Peninsula Corridor Electrification Project
Second Addendum to the Final Environmental Impact Report
Overhead Contact System (OCS) Pole and Wire Relocations

08/08/17

Executive Summary

The Peninsula Corridor Electrification Project (PCEP) consists of converting Caltrain from diesel-hauled to EMU trains for service between the 4th and King Street Station terminus station in San Francisco and the Tamien Station in San Jose. Operating speed would be up to 79 mph, which would match the existing maximum speed. The PCEP would require the installation of 130 to 140 single-track miles of overhead contact system (OCS) for the distribution of electrical power to the new electric rolling stock. The OCS would be powered from a 25 kilovolt (kV), 60 Hertz (Hz), single-phase, alternating current (AC) traction power system consisting of two traction power substations (TPSs), one switching station and seven paralleling stations.

The PCEP objectives include the following:

- **Provide electrical infrastructure compatible with high-speed rail.**
- **Improve train performance, increase ridership and increase service.**
- **Increase revenue and reduce fuel costs**.
- **Reduce environmental impact by reducing noise emanating from trains**.
- **Reduce environmental impact by improving regional air quality and reducing greenhouse gas emissions.**

The Peninsula Corridor Joint Power Board (JPB) certified the PCEP Environmental Impact Report (EIR) on January 8, 2015. Since certification of the Final EIR, the JPB and the California High Speed Rail Authority (CHSRA) have coordinated on the developing design for the shared Caltrain corridor to meet the PCEP objective of accommodating blended Caltrain and HSR service. As discussed in the PCEP EIR, in order to meet HSR and Caltrain service time goals in a blended system, there will be a need to realign certain curves in order to support speeds up to 110 miles per hour (mph). The future curve realignment (by CHSRA, not by JPB) would require placement of some sections of overhead contact system (OCS) poles and wires at slightly different locations than originally anticipated in the PCEP EIR. The placement of poles needed to accommodate future curve straightening needed for HSR was not known at the time that the PCEP EIR was prepared and certified; if it had been known at that time, the project description would have included pole locations that are compatible with the existing alignment as well as the future HSR alignment.

The JPB plans to operate trains at speeds up to 79 mph as described in the PCEP EIR. Caltrain would only operate at speeds greater than 79 mph after CHSRA constructs track realignments and other improvements necessary to safely operate at such speeds and after such track realignments are environmentally cleared in the Environmental Impact Report/Environmental Impact Statement being

prepared by CHSRA for the San Francisco to San Jose HSR section. CHSRA will environmentally clear any and all track realignments necessary for blended service.

In order to reduce duplicative disruption to Caltrain service, additional disruption to neighboring communities, and control costs, the JPB now proposes to adjust certain OCS pole and wire alignments as part of PCEP construction to anticipate future HSR track relocations, but only where such OCS alignments will:

- work with both existing and future track alignments (e.g. the alignments would work with the existing track alignment whether or not HSR track realignments are ever built);
- not restrict alternatives under consideration in the CHSRA environmental process (e.g. will not be in any location where multiple alignments are under consideration by CHSRA),
- not result in substantial impacts to Caltrain or other infrastructure (such as stations, underpasses, or overpasses),
- not require modification of the PCEP environmental permits; and
- not result in new significant environmental impacts or substantially more severe environmental impacts than disclosed in the PCEP EIR.

Under the California Environmental Quality Act (CEQA), an addendum to an EIR is needed if minor technical changes or modifications to the EIR are needed related to a subsequent discretionary action (e.g. a proposed project change). An addendum is appropriate only if the subsequent discretionary actions do not result in any new significant impacts or a substantial increase in the severity of previously identified significant impacts (CEQA Guidelines Section 15164). An addendum does not need to be circulated for public review (CEQA Guidelines Section 15164(c)) or formally adopted like an EIR or Negative Declaration; however, an addendum is to be "considered" along with the Final EIR by the decision- making body prior to making a decision on the subsequent discretionary action (CEQA Guidelines Section 15164(d)).

This addendum to the PCEP Final EIR (State Clearinghouse No. 2013012079) has been prepared in accordance with CEQA Guidelines Section 15164.

Purpose and Need for Project Changes

In 2015, the JPB certified the Final EIR for the PCEP. The Proposed Project would require the installation of 130 to 140 single-track miles of overhead contact system (OCS) for the distribution of electrical power to the electric rolling stock. The OCS would be powered from a 25 kilovolt (kV), 60 Hertz (Hz), single-phase, alternating current (AC) supply system consisting of two traction power substations (TPSs), one switching station (SWS), and seven paralleling stations (PSs). The Final EIR evaluated environmental impacts associated with the four options for the site of the northern TPS (TPS1 in South San Francisco) and three options for the site of the southern TPS (TPS2 in San Jose). In addition, the Final EIR evaluated environmental impacts associated with one switching station (SWS1) (with two site location options) and seven paralleling stations (PS1 through PS7) at a spacing of approximately 5 miles. Two options were evaluated for the PS3 and PS6 sites and three options were evaluated for the PS4, PS5, and PS7 sites.

