation Plan

- **Subtask I2.01:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering and remove and relocation irrigation facilities within an RCP casing at Braly No 14 facility near California Ave and Cherry Ave. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FACILITY WORK is shown in UT-C4061.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FACILITY WORK is $480,600.

- **Subtask I2.02:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering realign existing Fresno Colony No 24 facility near Golden State Blvd & Cedar Ave to clear viaduct columns. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FACILITY WORK is shown on Drawing TT-D1022, ST-J1002, ST-J1003, CV-G1022 and UT-C4068.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FACILITY WORK is $476,000

- **Subtask I2.03:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering and protect in place existing North Central No 26 facility near Cedar Ave and SR 99. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FACILITY WORK is shown in Drawing TT-D1024, ST-J1007 and CV-G1024.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FACILITY WORK is $483,421

- **Subtask I2.04:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering and construct a culvert at Central No 23 facility adjacent to the Central Ave roadway structure and construct a separate culvert at the North Central No 26 Canal at the intersection of Cedar Ave and Central Ave. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FACILITY WORK is shown in Drawing ST-J3017, ST-J1010, CV-T1036, ST-K1047 and CV-G1025.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

The estimated value for this FACILITY WORK is $966,842.

- **Subtask I2.05:**
  Scope: Design, secure proper permits, construct bypass facilities, traffic control, dewatering and construct a culvert at Viau No 25 facility near Malaga and Cedar Ave to allow HST to cross this existing facility. Irrigation FACILITIES include RGRCP ASTM C-361, stand-pipes, concrete boxes, gates, metal covers, vents and other connections that are required to complete the work in accordance with FID standards. FACILITY WORK is shown in Drawings TT-D1026, ST-J3017 and CV-G1026.
  Estimated Period of Performance: During the non-irrigation season. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.
  The estimated value for this FACILITY WORK is $560,000.

- **Subtask I2.06:**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse FID for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $100,000

3. Project Schedule

Deadlines for the completion of FID FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR. Notwithstanding the foregoing, all FID FACILITY WORK must be completed prior to the commencement of FID's irrigation season unless FID-approved full bypass facilities are timely constructed to convey the irrigation water that would otherwise flow through the FID FACILITY in question. FID will determine the minimum flow rate if a bypass is required

4. Schedule for FID FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. All construction must occur outside of FID's irrigation season. The permitted construction window is typically October 1 through February 22, however it is determined each year by the FID Board of Directors based on hydrologic conditions. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix A – Design Build Procedures of the MASTER AGREEMENT.

Design:
Start Date: January 2013

Construction:
Start Date: The permitted construction window is typically October 1 through February 22, however

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TASK ORDER NO. FID00002
CHSRP Interaction Removal or Relocation Plan

it is determined each year by the FID Board of Directors based on hydrologic conditions. An exception to the above construction window requirement can only occur by mutual agreement between Authority's Contractor and FID.)

Completion Date: June 2013

Completion Date: February 2016

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Task Order 2 (1C) Add 4.docx

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. FID00002
CHSRP Interaction Removal or Relocation Plan

PERFORMANCE OF THE FID FACILITY WORK. AUTHORITY'S CONTRACTOR shall perform all design and construction services for FID FACILITY WORK.

1. **Design**

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Exhibit A– Design Build Procedures of the MASTER AGREEMENT) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FID FACILITY WORK are subject to review by AUTHORITY, FID, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Exhibit A – Design Build Procedures of the MASTER AGREEMENT. FID will be entitled to have a reasonable number of representatives on site of PROJECT to verify the FID FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR in accordance with the PLANS AND SPECIFICATIONS.

2. **Construction**

AUTHORITY'S CONTRACTOR will perform all FID FACILITY WORK in substantially and material compliance with the final PLANS AND SPECIFICATIONS. Deviations from the final PLANS AND SPECIFICATIONS may occur only in conformity with the MASTER AGREEMENT. FID FACILITY WORK shall not be deemed complete until accepted by FID as provided in Section 3.7 of the MASTER AGREEMENT as subject to LOCAL AGENCY approval.

LIABILITY FOR THE COST OF THE WORK

In accordance with Article III of the MASTER AGREEMENT, FID and AUTHORITY shall each be responsible for the cost of the FID FACILITY WORK as specified herein. The total estimated cost for the FID FACILITY WORK is $3,066,863.

Deleted: 2,966

Cost Allocation

AUTHORITY pays 100 % and FID pays 0 % of cost of FID FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FID FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the MASTER AGREEMENT.

AUTHORITY has prepared an initial cost estimate in the amount of $3,066,863 for the FID FACILITY WORK included in this TASK ORDER.

Deleted: 2,966

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FID FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

CREDITS TO AUTHORITY FOR CERTAIN COSTS

FID shall credit AUTHORITY for BETTERMENT and other costs as provided in Section 3.17 of the MASTER AGREEMENT, and pay the AUTHORITY'S CONTRACTOR for such costs (if any) as provided in Section 3.18 of the MASTER AGREEMENT.

The FID FACILITY WORK in this TASK ORDER does not include any BETTERMENT or other credits described in Section 3.17 of the MASTER AGREEMENT.

CONTACTS

Deleted: task order compare

Task Order 2 (1C) Add 4.docx

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

California High-Speed Rail

Agreement Status

RFP No.: HSR 11-16
Addendum No. 4
July 31, 2012

Entity: The County of Madera

Entity Role: The County of Madera will review and approve Facility Plans and have a reasonable number of representatives on site of Project to verify that the Facility Work is being properly performed by Authority's Contractor and approve that work.

Master Agreement: Master Agreement technical review is 100% complete. Legal Review is 100% complete. The County of Madera will present Master Agreement to their Board of Supervisors for approval on the July 24, 2012 Board Meeting. Master Agreement is expected to be executed by August 12, 2012.

Task Orders: Draft Task Order 1 has been prepared. County of Madera has not provided comments to Draft Task Order 1.

DISCLAIMER: **Because the Master Agreement has not yet been approved by the County of Madera Board of Supervisors, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although the County of Madera staff has reviewed and approved the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. MC00001
CHSRP Interaction Removal or Relocation Plan

Date: July 20, 2012
LOCAL AGENCY: The County of Madera
Agreement No: 0000000
Task Order No: MC00001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for LOCAL AGENCY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. **Master Agreement**

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. **Scope of Work**

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. LOCAL AGENCY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

TASK ORDER NO. MC00001
CHSRP Interaction Removal or Relocation Plan

- **Subtask R1.01**
  Scope: Design, secure permits, traffic control and construct an elevated structure and retaining walls to allow HST to go over Raymond Rd, Fresno River, SR 145 and Main Canal within Madera County and roadway modifications. Roadway modifications includes the closure of Watson St and Ave 15 ¾. FACILITY WORK is shown on Drawing SV2000, SV2001, SV2002, SV2003, SV2004, SV2005, T1115-A and T1116-A.
  Estimated Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $45,547,454

- **Subtask R1.02**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 15 ½ in Madera County. FACILITY WORK is shown on Drawing ST1007 and T1116-A.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $5,110,206

- **Subtask R1.03:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 15 in Madera County. FACILITY WORK is shown on Drawing ST1006 and T1117-A.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $4,487,226

- **Subtask R1.04:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 13 in Madera County. FACILITY WORK is shown on Drawing ST1005, ST1005A and T1119-A.
  Estimated Period of Performance: 13 Months
  The estimated value for this FACILITY WORK is $5,647,686

- **Subtask R1.05:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 12 in Madera County. FACILITY WORK is shown on Drawing ST1004 and T1120-A.
  Estimated Period of Performance: 16 Months
  The estimated value for this FACILITY WORK is $6,016,866

- **Subtask R1.06:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 11 in Madera County. FACILITY WORK is shown on Drawing ST1003 and T1121-A.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $5,352,846

- **Subtask R1.07:**

MC - Task Order 1 (Roads) Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 10 in Madera County. FACILITY WORK is shown on Drawing ST1002 and T1122-A.
Estimated Period of Performance: 16 Months
The estimated value for this FACILITY WORK is $6,755,226

- **Subtask R1.08:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 9 in Madera County. Roadway Modifications include the closure of Road 32 adjacent to Ave 9. FACILITY WORK is shown on Drawing ST1001 and T1123-A.
  Estimated Period of Performance: 14 Months
  The estimated value for this FACILITY WORK is $5,890,866

- **Subtask R1.09:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 8 in Madera County. FACILITY WORK is shown on Drawing ST1000 and T1124-A.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $5,359,146.

- **Subtask R1.10:**
  Scope: Design, secure permits, traffic control, and construct a grade separation and roadway modifications at Ave 7 in Madera County. Roadway modifications include the reconfiguration of Road 33 adjacent to Ave 7. FACILITY WORK is shown on Drawing ST1070 and T1125-A.
  Estimated Period of Performance: 16 Months
  The estimated value for this FACILITY WORK is $6,949,266

- **Subtask R1.11:**
  Scope: Design, secure permits, traffic control, and construct a culvert to allow HST to go over Cotton Wood Creek near Ave 13 in Madera County. FACILITY WORK is shown on Drawing T1118-A.
  Estimated Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $1,500,000.

- **Subtask R1.12:**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse the LOCAL AGENCY for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout. The estimated value does not include plan review and inspection costs for false work since LOCAL AGENCY will require AUTHORITY'S CONTRACTOR to review and certify.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $517,000

TASK ORDER NO. MC00001
CHSRP Interaction Removal or Relocation Plan

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

MC - Task Order 1 (Roads) Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

PEFORMANCE OF THE FACILITY WORK

1. **Design**

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, LOCAL AGENCY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY LOCAL AGENCY: LOCAL AGENCY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. **Construction**

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, LOCAL AGENCY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $99,133,788.

Cost Allocation

AUTHORITY pays 100 % and LOCAL AGENCY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. **For Work by LOCAL AGENCY**

LOCAL AGENCY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

TASK ORDER NO. MC00001
CHSRP Interaction Removal or Relocation Plan

2. **For Work by AUTHORITY'S CONTRACTOR**

AUTHORITY has prepared an initial cost estimate in the amount of $99,133,788 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

LOCAL AGENCY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

LOCAL AGENCY: Johannes Hoevertsz

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

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08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

California High-Speed Rail

Agreement Status

RFP No.: HSR 11-16
Addendum No. 4
July 31, 2012

Entity: Fresno Metropolitan Flood Control District

Entity Role: Fresno Metropolitan Flood Control District (FMFCD) will review and approve Facility Plans and have a reasonable number of representatives on site of Project to verify that the Facility Work is being properly performed by Authority's Contractor and approve that work.

Master Agreement: Master Agreement technical review is 100% complete. Legal Review is 100% complete. FMFCD has signed agreement and is pending Authority signature. Master Agreement is expected to be executed by August 15, 2012.

Task Orders: Draft Task Order 1 has been prepared. FMFCD has not provided comments to Draft Task Order 1.

DISCLAIMER: **Because the Master Agreement has not yet been executed, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although the Fresno Metropolitan Flood Control District staff has reviewed and approved the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

TASK ORDER NO. SD00001
CHSRP Interaction Removal or Relocation Plan

Date: July 18, 2012
DISTRICT: Fresno Metropolitan Flood Control District
Agreement No: 0000000
Task Order No: SD00001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the STORM DRAIN WORK for DISTRICT. Each STORM DRAINAGE FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

STORM DRAIN WORK TO BE DONE

1. **Master Agreement**

This TASK ORDER is issued in order to authorize the STORM DRAIN WORK described herein (STORM DRAIN WORK). This TASK ORDER does not express all of the terms and conditions relevant to the STORM DRAIN WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All STORM DRAIN WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. **Scope of Work**

STORM DRAIN WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate STORM DRAINAGE FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of STORM DRAINAGE FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L St, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for STORM DRAIN WORK. DISTRICT will review and approve STORM DRAIN PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the STORM DRAIN WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

- **Subtask SD1.01**
  Scope: Design, secure permits and relocate STORM DRAINAGE FACILITIES from the existing Golden State Blvd to the new Golden State Blvd. Work includes removal of existing STORM DRAINAGE FACILITIES. Existing STORM DRAINAGE FACILITIES are shown on Drawing UT-C4001 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  Estimated Value: $531,732

- **Subtask SD1.02**
  Scope: Design, secure permits and relocate Basin EH to accommodate Golden State Boulevard re-alignment. Relocation must provide a minimum storage capacity of 248.0 ac-ft with a potential to provide 252.5 ac–ft, based on FMFCD preliminary basin design. Storm Drainage Basin EH is shown on Drawing UT-C4002 and UT-C4003 and will be completed in accordance with FMFCD standards. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $772,000.

- **Subtask SD1.03:**
  Design, secure permits, furnish and install RCP casing for future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4006 and will be completed in accordance with FMFCD standards. Work also includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $288,000.

- **Subtask SD1.04:**
  Design, secure permits, furnish and install RCP casing for future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4007 and will be completed in accordance with FMFCD standards. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $260,000.

- **Subtask SD1.05:**
  Design, secure permits, furnish and install RCP casing for future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4007 and will be completed in accordance with FMFCD standards. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $260,000.

- **Subtask SD1.06:**
  Design, secure permits, furnish and install casing for future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4008 and will be completed in accordance with

TASK ORDER NO. SD00001
CHSRP Interaction Removal or Relocation Plan

FMFCD standards. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
Estimated Period of Performance: 2 Months
The estimated value for this STORM DRAIN WORK is $242,000.

- **Subtask SD1.07:**
  Design, secure permits, furnish and install STORM DRAINAGE FACILITIES including storm drain inlets, RCP casing and removal of existing STORM DRAINAGE FACILITIES including storm drain inlets. STORM DRAIN WORK is shown on Drawing UT-C4010 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $291,576.

- **Subtask SD1.08:**
  Design, secure permits and reconstruct STORM DRAINAGE FACILITIES in an RCP casing and removal of remaining STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4012 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $360,000.