The PCEP EIR cumulative analysis recognized that there was a potential for multiple rounds of disruption to Caltrain service and multiple rounds of construction disruption to adjacent communities due to PCEP construction prior to construction of improvements for HSR. Specifically, PCEP construction of OCS poles and wires prior to determination and environmental clearance of final design for the HSR blended alignment could then necessitate relocation of OCS poles and wires with a second construction effort potentially on a then-operating electric railroad (Caltrain). At the time of the PCEP EIR, there was no design for blended service track or pole alignments and thus the PCEP EIR could not fully evaluate the potential effects of alternative pole locations. The CHSRA has now provided a proposed alignment to the JPB that can now be used to identify the resultant pole locations that would be compatible with the future HSR alignment.

The CHSRA is preparing an Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for the improvements to the Caltrain corridor to facilitate blended service in the future. This EIR/EIS is analyzing all necessary improvements to allow for blended service including track relocations, installation of OCS poles and wires, station improvements, potential need for passing track options, and safety improvements such as quad gates for at-grade crossings.

Recognizing that construction of certain sections of OCS poles and wires twice would result in substantial disruption to Caltrain service, additional disruption to neighboring communities, as well as incur substantial additional cost, the JPB and CHSRA reviewed the proposed alignment for the HSR to identify if there were certain areas where the OCS pole and wire alignment could be adjusted to avoid the need for future relocation. The goal of JPB and CHSRA is to, as much as possible, construct the OCS pole and wire system once, not twice to minimize disruption to Caltrain service, minimize environmental impacts of construction, and minimize costs.

Proposed Project Changes

Appendix A provides a list of 61 locations in which OCS pole and wire alignments would be adjusted compared to the current OCS pole and wire alignments in the PCEP. Of these 61 locations, 51 would entail a shift of less than 1 foot from the current alignment, seven would entail a shift of one to two feet, two would entail a shift of two to three feet and one would entail a shift of 4.2 feet. In some cases (32 locations) the OCS alignment shift would be toward the outer edge of the right of way (ROW); in the remaining cases (29 locations) the realignment would be toward the inner portion of the ROW.

OCS pole and wire alignments would be slightly shifted along a total of 11.55 miles of track (north and south). By contrast, the PCEP, as a whole, would electrify 130 to 140 miles of track, so the proposed relocations represent a small portion of the overall OCS pole and wire construction effort.

All of relocated OCS pole and wire alignments constructed by JPB as part of the PCEP before completion of the CHSRA EIR/EIS would work with the existing track alignments regardless of whether HSR ever realigns tracks in the future and regardless of whether HSR ever operates on the Caltrain Corridor.

There would be no change in the construction methods compared to that disclosed in the PCEP EIR. All PCEP commitments and mitigation measures would apply to construction of the OCS pole and wire alignments included in this addendum. If this change is approved by the JPB, it would reduce potential future Caltrain service disruption, construction disruption to neighboring communities, and would

reduce cost in comparison to a cumulative scenario in which the OCS poles and wires were installed along the subject 11.55 miles by the PCEP as originally proposed in the PCEP EIR and then later were relocated by CHSRA.

The construction of the OCS pole and wire alignments at slightly different locations would not require greater construction effort or duration compared to the originally proposed project.

For all pole and wire alignment shifts of less than 2 feet, there would be no need for a change in OCS pole design, with one exception. At one location near Brewster Avenue in Redwood City, the OCS pole design would shift from a side pole design to a two-track cantilever to avoid potential ROW effects. For the three locations with a shift of greater than 3 feet, an elongated two-track cantilever would be utilized instead of a side-pole design. One of two elongated designs would be used at these locations. The design would either use a long reach cantilever arm assembly attached to the column that supports the OCS over the existing track or a drop tube and a standard reach cantilever arm assembly. In either case, the column would be positioned 9'6" from the proposed CHSRA track location. When the CHSRA track is shifted to the proposed CHSRA track location in the future (as part of the CHSRA project, not as part of PCEP), a standard reach cantilever arm attached to the column would replace the long reach cantilever arm or the drop tube since the shifted track would be closer to the column. These OCS pole designs are not taller than standard two-track cantilevers; the only difference is that the pole assemblies are longer in order to function with the current track alignment and then be able to be adjusted to a future track alignment.

The revised OCS pole and wire alignments would require slightly greater Electrical Safety Zone (ESZ) acquisition on one private parcel that already had ESZ acquisition with the prior PCEP design. The area of slightly greater acquisition would only be 0.1 feet. Additional right of way acquisition for the ESZ would also occur at four public right-of-way locations where a slightly larger (each less than 0.6 feet) area of acquisition would be necessary on either local city road rights-of way or the Santa Clara Valley Transportation Authority (SCVTA). These acquisitions would not require the relocation of any roadways or SCVTA structures or tracks. The revised OCS pole and wire alignments would also result in slight reduction in areas of acquisition in four locations.

Pole and Wire Alignments Excluded from Proposed Project Changes

The alignments discussed below were excluded from the proposed project changes.

OCS Pole/Wire Alignments Incompatible with Current Track Locations

Nearly all of the proposed project changes (58 locations) do not include any OCS pole and wire relocations in any area where the track alignment must be moved more than 2 feet from the proposed PCEP location. There is a 2-foot tolerance in terms of specific OCS pole placement in which the pole could be moved and still be able to function for the existing track without requiring a change in pole design.