- **Subtask SD1.09:**
  Design, secure permits, furnish and install an RCP casing for future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4014 and will be completed in accordance with FMFCD standards. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $235,000.

- **Subtask SD1.10:**
  Design, secure permits and reconstruct STORM DRAINAGE FACILITIES in an RCP casing and removal of remaining STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4014 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $260,000.

- **Subtask SD1.11:**
  Design, secure permits and remove STORM DRAINAGE FACILITIES, including storm drain man holes and drain inlets from the existing Golden State Blvd. Install STORM DRAINAGE FACILITIES, including manholes and drain inlets to the new Golden State Blvd. STORM DRAIN WORK is shown on Drawing UT-C4016 and UT-C4017 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 3 Months
  The estimated value for this STORM DRAIN WORK is $358,949.

- **Subtask SD1.12:**
  Design, secure permits, furnish and install steel casing for future 18” STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4017and will be completed in

FMFCD - Task Order 1 Add 4.docx
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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

accordance with FMFCD standards. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES.
Estimated Period of Performance: 2 Months
The estimated value for this STORM DRAIN WORK is $235,000.

- **Subtask SD1.13:**
  Design, secure proper permits, traffic control, dewatering, protect in place STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4030 and UT-C4032 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 3 Months
  The estimated value for this STORM DRAIN WORK is $222,908.

- **Subtask SD1.14:**
  Design, secure proper permits, traffic control, dewatering, remove STORM DRAINAGE FACILITIES, including storm drain man holes and storm drain inlets from the existing McKinley Ave and Motel Dr. Install STORM DRAINAGE FACILITIES, including manholes and storm drain inlets to the proposed McKinley Ave, McKinley Connector and Golden State Blvd. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4036, UT-C4037, UT-C4046 and UT-C4047 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 3 Months
  The estimated value for this STORM DRAIN WORK is $1,433,752.

- **Subtask SD1.15:**
  Design, secure proper permits, traffic control, dewatering, remove STORM DRAINAGE FACILITIES, including storm drain man holes and storm drain inlets from existing Olive Ave. Install STORM DRAINAGE FACILITIES, including manholes and storm drain inlets to the proposed Olive Ave. STORM DRAIN WORK is shown on Drawing UT-C4039, UT-C4048 and UT-C4049 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 3 Months
  The estimated value for this STORM DRAIN WORK is $1,529,743.

- **Subtask SD1.16:**
  Design, secure proper permits, traffic control, dewatering, remove STORM DRAINAGE FACILITIES including storm drain manholes, storm drain manholes, storm drain inlets, junction boxes, outlet structures and rock energy dissipaters from existing Belmont Ave, Golden State Ave, Weber Ave, adjacent streets and basins. Furnish and Install STORM DRAINAGE FACILITIES including storm drain manholes, storm drain inlets, junction boxes, outlet structures and rock energy dissipaters at proposed Belmont Ave, Weber Ave, adjacent streets and storm drain basin. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4041, UT-C4042 and UT-C4052 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 18 Months
  The estimated value for this STORM DRAIN WORK is $5,738,993.

  Subtask SD1.17:
  Design, secure proper permits, traffic control, dewatering, remove STORM DRAINAGE FACILITIES including storm drain manholes and storm drain inlets adjacent to Dry Creek Canal, SR 180 and

TASK ORDER NO. SD00001
CHSRP Interaction Removal or Relocation Plan

Roosevelt Ave. Furnish and Install STORM DRAINAGE FACILITIES including storm drain manholes and storm drain inlets adjacent to Dry Creek Canal, SR 180 and Roosevelt Ave. STORM DRAIN WORK includes coordinate design and relocation with future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4043, UT-C4044 and UT-C4053 and will be completed in accordance with FMFCD standards.
Estimated Period of Performance: 12 Months
The estimated value for this STORM DRAIN WORK is $937,136.

- **Subtask SD1.18:**
  Design, secure proper permits, traffic control, dewatering, remove STORM DRAINAGE FACILITIES including storm drain manholes and storm drain inlets from existing Divisadero St. STORM DRAIN WORK is shown on Drawing UT-C4044 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $34,453.

- **Subtask SD1.19:**
  Design, secure proper permits, traffic control, dewatering, protect in place STORM DRAINAGE FACILITIES from existing Stanislaus St and G Street. STORM DRAIN WORK is shown on Drawing UT-C4054 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 9 Months
  The estimated value for this STORM DRAIN WORK is $64,144.

- **Subtask SD1.20:**
  Design, secure proper permits, traffic control, dewatering, protect in place STORM DRAINAGE FACILITIES at G St and Stanislaus St. STORM DRAIN WORK is shown on Drawing UT-C4054 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $69,616.

- **Subtask SD1.21:**
  Design, secure proper permits, traffic control, dewatering, protect in place STORM DRAINAGE FACILITIES at G St and Fresno St. STORM DRAIN WORK is shown on Drawing UT-C4055 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 2 Months
  The estimated value for this STORM DRAIN WORK is $41,116.

- **Subtask SD1.22:**
  Design, secure proper permits, traffic control, dewatering, remove, relocate and protect in place STORM DRAINAGE FACILITIES near Tulare St and G St. STORM DRAIN WORK is shown on Drawing UT-C4056 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 4 Months
  The estimated value for this STORM DRAIN WORK is $1,037,975.

- **Subtask SD1.23:**

FMFCD - Task Order 1 Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Design, secure proper permits, traffic control, dewatering, protect in place STORM DRAINAGE FACILITIES near Inyo St and G St. STORM WORK is shown on Drawing UT-C4056 and will be completed in accordance with FMFCD standards.
Estimated Period of Performance: 2 Months
The estimated value for this STORM DRAIN WORK is $35,112.

- **Subtask SD1.24:**
  Design, secure proper permits, traffic control, dewatering, protect in place STORM DRAINAGE FACILITIES near G St and Ventura St. STORM WORK is shown on Drawing UT-C4057 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 36 Months
  The estimated value for this STORM DRAIN WORK is $129,200.