At three locations with more than 2 feet in alignment shift, the OCS pole design would change to an elongated two-track cantilever design that will work for the existing alignment and the future HSR alignment. Because the elongated two-track cantilevers used will be similar in design to the two-track

cantilevers already included in the design, just with longer arms, the proposed changes will not result in substantial changes in pole design relative to appearance.

OCS Pole/Wire Alignments in areas of CHSRA Alternatives

This addendum does not include OCS pole and wire relocations in any areas where multiple alternatives are under consideration by CHSRA in the CHSRA EIR/EIS in order to avoid restrictions on consideration of alternatives. The CHSRA EIR/EIS will be used for the environmental clearance for all improvements for blended service in such areas, including the OCS pole and wire locations. This does not preclude the JPB constructing the currently proposed OCS pole and wire locations for PCEP as that has already been environmentally cleared; but doing so may result in additional disruption and cost if the ultimately selected alignment for blended service required OCS pole and wire relocation. The areas of exclusion include the following:

- Brisbane Light Maintenance Facility (LMF) Area: No OCS pole and wire relocations are considered in the area from the San Francisco Tunnel No. 4 to the northern end of Brisbane Lagoon as the CHSRA EIR/EIS is considering two different LMF locations and configurations in this area. The LMF facility and the associated alignments for tracks and OCS pole and wire locations for blended service in this area will be environmentally cleared in the CHSRA EIR/EIS.
- Mid-Peninsula Potential Passing Track Area: No OCS pole and wire relocations are considered for now in the area from south of 9th Street in San Mateo to just north of Whipple Avenue in Redwood City. The CHSRA EIR/EIS is considering two alternatives in this area (a No Passing Track Option and a Short-Middle-4 Passing Track Option). Alignments for tracks and OCS pole and wire locations for blended service in this area will be environmentally cleared in the CHSRA EIR/EIS.
- Aerial Sections south of Scott Blvd: No OCS pole and wire relocations are considered in the area south of Scott Blvd. in Santa Clara because the CHSRA design in this area is considering two options (Aerial section starting at Scott Blvd. and Aerial section starting at I-880). The aerial section will be dedicated for HSR use only; the at-grade portion between Scott Blvd. and I-880 in the I-880 aerial option would be for blended service. Alignments for tracks and OCS pole and wire locations for blended and dedicated service will be environmentally cleared in the CHSRA EIR/EIS.

Exclusion of OCS Pole/Wire Alignments with Substantial Infrastructure Impacts

The PCEP EIR project description did not include any substantial modification of infrastructure such as Caltrain station platforms or overpasses or underpasses. Some of the CHSRA proposed track realignments would require some modifications of certain station platforms, and certain other structures along the corridor. All OCS pole and wire locations associated with any track relocations requiring substantial structural work are excluded from consideration in this addendum.

Exclusion of OCS Pole/Wire Alignments that would require modification of PCEP environmental permits

Some of the proposed CHSRA OCS pole and wire alignment relocations would change impacts in areas subject to the jurisdiction of the U.S. Army Corps of Engineers, the San Francisco Regional Water Quality

Control Board, the California Department of Fish and Wildlife, and/or the U.S. Fish and Wildlife Service. The JPB has already obtained all necessary permits from these agencies for construction of the PCEP. In order to avoid potential delay of having to modify such permits, all pole and wire alignment relocations that would change effects to jurisdictional resources under these agencies have been excluded from consideration in this addendum.

Exclusion of OCS Pole/Wire Alignments that would result in additional Significant Environmental Impacts

All CHSRA OCS pole and wire alignment relocations that could result in new significant impacts or substantially more severe impacts than would result from that disclosed in the PCEP EIR are excluded from consideration in this addendum.

2 Environmental Analysis of Proposed Pole and Wire Relocations

Table 1 describes the potential environmental impacts of the proposed OCS pole and wire relocations and analyzes any potential change in the level of significance as determined in the 2015 FEIR.

Table 1. Summary of Impacts of Proposed OCS Pole and Wire Relocations.

Environmental Topic	Impact
Aesthetics	• Assessment of this subject was through qualitative assessment of visual aesthetics and quantitative assessment of tree removal. • Some OCS poles and wires would be closer to sensitive viewers and could increase vegetation removal compared to that disclosed in the PCEP EIR. Some would be further away. The changes would be minimal for the 51 of the relocation areas with less than a one foot shift and the seven locations with a shift of 1 to 2 feet. For the three locations with a shift in alignment of 2 to 4 feet, the shift of OCS is fully contained within the JPB ROW and thus will not change the aesthetics of any adjacent parcels. For these three locations, elongated two-track cantilevers will be used that have the same appearance as standard two-track cantilevers but have a longer arm to allow adaptation in the future from the existing alignment to a future HSR alignment. In the end, such pole designs would not change the aesthetics of the OCS along the route. • The realignments would have less effect on trees that the current design because the OCS pole and wire alignment would be further away from more trees than it would move close to. The alignment would be closer to 312 trees, but further away from 331 trees, and thus would have a net reduction in effects to 19 trees overall. In most cases, especially the 51 locations with a shift of less than 1 feet, there would only be negligible change in effects to trees, positively or adversely. Thus, overall the aesthetic impacts of tree removal would be similar and less than disclosed in the EIR. • No change in pole design commitments beyond those noted in the description of project changes above, would be necessary. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding aesthetics that were analyzed in the Final EIR.
Air Quality	• Assessment of this subject was through qualitative assessment of construction and permanent air quality effects. • OCS pole and wire realignment would require the same amount of construction in realignment locations compared to that disclosed in the PCEP EIR. However, OCS installation that avoids future OCS relocation by CHSRA would lower cumulative construction air quality emissions compared to two separate construction events. • There would be no changes in train locomotive emissions due to these project changes. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding air quality that were analyzed in the Final EIR.

Environmental Topic	Impact
Biological Resources	• Assessment of this subject was through GIS analysis of construction areas vs. resource areas and quantitative assessment of tree impacts. • OCS Realignment would increase or decrease vegetation removal compared to that disclosed in the PCEP EIR depending on location, but as discussed above, the realignment is moving away from slightly more trees than it is moving closer to and thus vegetation removal should be approximately the same or slightly less than the adopted design. • No OCS realignments were included in areas of threatened and endangered species habitat or that would increase impacts on jurisdictional waters or wetlands compared to that disclosed in the PCEP EIR. • The realignments would have less effect on trees that the current design because the OCS pole and wire alignment would be further away from more trees than it would move close to. The alignment would be closer to 312 trees, but further away from 321 trees, and thus would have a net reduction in effects to 19 trees overall. Thus, overall the aesthetic impacts of tree removal would be similar and less than disclosed in the PCEP EIR. • No change in pole design commitments would be necessary. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding biological resources that were analyzed in the Final EIR.
Cultural Resources	• Assessment of this subject was through GIS analysis of construction areas vs. resource areas. • OCS realignment would not change impacts to historic architectural resources. • Due to the nature of archaeological resources (which tend to be spread across the ROW)and with application of PCEP mitigation, no change in the significance of effects to archaeological resources would occur. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding cultural resources that were analyzed in the Final EIR.

Environmental Topic	Impact
EMF/EMI	• Assessment of this subject was through quantitative analysis of change in EMF levels and qualitative analysis of change in EMI. • The PCEP EIR concluded that the project would have no significant health effect due to EMF exposure because EMF levels identified in the EIR were well below the health effect thresholds. • The FEIR identified that the maximum magnetic field level at the edge of the ROW (15 feet) could be up to 41 milligauss (mG) and outside the ROW (at 58 feet) could be up to 11 mG, which are both below the lowest health effect threshold for adjacent public exposure of 833 mG. Magnetic fields attenuate quickly with distance as shown in the estimated change of 30 mG over 43 feet in the FEIR data. The FEIR identified that the maximum electric field levels at the edge of the ROW (15 feet) could be up to 0.48 kilovolts/meter (kV/m) and outside the ROW (at 58 feet) could be up to 0.35kV/m, which are both well below the lowest health effect threshold for adjacent occupant exposure of 4.2 kV/M. Electrical fields also attenuate with distance as shown in the FEIR data that indicate a change of 0.13 kV/M over 43 feet. • OCS realignment in certain areas would move OCS poles and wires slightly closer to or slightly further from human receptors and sensitive equipment (such as MRIs at medical facilities along the corridor). In 29 locations, the alignment would be further away from the edge of the ROW and EMF levels would be slightly less than in disclosed in the FEIR. In 25 locations, the OCS alignment would be up to 1 foot closer to the edge of the ROW. In 6 locations, the OCS alignment would be up to 2 feet closer to the edge of the ROW. In 1 location, the OCS alignment would be approximately 4 feet closer to the edge of the ROW. • The FEIR data shows that the magnetic strength increased by 30 mG by as one moved from 58 feet to within 15 feet of the OCS. With the OCS shifts of <1 to 4 feet, the potential increase in magnetic field for any receptor would be substantially lower than 30 mG. Even if the field strength were to increase by 30 mG, the resultant levels at the edge of the ROW and outside the ROW would still be less than 10% of the threshold. With the shifts of <1 to 4 feet, the potential increase in electrical field strength for any receptor would be substantially lower than 0.13 kV/m indicated in the FEIR data as one moved from 58 feet to within 15 feet of the OCS. Even if the field strength were to increase by 0.13 kV/m, the resultant electrical field levels at the edge of the ROW and outside the ROW would still be well below the relevant threshold. • Given the EMF levels identified in the EIR are substantially lower than the relevant health thresholds, the potential increase of magnetic fields due to slightly closer OCS alignments would not result in levels even approaching the relevant thresholds. Thus EMF effects on health would not substantially change relative to the FEIR conclusions. • The level of EMI might slightly increase at certain sensitive locations due to the potential change in magnetic fields but only in a minor way at certain locations. With PCEP EMI mitigation applied, all interference with sensitive equipment due to the project would be attenuated through design or control measures, and thus no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding EMF/EMI that were analyzed in the Final EIR.