- **Subtask SD1.25:**
  Design, secure proper permits, traffic control, dewatering, remove and relocate STORM DRAINAGE FACILITIES near H St and Ventura St. STORM DRAIN WORK is shown on Drawing UT-C4059 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 6 Months
  The estimated value for this STORM DRAIN WORK is $691,306

- **Subtask SD1.26:**
  Design, secure proper permits, traffic control, dewatering and relocate STORM DRAINAGE FACILITIES near Railroad Ave and Florence Ave. Protect in place STORM DRAINAGE FACILITIES near California Ave and Railroad Ave. Coordinate Design and Relocation with future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4060, UT-C4061 and UT-C4062 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 6 Months
  The estimated value for this STORM DRAIN WORK is $1,108,836

- **Subtask SD1.27:**
  Design, secure proper permits, traffic control, dewatering remove and relocate STORM DRAINAGE FACILITIES near Railroad Ave near Church Ave and East Ave. Coordinate Design and Relocation with future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4063, UT-C4064, UT-C4065, UT-C4081 and UT-C4083 and will be completed in accordance with FMFCD standards.
  Estimated Period of Performance: 8 Months
  The estimated value for this STORM DRAIN WORK is $2,432,700

- **Subtask SD1.28:**
  Design, secure permits, traffic control and coordinate relocation with future STORM DRAINAGE FACILITIES near Jensen Ave and Railroad Ave. STORM DRAIN WORK is shown on Drawing UT-C4066.
  Estimated Period of Performance: 1 Month
  The estimated value for this STORM DRAIN WORK is $5,000

- **Subtask SD1.29:**

TASK ORDER NO. SD00001
CHSRP Interaction Removal or Relocation Plan

Design, secure proper permits, traffic control, dewatering and relocate STORM DRAINAGE FACILITIES near Cedar Ave and Golden State Blvd. Coordinate design and relocation with future STORM DRAINAGE FACILITIES. STORM DRAIN WORK is shown on Drawing UT-C4068 and will be completed in accordance with FMFCD standards.
Estimated Period of Performance: 6 Months
The estimated value for this STORM DRAIN WORK is $649,900

- **Subtask SD1.30:**
  Design, secure permits, traffic control and coordinate relocation with future STORM DRAINAGE FACILITIES near North Ave and Cedar Ave. STORM DRAIN WORK is shown on Drawing UT-C4070 and UT-C4071.
  Estimated Period of Performance: 1 Month
  The estimated value for this STORM DRAIN WORK is $15,000

- **Subtask SD1.31:**
  Design, secure permits, traffic control and coordinate relocation with future STORM DRAINAGE FACILITIES near North Ave and Cedar Ave. STORM DRAIN WORK is shown on Drawing UT-C4073, UT-C4074, UT-C4085 and UT-C4086.
  Estimated Period of Performance: 1 Month
  The estimated value for this STORM DRAIN WORK is $30,000

- **Subtask SD1.32:**
  Design, secure permits, traffic control and coordinate relocation with future STORM DRAINAGE FACILITIES near North Ave and Cedar Ave. STORM DRAIN WORK is shown on Drawing UT-C4078.
  Estimated Period of Performance: 1 Month
  The estimated value for this STORM DRAIN WORK is $20,000

- **Subtask SD1.33:**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse DISTRICT for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $330,000

- **Subtask SD1.34:**
  Scope: The AUTHORITY'S CONTRACTOR shall (i) execute and comply with and (ii) pay or cause to be paid to DISTRICT drainage fees in accordance with the Fresno Metropolitan Flood Control District Drainage Facility Project Agreement attached to the Master Agreement as Appendix. Those drainage fees are intended to compensate DISTRICT for the cost of its perpetually accepting the stormwater runoff from the PROJECT into Storm Drainage Facilities
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $2,730,000

- **Subtask SD1.35:**
  Scope: The AUTHORITY'S CONTRACTOR shall (i) execute and comply with and (ii) pay or cause to be paid to DISTRICT NCF fees in accordance with the DISTRICT'S NON CONFORMING FACILITIES Policy.

FMFCD - Task Order 1 Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Period of Performance: 36 Months
The estimated value for this FACILITY WORK is $200,000

Deadlines for the completion of STORM DRAIN WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

3. Schedule for STORM DRAIN WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

TASK ORDER NO. SD00001
CHSRP Interaction Removal or Relocation Plan

PEFORMANCE OF THE STORM DRAIN WORK

1. Design

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for STORM DRAIN WORK are subject to review by AUTHORITY, DISTRICT, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY DISTRICT: DISTRICT will review STORM DRAIN PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the STORM DRAIN WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for STORM DRAIN WORK.

2. Construction

AUTHORITY'S CONTRACTOR will perform all the construction services for the STORM DRAIN WORK. The construction of STORM DRAIN WORK shall be performed substantially in accordance with the final STORM DRAIN PLANS. Deviations from the final STORM DRAIN PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, DISTRICT and AUTHORITY shall each be responsible for the cost of the STORM DRAIN WORK as specified herein. The total estimated cost for the STORM DRAIN WORK is $22,881,087

Cost Allocation

AUTHORITY pays 100 % and DISTRICT pays 0 % of cost of STORM DRAIN WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the STORM DRAIN WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. For Work by DISTRICT

DISTRICT's costs for STORM DRAIN WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

FMFCD - Task Order 1 Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

TASK ORDER NO. SD00001
CHSRP Interaction Removal or Relocation Plan

2. For Work by AUTHORITY'S CONTRACTOR

AUTHORITY has prepared an initial cost estimate in the amount of $22,881,087 for the STORM DRAIN WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the STORM DRAIN WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

DISTRICT shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The STORM DRAIN WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

DISTRICT: Jerry Lakeman

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

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California High-Speed Rail

Agreement Status

Entity: Madera Irrigation District

Entity Role: The Madera Irrigation District will review and approve Facility Plans and have a reasonable number of representatives on site of Project to verify that the Facility Work is being properly performed by Authority's Contractor and approve that work.

Master Agreement: Master Agreement technical review is 100% complete. The Madera Irrigation District is conducting a final Master Agreement legal review. Master Agreement is expected to be executed by August 17, 2012.

Task Orders: Draft Task Order 1 has been prepared. The Madera Irrigation District has provided comments to the Draft Task Order 1.

DISCLAIMER: **Because the Master Agreement has not yet been approved by the Madera Irrigation District Board of Directors, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although the Madera Irrigation District staff has reviewed the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

Date: July 20, 2012
LOCAL AGENCY: Madera Irrigation District
Agreement No: 0000000
Task Order No: MID00001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for LOCAL AGENCY. Each FACILITY that requires relocation will be handled under a separate subtask of this TASK ORDER.

FACILITY WORK TO BE DONE

1. Master Agreement

This TASK ORDER is issued in order to authorize the FACILITY WORK described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

2. Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  AUTHORITY'S CONTRACTOR will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L S, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK. LOCAL AGENCY will review and approve FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify that the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR and approve that work.

TASK ORDER NO. MID00001
CHSRP Interaction Removal or Relocation Plan

- **Subtask I1.01**
  Scope: Design, proper permits, construct bypass facilities, traffic control, dewatering and protect in place "Main Canal" located adjacent to SR 145 and the BNSF rail road track in Madera County. FACILITY WORK is shown on Drawing T1115-A. Caltrans vertical clearance requirements for MID maintenance roads on either side of canal are to be met.
  Estimated Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $240,000

- **Subtask I1.02**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and protect in place "Fresno River" in Madera County. New facilities are to be built to ensure that existing maintenance roads meet Caltrans vertical clearance requirements on either side of Fresno River.
  Estimated Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $240,000

- **Subtask I1.03**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and construct a double track box culvert to allow HST to go over "Cottonwood Creek" in Madera County.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $240,000

- **Subtask I1.04**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and relocate "Lateral 6.2-14" located between Ave 11 and Ave 10 in Madera County. Relocation includes backfilling existing canal, reconstructing turnouts (irrigation services), access roads and reconnecting turnouts to existing facilities. FACILITY WORK is shown on Drawing T1121-A and T1122-A.
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $2,032,500

- **Subtask I1.05**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and relocate existing irrigation facilities at Ave 10 proposed grade separation embankment. Automated facilities may be required to counter access restrictions
  Estimated Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $240,000

- **Subtask I1.06:**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and construct a box culvert to allow HST to go over "Lateral 6.2" between Ave 10 and Ave 9 in Madera County. Facility work includes trash racks, automatic gate at head of lateral 6.2-14.0 located approximated 1,500 west of HST crossing and within lateral 6.2 just west of the lateral 6.2-14.0 head and check structure at SR99 entrance structure. FACILITY WORK is shown on Drawing T1122-A.
  Estimated Period of Performance: 6 Months

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

The estimated value for this FACILITY WORK is $240,000.