Environmental Topic	Impact
Geology, Soils, Seismicity	• Assessment of this subject was qualitative. • OCS realignment would not result in substantial impacts related to geology, soils and seismicity compared to that disclosed in the PCEP EIR because these environmental conditions do not vary in the short distance of realignment under consideration. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding geology, soils, and seismicity that were analyzed in the Final EIR.
Greenhouse Gas Emissions	• Assessment of this subject was through qualitative assessment of construction and permanent air quality effects. • OCS pole and wire realignment would require the same amount of construction in realignment locations compared to that disclosed in the PCEP EIR. However, OCS installation that avoids future OCS relocation by CHSRA would lower cumulative construction GHG emissions compared to two separate construction events. • There would be no changes in train locomotive GHG emissions due to these project changes. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding GHG emissions that were analyzed in the Final EIR.
Hazards and Hazardous Material	• Assessment of this subject was through qualitative assessment of construction and permanent effects. • Construction effort would be the same as in the PCEP EIR, and standard controls would still apply. • Hazards and hazardous material conditions would not vary in the short distance of realignment under consideration compared to that disclosed in the PCEP EIR. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding hazards and hazardous material that were analyzed in the Final EIR.
Hydrology and Water Quality	• Assessment of this subject was through qualitative assessment of construction and permanent hydrology and water quality effects. • OCS realignment would require the same amount of construction in the same locations as disclosed in the PCEP EIR and thus the potential for construction period effects on water quality would not change. However, OCS installation that avoids future OCS relocation by CHSRA would lower cumulative construction water quality effects compared to two separate construction events. • OCS realignment would not increase the amount of impervious surfaces. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding hydrology and water quality that were analyzed in the Final EIR.

Environmental Topic	Impact
Land Use and Recreation	• Assessment of this subject was through GIS analysis of permanent ROW needs (including changes in ROW acquisition). • OCS Realignment would not affect any planned land uses or any park or recreational areas outside the ROW. • The only areas of additional ROW acquisition would be slight increase in ESZ encroachment in two road ROWs (California St. in Palo Alto and Castro St. in Mountain View), two areas owned by SCVTA (near SR 85 and in a parking lot at the Caltrain Lawrence Station) and one private parcel (but by only 0.1 foot in a back area of a commercial property with no structural displacement). ESZ acquisition would not displace roadways or SCVTA facilities or tracks and would not alter transit use. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding land use that were analyzed in the Final EIR.

Environmental Topic	Impact
Noise and Vibration	• Assessment of this subject was through quantitative assessment of construction noise and vibration and qualitative assessment of permanent noise and vibration effects. • OCS pole and wire realignment would require the same amount of construction in realignment locations compared to that disclosed in the PCEP EIR and thus would have the same noise and vibration generation during construction. • The FEIR identified that OCS installation would result in noise levels of approximately 77 dBA at 50 feet (FEIR, Table 3.11-7, page 3.11-20) which is less than the 80 dBA threshold used for adjacent residential land uses in the EIR during the day but more than the 70 DBA threshold for residential uses as night. While construction is often more than 50 feet from residences, in some locations residences are close to the JPB ROW and sometimes construction will need to occur at night, and thus the FEIR concluded that even with noise mitigation, in some locations, temporary construction impacts may be significant and unavoidable. • As explained in the FEIR (Appendix N, Page 3-1), point sources like stationary construction equipment used for OCS construction, is that sound attenuates 6 dBA with a doubling of distance (or increases 6 dBA with a halving of distance). Changes in construction noise levels for a receptor 50 feet from the EIR alignment using FTA Guidance[1] would be 0.2 DBA for a shift of 1 foot, 0.4 dBA for a shift of 2 feet, and 0.7 dBA for shift of 4 feet. • Where the OCS alignment is moving toward the inner part of the ROW (29 of 61 locations), construction noise would be less than anticipated in the FEIR. Where the OCS alignment is moving toward the outer part of the ROW, but less than a foot (25 locations), construction noise would change by 0.2 dBA or less. Where the OCS alignment is moving toward the outer part of the ROW by between 1 to 2 feet (6 locations), construction noise could increase by up to 0.4 dBA. For the one location with an OCS alignment shift of approximately 4 feet moving toward the outer part of the right of, the change in construction noise could be up to 0.7 dBA. Small changes in noise levels less than 3 dBA are barely detectable by the human ear.[2] Construction noise changes in the locations moving closer to the ROW edge would result in up to less than 1 dBA increase in noise levels, which is not expected to be a noticeable change in overall construction noise levels. Construction noise impacts to sensitive receptors at night may still be significant as disclosed in the FEIR, but the noise effects during construction due to the OCS alignment shifts would not substantially change construction noise levels experienced by neighboring land uses. • Vibration levels attenuate similar to noise levels and the change in vibration levels during construction at certain locations slightly closer to the ROW edge would be minimal and barely observable by adjacent occupants. • OCS installation that avoids future OCS relocation by CHSRA would lower cumulative construction noise exposure compared to two separate construction events. • There would be no changes in operational train locomotive noise due to these project changes. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding noise and vibration that were analyzed in the Final EIR.