- **Subtask I1.07:**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and realign meter boxes at "Lateral 6.2-13.4 and turnouts at the Ave 9 and Road 32 intersection. Reconstruct check structure north of roadway right of way in kind, provide access roadway between right of way and check structure and reconstruct existing turnouts in kind (south of Ave 10 and east of HST, and south of Ave 10 and west of HST to wet well. FACILITY WORK is shown on Drawing T1123-A.
  Estimated Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $240,000.

- **Subtask I1.08:**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and construct a box culvert to allow HST to go over "Lateral 6.2-9.2" near Ave 8 in Madera County. Facility work includes trash racks and automatic gates. FACILITY WORK is shown on Drawing T1124-A.
  Estimated Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $240,000.

- **Subtask I1.09:**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and relocate and replace irrigation FACILITIES to allow HST to go over "Lateral 6.2-9.2-5.0" near Ave 7 in Madera County. FACILITY WORK is shown on Drawing T1125-A.
  Estimated Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $240,000.

- **Subtask I1.10:**
  Scope: Design, secure permits, construct bypass facilities, traffic control, dewatering and construct retention basins adjacent to HST and laterals in Madera County to allow MID regulate storage.
  Estimated Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $240,000.

- **Subtask I1.11:**
  Scope: AUTHORITY'S CONTRACTOR shall reimburse MID for all costs resulting from plan check review, permits, inspection and testing (inspection & testing in an oversight Quality Assurance capacity only). AUTHORITY'S CONTRACTOR is still responsible to provide Quality Assurance and Quality Control for design and construction through project completion and closeout.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $150,000

3. Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

TASK ORDER NO. MID00001
CHSRP Interaction Removal or Relocation Plan

4. Schedule for FACILITY WORK (This TASK ORDER Only)

AUTHORITY'S CONTRACTOR shall complete the design work in accordance with the schedule specified in this TASK ORDER. AUTHORITY'S CONTRACTOR shall commence construction work only after acceptance of the final design for such work in accordance with Appendix C – Design Build Procedures of the Master Agreement.

Design:
Start Date: January 2013
Completion Date: June 2013

Construction:
Start Date: June 2013
Completion Date: February 2016

MID - Task Order 1 - Add 4.docx
08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

PEFORMANCE OF THE FACILITY WORK

1. **Design**

The design furnished by AUTHORITY'S CONTRACTOR pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix C – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, LOCAL AGENCY, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix C – Design Build Procedures of the Master Agreement.

BY LOCAL AGENCY: LOCAL AGENCY will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being properly performed by AUTHORITY'S CONTRACTOR.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR performs all design and construction services for FACILITY WORK.

2. **Construction**

AUTHORITY'S CONTRACTOR will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, LOCAL AGENCY and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $4,342,500.

Cost Allocation

AUTHORITY pays 100 % and LOCAL AGENCY pays 0 % of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

1. **For Work by LOCAL AGENCY**

LOCAL AGENCY's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix C – Design Build Procedures of this Master Agreement.

TASK ORDER NO. MID00001
CHSRP Interaction Removal or Relocation Plan

2. **For Work by AUTHORITY'S CONTRACTOR**

AUTHORITY has prepared an initial cost estimate in the amount of $4,342,500 for the FACILITY WORK included in this TASK ORDER.

AUTHORITY'S CONTRACTOR shall prepare an independent cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

LOCAL AGENCY shall credit AUTHORITY for the actual cost of any BETTERMENT, salvage value, and accrued depreciation on the FACILITIES as required pursuant to the Master Agreement, and pay the AUTHORITY'S CONTRACTOR for the actual cost of any BETTERMENT constructed by AUTHORITY'S CONTRACTOR.

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

CONTACTS

The contacts for this TASK ORDER will be as follows:

LOCAL AGENCY: Dina Nolan

AUTHORITY: Tony Valdez

AUTHORITY'S CONTRACTOR:

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08/22/2012 ADDENDUM 4 - RFP HSR 11-16

Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

California High-Speed Rail

Agreement Status

RFP No.: HSR 11-16
Addendum No. 4
July 31, 2012

Entity: Pacific Gas and Electric

Entity Role: Pacific Gas and Electric (PG&E) will perform all design and construction services for Facility Work.

Master Agreement: Master Agreement technical review is 100% complete. Master Agreement has been reviewed by Authority's Legal Counsel and PG&E is conducting final legal review.

Task Orders: Draft Task Order 1, 2 and 3 have been prepared. PG&E has not provided comments to scope within Draft Task Orders.

DISCLAIMER: **Because the Master Agreement has not yet been approved by the Pacific Gas and Electric, the Authority cannot represent that there will be no substantive changes to the draft Master Agreement as provided, although the Pacific Gas and Electric staff has reviewed the Master Agreement. The Master Agreement and draft Task Orders are being provided for informational purposes only, and the draft Task Orders are subject to the express limitations set forth in the General Provisions.**

TASK ORDER NO. PG&E 001
CHSRP Interaction Removal or Relocation Plan

Date: May 4, 2012
UTILITY OWNER: PG&E
Agreement No: 0000000
Task Order No: PG&E 001
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for UTILITY OWNER. Each FACILITY that requires RELOCATION will be handled under a separate subtask of this TASK ORDER.

WORK TO BE COMPLETED

Master Agreement

This TASK ORDER is issued in order to authorize the work described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  UTILITY OWNER will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L S, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  UTILITY OWNER performs all design and construction services for FACILITY WORK. AUTHORITY and AUTHORITY'S CONTRACTOR will review and provide comments FACILITY PLANS and AUTHORITY's CONTRACTOR shall be entitled to have representatives on the site of

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Attachment to Submission BO060 (Jason Holder, Madera County Farm Bureau (Atty. For) Fitzgerald Abbott & Beardsley LLP, October 18, 2012) - 770_Holder_CD_10182012_Attachments.pdf - Continued

PROJECT to verify that the FACILITY WORK is being performed on schedule and coordinated by UTILITY OWNER.

- **Subtask HV1.01**
  Scope: Design and Raise High Voltage Transmission Lines between 2 towers near Ave 12 in Madera County. Facility Work is shown on Drawing T1120-A.
  Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $8,600,000.

- **Subtask HV1.02**
  Scope: Design and Raise High Voltage Transmission Lines between 3 towers near Veterans Blvd and Golden State Blvd in the City of Fresno. Facility Work is shown on Drawing UT-C4006, UT-C4007 and UT-C4028.
  Period of Performance: 30 Months
  The estimated value for this FACILITY WORK is $8,600,000.

Comment [v1]: This sheet does not show work but I am referencing for the interim until RCs complete Utility Composite drawings for this conflict.

Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

Schedule for FACILITY WORK (This TASK ORDER Only)

UTILITY OWNER shall complete the design and construction work in accordance with the schedule specified in this TASK ORDER. UTILITY OWNER shall commence construction work only after acceptance of the final design for such work in accordance with Appendix B – Design Build Procedures of the Master Agreement.

Design:
Start Date: June 2012
Completion Date: January 2013

Construction:
Start Date: January 2013
Completion Date: June 2015

PERFORMANCE OF THE FACILITY WORK

Design

The design furnished by UTILITY OWNER pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix B – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, UTILITY OWNER, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix B – Design Build Procedures of the Master Agreement.

BY UTILITY OWNER: UTILITY OWNER performs all design and construction services for FACILITY WORK.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being performed on schedule and coordinated by UTILITY OWNER

Construction

UTILITY OWNER will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, UTILITY OWNER and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $17,200,000.

Cost Allocation

AUTHORITY pays 100% and UTILITY OWNER pays 0% of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

For Work by UTILITY OWNER

AUTHORITY has prepared an initial cost estimate in the amount of $17,200,000 for the FACILITY WORK included in this TASK ORDER.

UTILITY OWNER's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix B – Design Build Procedures of this Master Agreement.

[Select (and complete, if necessary) the one appropriate provision, and delete the inapplicable provisions]

UTILITY OWNER estimates that its total actual cost for the FACILITY WORK (net of any applicable credits for accrued depreciation, salvage and BETTERMENT), referred to herein as the "ACTUAL COST," will be approximately $17,200,000. UTILITY OWNER's ACTUAL COST for the FACILITY WORK shall be developed in accordance with 23 C.F.R. 645.117, pursuant to either *[check one]*

☐ A work order accounting procedure prescribed by the applicable Federal or State regulatory body;

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or

☐ An established accounting procedure developed by UTILITY OWNER and which UTILITY OWNER uses in its regular operations. Any costs included in the Actual Cost shall be reasonable, and shall be computed using rates and schedules not exceeding those applicable to similar work performed by or for UTILITY OWNER at UTILITY OWNER's full expense. The parties agree that 0% of UTILITY OWNER's Actual Cost will be attributed to BETTERMENT.

For Work by Authority's Contractor

AUTHORITY'S CONTRACTOR shall prepare a cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

– OR –

The parties have not yet determined if the FACILITY WORK includes any BETTERMENT, or have not yet determined the amount attributable to BETTERMENT. Upon such determination, the parties shall revise this TASK ORDER as appropriate.

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

SIGNATURES

This TASK ORDER shall become effective upon the later of:

The date of signing by the last party signing this TASK ORDER, or

The completion AUTHORITY's review as indicated by the signature of AUTHORITY's representative, below.

IN WITNESS WHEREOF, this TASK ORDER has been executed under the provisions of Agreement No. _____ between the AUTHORITY, UTILITY OWNER, and AUTHORITY'S CONTRACTOR. By signature below, the parties hereto agree that all terms and conditions of this TASK ORDER No. ____ and Agreement No. _____ shall be in full force and effect.

UTILITY OWNER:

Date: May 4, 2012
UTILITY OWNER: PG&E
Agreement No: 0000000
Task Order No: PG&E 002
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for UTILITY OWNER. Each FACILITY that requires RELOCATION will be handled under a separate subtask of this TASK ORDER.

WORK TO BE COMPLETED

Master Agreement

This TASK ORDER is issued in order to authorize the work described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  UTILITY OWNER will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L S, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  UTILITY OWNER performs all design and construction services for FACILITY WORK. AUTHORITY and AUTHORITY'S CONTRACTOR will review and provide comments FACILITY PLANS and AUTHORITY's CONTRACTOR shall be entitled to have representatives on the site of

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PROJECT to verify that the FACILITY WORK is being performed on schedule and coordinated by UTILITY OWNER.

- **Subtask G2.01**
  Scope: Design and relocate approximately 500 LF of gas facilities along Ave 12 in Madera County. Facility Work is shown on Drawing T1120-A.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $73,000.
- **Subtask G2.02**
  Scope: Design and relocate approximately 500 LF of gas facilities near Motel Dr and SR99 in the City of Fresno. FACILITY WORK is shown on Drawing T1126-A
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $73,000.
- **Subtask G2.03**
  Scope: Design and relocate approximately 500 LF of gas facilities near Motel Dr and SR99 in the City of Fresno. FACILITY WORK is shown on Drawing T1127-A
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $73,000.
- **Subtask G2.04**
  Scope: Design and relocate approximately 300 LF of 2", 940 LF of 4" and 440 LF of 12" gas facilities near Herndon Ave and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4000 and UT-C4001.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $245,280
- **Subtask G2.05**
  Scope: Design and relocate approximately 630 LF of 2" and 3,922 LF of 4" gas facilities near Barstow Ave and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4015, UT-C4016 and UT-C4017.
  Period of Performance: 8 Months
  The estimated value for this FACILITY WORK is $1,075,704
- **Subtask G2.06**
  Scope: Design and relocate approximately 100 LF of 2", 3,466 LF of 3" and 150 LF of 4" gas facilities along Golden State Blvd between Shaw Ave and Ashlan Ave in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4015, UT-C4016 and UT-C4017.
  Period of Performance: 8 Months
  The estimated value for this FACILITY WORK is $820,636
- **Subtask G2.07**
  Scope: Design and relocate approximately 1,077 LF of 4" gas facilities along adjacent to SR99 near Dakota Ave and Valentine Ave in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4019 and UT-C4020.