Environmental Topic	Impact
Population and Housing	• No housing or other displacements would occur due to the proposed OCS realignments. • The impact determinations identified in the Final EIR would not change. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding population and housing that were analyzed in the Final EIR.
Public Services, Utilities, and Energy	• There would be no change in demand for public service, utilities, or energy with the proposed OCS realignments as construction effort would be the same and the realignments would not change operational public service, utilities, or energy use. • OCS installation that avoids future OCS relocation by CHSRA would lower cumulative construction energy use. • The slight relocation of the OCS would have the same effect on utilities during construction because it is located in the same vicinity to utilities as disclosed in the PCEP EIR. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding public services, utilities, and energy that were analyzed in the Final EIR.
Safety and Security	• Assessment of this subject was through qualitative analysis. • The PCEP EIR concluded that safety of Caltrain operations would improve with the PCEP due to the improved stopping performance of EMUs, the institution of Positive Train Control (PTC), and the continued operation of Caltrain at its current top speed of 79 mph. • OCS realignments would not result in changes in Caltrain operational speeds as no track realignments are included in the proposed project changes.

[1] FTA Transit Noise and Vibration Impact Assessment Manual. 2006, p. 6-22, formula of Leq = Leq(@50feet)-20log(D/50)-10G log (D/50). The ROW is hard packed ground so G is assumed to be zero.

[2] https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

Environmental Topic	Impact
Transportation	• Assessment of this subject was through qualitative analysis of construction traffic (no change in permanent traffic would occur). • OCS pole and wire realignment would require the same amount of construction in realignment locations compared to that disclosed in the PCEP EIR. • OCS installation that avoids future OCS relocation by CHSRA would lower cumulative construction traffic impacts and cumulative disruption to Caltrain service compared to two separate construction events. • OCS realignments would not change wire heights in any way that would affect freight operations. • There would be no changes in train operations, gate-down time, or operational traffic impacts with the OCS realignment. • With PCEP mitigation applied, no new significant or substantially more severe impacts would occur. • The OCS pole and wire relocations would not result in new significant impacts or a substantial increase in the severity of impacts regarding transportation that were analyzed in the Final EIR.
Cumulative	• No new significant impacts or substantially more severe impacts associated proposed OCS realignments have been identified compared to those disclosed in the PCEP EIR. Therefore, there would be no change to the cumulative analysis. • The impact determinations identified in the Final EIR would not change. • The OCS pole and wire relocations would not result in new cumulative significant impacts or a substantial increase in the severity of cumulative impacts that were analyzed in the Final EIR.
Alternatives	• No new alternatives identified relative to the OCS realignments are proposed because the realignments would not result in any new significant impacts.

Conclusion

This addendum analyzes certain proposed OCS realignments and compares the potential impacts of the proposed project changes to the conclusions of the 2015 Final EIR. This analysis was completed to determine the requirement for further environmental documentation pursuant to the State CEQA Guidelines sections 15162, 15163 and 15164. This analysis has identified no new or substantially more severe impacts of the proposed project changes compared with those identified and evaluated in the 2015 Final EIR. Mitigation measures identified in the 2015 Final EIR would be applied to the OCS realignments as proposed, to reduce or avoid significant impacts. With the application of these previously-identified mitigation measures, no new significant impacts or substantial increases in the severity of previously identified impacts requiring revisions to the 2015 Final EIR would occur. No new mitigation measures are required for the adoption and implementation of the proposed OCS realignments.

Appendix A-1: Pole Relocation Areas Proposed to be Included in the PCEP

#	MP Start	MP End	Length (mi.)	City	OCS Shift (Max.)	Moving to ROW edge?	ESZ within ROW?	Wetlands in ESZ?	Habitats in ESZ	Parks in ESZ?	Cultural Res. in ESZ?	CEQA Addendum Candidate?	Notes on Environmental Impact	Change in Tree Impact?	Greater Tree Impacts	Less Tree Impacts	Change in ROW Impact?
SB-2	2.53	2.68	0.15	San Francisco	0.07	Yes	Yes	No	Disturbed/Barren, Urban/Developed, Non-native Annual Grassland	No	No	***Yes-in ROW***		No			No
SB-3	2.82	2.89	0.08	San Francisco	-0.04	No	Yes	No	Non-native Annual Grassland, Urban/Developed, Disturbed/Barren	No	No	***Yes-in ROW***		No			No
SB-4	2.89	2.97	0.08	San Francisco	0.04	Yes	Yes	No	Urban Landscaping, Urban/Developed, Ruderal	No	No	***Yes-in ROW***		Potentially greater impact to 4 trees (- <1 inch)	4		No
NB-2	3.74	4.01	0.27	San Francisco	-1.84	Yes	Yes	No	Grass and scrub on slope	No	No	***Yes-in ROW***		No. No trees.			No
SB-5	3.74	4.01	0.27	San Francisco	0.66	Yes	Yes	No	Grass and scrub on slope	No	No	***Yes-in ROW***		No. No trees.			No
NB-3A	7.78	7.95	0.17	Brisbane/South San Francisco	0.43	No	Yes	No	Grass and scrub	No	No	***Yes-in ROW***		No. No trees.			No
SB-6A	7.78	7.95	0.17	Brisbane/South San Francisco	0.26	Yes	Yes	No	Grass and scrub	No	No	***Yes-in ROW***		No. No trees.			No
NB-4	8.40	8.55	0.15	South San Francisco	0.04	No	Yes	No	URBAN/DEVELOPED	No	No	***Yes-in ROW***		No			No
NB-7	11.13	11.28	0.15	San Bruno	0.66	No	Yes	No	Disturbed/Barren, Urban/Developed, Urban Landscape	No	No	***Yes-in ROW***		No			No
NB-8	11.73	11.91	0.17	San Bruno	0.87	No	Yes	No	Disturbed/Barren, Urban/Developed, Urban Landscape, Eucalyptus Grove	No	No	***Yes-in ROW***		No			No
NB-11	15.84	16.03	0.19	Burlingame	0.90	No	Yes	No	Riverine, Eucalyptus Grove, Urban Landscaping, Urban/Developed	No	No	***Yes-in ROW***	Historic eucalyptus grove is on west side of tracks; NB is on east side of tracks, so shift of less than 1' would Not affect historic grove trees	Potentially less impact to 2 trees		2	No
NB-12	16.34	16.52	0.19	Burlingame	-1.79	Yes	Yes	No	Urban/Developed, Disturbed/Barren	No	No	***Yes-in ROW***		No			No