California High Speed Rail Authority

TASK ORDER NO. PG&E 002
CHSRP Interaction Removal or Relocation Plan

Period of Performance: 6 Months
The estimated value for this FACILITY WORK is $157,242

- **Subtask G2.08**
  Scope: Design and relocate approximately 1,305 LF of 2" gas facilities adjacent to SR99, near Cortland Ave and Shields Ave in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4021 and UT-C4022.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $190,532
- **Subtask G2.09**
  Scope: Design and relocate approximately 440 LF of 2" and 500 LF of 3" gas facilities near SR99 and Clinton Ave in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4024.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $137,240
- **Subtask G2.10**
  Scope: Authority's Contractor is to protect in place approximately 1,200 LF of 6" gas facilities near Shaw Ave and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4030
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $98,400
- **Subtask G2.11**
  Scope: Design and relocate approximately 250 LF of 3", 2,588 LF of 4" gas facilities and Authority's Contractor is to protect in place approximately 375 LF of 4" gas facilities adjacent to Golden State Blvd near McKinley Ave and Olive Ave in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4036, UT-C4037, UT-C4038, UT-C4046 and UT-C4047.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $408,598
- **Subtask G2.12**
  Scope: Design and relocate approximately 220 LF of 2" and 1,510 LF of 3" gas facilities near Olive Ave and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4039, UT-C4048 and UT-C4049.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $252,580
- **Subtask G2.13**
  Scope: Design and relocate approximately 201 LF of 2", 550 LF of 3", 310 LF of 8", 650 LF of 12" and 2,550 LF of 16" gas facilities and Authority's Contractor is to protect in place approximately 150 LF of 16" gas facilities near Belmont Ave and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4041, UT-C4042, UT-C4051 and UT-C4052.
  Period of Performance: 12 Months
  The estimated value for this FACILITY WORK is $1,080,506
- **Subtask G2.14**

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Scope: Design and relocate approximately 1,020 LF of 12" gas facilities near H Street and Divisadero in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4043 and UT-C4053.
Period of Performance: 6 Months
The estimated value for this FACILITY WORK is $148,920

- **Subtask G2.15**
  Scope: Design and relocate approximately 670 LF of 12" gas facilities near H Street and Divisadero in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4044.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $148,920
- **Subtask G2.16**
  Scope: Design and relocate approximately 120 LF of 6" gas facilities near H Street and Divisadero in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4045.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $240,000
- **Subtask G2.17**
  Scope: Design and relocate approximately 850 LF of 6" gas facilities near G Street and Stanislaus St in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4054.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $124,100
- **Subtask G2.18**
  Scope: Design and relocate approximately 900 LF of 6" and Authority's Contractor is to protect in place approximately 210 LF of 16" gas facilities near G Street and Tulare St in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4056.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $148,620
- **Subtask G2.19**
  Scope: Design and relocate approximately 350 LF of 4", 450 LF of 16" and Authority's Contractor is to protect in place approximately 420 LF of 6" gas facilities near G Street and Ventura St in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4057.
  Period of Performance: 36 Months
  The estimated value for this FACILITY WORK is $219,240
- **Subtask G2.20**
  Scope: Design and relocate approximately 390 LF of 6" gas facilities near H Street and Tulare St in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4058.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $56,940
- **Subtask G2.21**
  Scope: Authority's Contractor is to protect in place approximately 340 LF of 6" and 530 LF of 8" gas facilities near H Street and Ventura St in the City of Fresno. FACILITY WORK is shown on Drawing UT-C4059.

California High Speed Rail Authority

TASK ORDER NO. PG&E 002
CHSRP Interaction Removal or Relocation Plan

Period of Performance: 36 Months
The estimated value for this FACILITY WORK is $71,340

- **Subtask G2.22**
  Scope: Design and relocate approximately 400 LF of gas facilities near Railroad Ave and California in the City of Fresno. FACILITY WORK is shown on Drawing CB1662.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $58,400
- **Subtask G2.23**
  Scope: Design and relocate approximately 400 LF of gas facilities near Railroad Ave and Florence Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1662.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $58,400
- **Subtask G2.24**
  Scope: Design and relocate approximately 2,700 LF of gas facilities near Railroad Ave and Church Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1663.
  Period of Performance: 8 Months
  The estimated value for this FACILITY WORK is $394,200
- **Subtask G2.25**
  Scope: Design and relocate approximately 5,700 LF of gas facilities along Railroad Ave between Church and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing CB1664.
  Period of Performance: 8 Months
  The estimated value for this FACILITY WORK is $394,200
- **Subtask G2.26**
  Scope: Design and relocate approximately 300 LF of gas facilities near East Ave and Railroad Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1664.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $43,800
- **Subtask G2.27**
  Scope: Design and relocate approximately 750 LF of gas facilities near Jensen Ave and Golden State Blvd in the City of Fresno. FACILITY WORK is shown on Drawing CB1665.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $109,500
- **Subtask G2.28**
  Scope: Design and relocate approximately 300 LF of gas facilities near Orange Ave and Cedar Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1666.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $43,800
- **Subtask G2.29**
  Scope: Design and relocate approximately 300 LF of gas facilities near Hardy Ave and Cedar Ave

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in the City of Fresno. FACILITY WORK is shown on Drawing CB1667.
Period of Performance: 4 Months
The estimated value for this FACILITY WORK is $43,800

- **Subtask G2.30**
  Scope: Design and relocate approximately 300 LF of gas facilities near North Ave and Cedar Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1667.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $43,800
- **Subtask G2.31**
  Scope: Design and relocate approximately 200 LF of gas facilities near Muscat Ave and Cedar Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1668.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $29,200
- **Subtask G2.32**
  Scope: Design and relocate approximately 200 LF of gas facilities near Central Ave and Cedar Ave in the City of Fresno. FACILITY WORK is shown on Drawing CB1669.
  Period of Performance: 4 Months
  The estimated value for this FACILITY WORK is $29,200

Comment [v1]: The work within the comment are assumptions since the RCs are currently progressing the scope within Section 1C.

Project Schedule

Deadlines for the completion of FACILITY WORK are provided for in the contract between AUTHORITY and AUTHORITY'S CONTRACTOR.

Schedule for FACILITY WORK (This TASK ORDER Only)

UTILITY OWNER shall complete the design and construction work in accordance with the schedule specified in this TASK ORDER. UTILITY OWNER shall commence construction work only after acceptance of the final design for such work in accordance with Appendix B – Design Build Procedures of the Master Agreement.

Design:
Start Date: June 2012
Completion Date: January 2013

Construction:
Start Date: January 2013
Completion Date: June 2015

PERFORMANCE OF THE FACILITY WORK

Design

The design furnished by UTILITY OWNER pursuant to this TASK ORDER shall be substantially in accordance with the Proposed Preliminary Design (see Appendix B – Design Build Procedures of the Master Agreement) attached to this TASK ORDER, and shall be consistent with 30% design submittal of the PROJECT plans. All plans for FACILITY WORK are subject to review by AUTHORITY, UTILITY

OWNER, and AUTHORITY'S CONTRACTOR, in accordance with the time frames and procedures set forth in Appendix B – Design Build Procedures of the Master Agreement.

BY UTILITY OWNER: UTILITY OWNER performs all design and construction services for FACILITY WORK.

BY AUTHORITY'S CONTRACTOR: AUTHORITY'S CONTRACTOR will review FACILITY PLANS and be entitled to have a reasonable number of representatives on site of PROJECT to verify the FACILITY WORK is being performed on schedule and coordinated by UTILITY OWNER

Construction

UTILITY OWNER will perform all the construction services for the FACILITY WORK. The construction of FACILITY WORK shall be performed substantially in accordance with the final FACILITY PLANS. Deviations from the final FACILITY PLANS may occur only in conformity with the Master Agreement.

LIABILITY FOR WORK

In accordance with Section 3 of the Master Agreement, UTILITY OWNER and AUTHORITY shall each be responsible for the cost of the FACILITY WORK as specified herein. The total estimated cost for the FACILITY WORK is $7,478,996.