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#	MP Start	MP End	Length (mi.)	City	OCS Shift (Max.)	Moving to ROW edge?	ESZ within ROW?	Wetlands in ESZ?	Habitats in ESZ	Parks in ESZ?	Cultural Res. in ESZ?	CEQA Addendum Candidate?	Notes on Environmental Impact	Change in Tree Impact?	Greater Tree Impacts	Less Tree Impacts	Change in ROW Impact?
NB-12A	17.02	17.36	0.34	San Mateo	0.11	No	Yes	No	Railroad grade	No	No	***Yes-in ROW***	Previously there were three historic roadway underpasses at East Poplar Avenue, East Santa Inez Ave. and Monte Diablo Ave. San Mateo Bridges project replaced these structures, so no longer historic.	No. Minor shift and trees previously removed by San Mateo Bridges project.			No
SB-11A	17.05	17.36	0.30	San Mateo	0.11	Yes	Yes	No	Railroad grade	No	No	***Yes-in ROW***	Previously there were three historic roadway underpasses at East Poplar Avenue, East Santa Inez Ave. and Monte Diablo Ave. San Mateo Bridges project replaced these structures, so no longer historic.	No. Minor shift and trees previously removed by San Mateo Bridges project.			No
SB-11B	17.57	18.17	0.61	San Mateo	-0.11	No	Yes	No	Railroad grade	No	No	***Yes-in ROW***		Potentially less impact to 9 trees		9	No
NB-23	25.05	25.24	0.19	Redwood City	-1.12	Yes	Yes	No	Urban/Developed, Urban Landscaping, on-native Annual Grassland, Ruderal	No	No	***Yes-in ROW***		No change due to use of two-track cantilever			No
NB-25	28.47	28.57	0.09	Menlo Park	-0.11	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	No ROW acquisition on east side (NB)	Potentially greater impact to 6 trees (up to 1.5 inches)	6		No
NB-26	28.57	28.66	0.09	Menlo Park	0.12	No	No	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	While ESZ may reach outside ROW; the pole shift would be inward and thus less than PCEP.	Potentially less impact to 24 trees		24	Less
NB-27	28.80	29.02	0.23	Menlo Park	-4.16	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	Elongated 2-track cantilever can work for existing alignment and future HSR alignment	Potentially greater impacts to 28 trees (up to +4 feet)	28		No

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#	MP Start	MP End	Length (mi.)	City	OCS Shift (Max.)	Moving to ROW edge?	ESZ within ROW?	Wetlands in ESZ?	Habitats in ESZ	Parks in ESZ?	Cultural Res. in ESZ?	CEQA Addendum Candidate?	Notes on Environmental Impact	Change in Tree Impact?	Greater Tree Impacts	Less Tree Impacts	Change in ROW Impact?
NB-28	29.61	29.93	0.32	Palo Alto (south of bridge)	-0.53	Yes	Yes	No	Redwoods/riparian trees south of san Francisquito Creek crossing to south of Alma	No	No	***Yes-in ROW***	Design avoids bridge/creek; TCE must avoid park.	Potentially greater impact to 8 trees (up to 6"); Potentially less impacts to 12 trees; would move slightly further away from El Palo Alto.	8	12	No
SB-22	29.59	29.76	0.17	Palo Alto (south of bridge)	1.86	Yes	Yes	No	Redwoods/riparian trees south of san Francisquito Creek crossing to south of Alma	No	No	***Yes-in ROW***	Design avoids bridge/creek; TCE must avoid park.	Potentially greater impact to 21 trees (up to 9")	21		No
SB-23	29.78	29.95	0.17	Palo Alto	-0.74	No	Yes	No	Urban/Developed, Urban Landscaping	No	Yes	***Yes-in ROW***	Includes Palo Alto station area, but would not modify historic station features or historic underpass.	Potentially less impacts to 7 trees		7	No
NB-29	30.08	30.25	0.17	Palo Alto	-0.59	Yes	Yes	No	Urban/Developed, Urban Landscaping	Yes	No	***Yes-in ROW***	See SB-24	Potentially greater impacts to 25 trees (up to 6")	25		No
SB-24	30.08	30.25	0.17	Palo Alto	-0.75	No	Yes	No	Urban/Developed, Urban Landscaping	Yes	No	***Yes-in ROW***	Park effect is for bike path within Caltrain ROW; presumed can be designed to avoid disruption as ESZ just grazes path	Potentially less impacts to 7 trees		7	No
NB-30	30.27	30.42	0.15	Palo Alto	0.90	No	Yes	No	Urban/Developed, Urban Landscaping	Yes	No	***Yes-in ROW***		Potentially less impacts to 65 trees		65	No
SB-25	30.29	30.46	0.17	Palo Alto	0.68	Yes	Yes	No	Urban/Developed, Urban Landscaping	Yes	No	***Yes-in ROW***	Park effect is for bike path within Caltrain ROW; presumed can be designed to avoid disruption as ESZ just grazes path	Potentially greater impacts to 45 trees (up to 10")	45		No