Cost Allocation

AUTHORITY pays 100% and UTILITY OWNER pays 0% of cost of FACILITY WORK

COST ESTIMATE

The amounts stated herein are estimates of the costs associated with the FACILITY WORK. Authorized expenditures and reimbursements will be based on the terms of the Master Agreement.

For Work by UTILITY OWNER

AUTHORITY has prepared an initial cost estimate in the amount of $7,478,996 for the FACILITY WORK included in this TASK ORDER.

UTILITY OWNER's costs for FACILITY WORK shall be developed pursuant to Section 5, "Payment of Work," of the Master Agreement, and shall be performed in accordance with the procedures set forth in Section 4, "Performance of Work" and Appendix B – Design Build Procedures of this Master Agreement.

[Select (and complete, if necessary) the one appropriate provision, and delete the inapplicable provisions]

UTILITY OWNER estimates that its total actual cost for the FACILITY WORK (net of any applicable credits for accrued depreciation, salvage and BETTERMENT), referred to herein as the "ACTUAL COST," will be approximately $7,478,996. UTILITY OWNER's ACTUAL COST for the FACILITY

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WORK shall be developed in accordance with 23 C.F.R. 645.117, pursuant to either *[check one]*

☐ A work order accounting procedure prescribed by the applicable Federal or State regulatory body; or

☐ An established accounting procedure developed by UTILITY OWNER and which UTILITY OWNER uses in its regular operations. Any costs included in the Actual Cost shall be reasonable, and shall be computed using rates and schedules not exceeding those applicable to similar work performed by or for UTILITY OWNER at UTILITY OWNER's full expense. The parties agree that 0% of UTILITY OWNER's Actual Cost will be attributed to BETTERMENT.

For Work by Authority's Contractor

AUTHORITY'S CONTRACTOR shall prepare a cost estimate for the FACILITY WORK which shall be submitted for AUTHORITY's approval. Such estimate will reflect appropriate estimated charges for BETTERMENT and salvage value, if any. Upon approval, the parties shall revise this TASK ORDER to incorporate the approved estimate.

BETTERMENT, ACCRUED DEPRECIATION, SALVAGE

The FACILITY WORK in this TASK ORDER does not include any BETTERMENT

– OR –

The parties have not yet determined if the FACILITY WORK includes any BETTERMENT, or have not yet determined the amount attributable to BETTERMENT. Upon such determination, the parties shall revise this TASK ORDER as appropriate.

BILLING AND PAYMENT

Billing and payment shall be in accordance with Section 5, "Payment for Work," of the Master Agreement.

SIGNATURES

This TASK ORDER shall become effective upon the later of:

The date of signing by the last party signing this TASK ORDER, or

The completion AUTHORITY's review as indicated by the signature of AUTHORITY's representative, below.

IN WITNESS WHEREOF, this TASK ORDER has been executed under the provisions of Agreement No. _____ between the AUTHORITY, UTILITY OWNER, and AUTHORITY'S CONTRACTOR. By signature below, the parties hereto agree that all terms and conditions of this TASK ORDER No. ____ and Agreement No. _____ shall be in full force and effect.

Date: May 4, 2012
UTILITY OWNER: PG&E
Agreement No: 0000000
Task Order No: PG&E 003
Project Title: California High-Speed Rail Project

GENERAL

This TASK ORDER supplements and amends the Construction Contract and Master Agreement. The purpose of this TASK ORDER is to authorize the FACILITY WORK for UTILITY OWNER. Each FACILITY that requires RELOCATION will be handled under a separate subtask of this TASK ORDER.

WORK TO BE COMPLETED

Master Agreement

This TASK ORDER is issued in order to authorize the work described herein (FACILITY WORK). This TASK ORDER does not express all of the terms and conditions relevant to the FACILITY WORK; accordingly, the Master Agreement and all of the provisions thereof are incorporated into this TASK ORDER by this reference. Capitalized terms used but not identified in this TASK ORDER shall have the definitions set forth in the Master Agreement. All attachments referenced in this TASK ORDER are incorporated herein by such reference. All FACILITY WORK shall be performed in accordance with the requirements of the Master Agreement and, in the event of any inconsistency between the provisions of this TASK ORDER and the Master Agreement, the provisions of the Master Agreement shall prevail.

Scope of Work

FACILITY WORK as defined in Section 2.1 of the Master Agreement is incorporated by reference. Each separate FACILITY that requires RELOCATION will be treated as a subtask to this TASK ORDER.

- **Location and General Description of the Work Covered by this TASK ORDER (Including Disposition of Existing Facilities):**
  UTILITY OWNER will furnish all labor, material, equipment and supervision required to complete the relocation of FACILITIES and appurtenances. All work shall be performed substantially in accordance with "Request for Proposal for Design Build Services-RFP No. 11-16 consisting of Hybrid Alternative, Contract Package 1A, Contract Package 1B and Contract Package 1C, a copy of which is on file in the AUTHORITY'S office at 770 L S, Suite 800, Sacramento, CA 95814.

- **Subject Work to be Performed by Parties Pursuant to this TASK ORDER:**
  UTILITY OWNER performs all design and construction services for FACILITY WORK. AUTHORITY and AUTHORITY'S CONTRACTOR will review and provide comments FACILITY PLANS and AUTHORITY's CONTRACTOR shall be entitled to have representatives on the site of

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PROJECT to verify that the FACILITY WORK is being performed on schedule and coordinated by UTILITY OWNER.

- **Subtask E3.01**
  Scope: Design and relocate approximately 200LF of overhead power facilities near Raymond Road in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.02**
  Scope: Design and relocate approximately 200LF of overhead power facilities near Highway 145 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.03**
  Scope: Design and relocate approximately 200LF of overhead power facilities near Watson St in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.04**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Road 29 and Ave 15 ½ in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.05**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 15 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.06**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 13 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.07**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 12 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.08**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 10 in

California High Speed Rail Authority

TASK ORDER NO. PG&E 003
CHSRP Interaction Removal or Relocation Plan

Madera County. Facility Work is shown on Drawing xxxx.
Period of Performance: 6 Months
The estimated value for this FACILITY WORK is $28,800.

- **Subtask E3.09**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 9 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.10**
  Scope: Design and relocate approximately 200LF of overhead power facilities north of Ave 8 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.11**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 8 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.12**
  Scope: Design and relocate approximately 200LF of overhead power facilities south of Ave 8 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.13**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Road 33 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.14**
  Scope: Design and relocate approximately 200LF of overhead power facilities at Ave 7 in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.15**
  Scope: Design and relocate approximately 200LF of overhead power facilities north of the San Joaquin River in Madera County. Facility Work is shown on Drawing xxxx.
  Period of Performance: 6 Months
  The estimated value for this FACILITY WORK is $28,800.
- **Subtask E3.16**
  Scope: Design and relocate approximately 822LF of overhead power facilities near Herndon Ave

Comment [v1]: Subtasks E3.1 to E3.15 are assumptions based on the limited information shown in the CP1 drawings.

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