Appendix A-1: Pole Relocation Areas Proposed to be Included in the PCEP

#	MP Start	MP End	Length (mi.)	City	OCS Shift (Max.)	Moving to ROW edge?	ESZ within ROW?	Wetlands in ESZ?	Habitats in ESZ	Parks in ESZ?	Cultural Res. in ESZ?	CEQA Addendum Candidate?	Notes on Environmental Impact	Change in Tree Impact?	Greater Tree Impacts	Less Tree Impacts	Change in ROW Impact?
NB-31	31.39	31.56	0.17	Palo Alto	-0.53	Yes	No	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	Possible slight ESZ encroachment into California Ave. road ROW in area; would not result in displacement of road.	Potentially greater impacts to 9 trees (up to 1.5"); Potentially less impacts to 9 trees	9	9	More
NB-32	31.71	31.90	0.19	Palo Alto	-1.43	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	TCE in Non-sensitive road ROW for Alma	Potentially greater impacts to 13 trees (up to 17")	13		No
SB-26	31.77	31.88	0.11	Palo Alto	0.24	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	NB-32 TCE avoids sensitive areas	No			No
SB-27	31.88	32.00	0.11	Palo Alto	-0.22	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		No			No
SB-28	32.49	32.60	0.11	Palo Alto	-0.04	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially less impacts to 15 trees		15	No
SB-29	32.60	32.72	0.11	Palo Alto	0.21	Yes	Yes	Yes	Riverine, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	Design can avoid waters/wetlands	No			No
SB-30	33.36	33.44	0.08	Palo Alto	0.05	Yes	Yes	Yes	Riverine, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	Design can avoid waters/wetlands	Potentially greater impacts to 2 trees (up to 1")	2		No
SB-31	33.46	33.53	0.08	Palo Alto	-0.05	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially less impacts to 9 trees		9	No
SB-32	33.78	33.93	0.15	Mountain View	-0.38	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially greater impacts to 4 trees (up to 1.5"); Potentially less impacts to 2 trees	4	2	No
NB-33	35.65	35.82	0.17	Mountain View	-0.59	Yes	No	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	ROW encroachment is slight ESZ encroachment into Castro St. road ROW; would not result in displacement of road.	Potentially greater impacts to 1 tree (up to 7"); Potentially less impacts to 1 tree	1	1	More
NB-34	36.05	36.22	0.17	Mountain View	-1.21	Yes	Yes	No	Urban/Developed, Urban Landscaping	No	No	***Yes-in ROW***		No			No

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#	MP Start	MP End	Length (mi.)	City	OCS Shift (Max.)	Moving to ROW edge?	ESZ within ROW?	Wetlands in ESZ?	Habitats in ESZ	Parks in ESZ?	Cultural Res. in ESZ?	CEQA Addendum Candidate?	Notes on Environmental Impact	Change in Tree Impact?	Greater Tree Impacts	Less Tree Impacts	Change in ROW Impact?
SB-33	36.33	36.56	0.23	Mountain View	0.16	No	No	Yes	Riverine, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	Design can avoid any effect to waters/wetlands; ROW is sliver take of SCVTA without displacement of VTA facilities.	Potentially greater impact to 1 tree (up to 1"); Potentially less impacts to 28 trees	1	28	More
SB-34	37.07	37.19	0.11	Mountain View	0.03	No	No	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	While ESZ may reach outside ROW; the pole shift would be inward and thus less than PCEP.	Potentially less impacts to 9 trees		9	Less
SB-35	37.19	37.30	0.11	Mountain View	0.04	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially greater impact to 14 trees (up to 1")	14		No
NB-35	37.70	37.85	0.15	Sunnyvale	0.46	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially greater impact to 30 trees (up to 6")	30		No
NB-36	37.85	38.02	0.17	Sunnyvale	1.14	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially less impacts to 8 trees		8	No
SB-36	37.85	38.02	0.17	Sunnyvale	0.22	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially greater impacts to 10 trees (up to 2.5"); Potentially less impact to 18 trees	10	18	No
NB-37	38.25	38.32	0.08	Sunnyvale	0.03	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		No			No
SB-37	38.27	38.34	0.08	Sunnyvale	0.10	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially greater impacts to 11 trees (up to 1.5")	11		No
SB-38	38.34	38.44	0.09	Sunnyvale	0.11	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially less impacts to 11 trees		11	No
NB-38	38.46	38.55	0.09	Sunnyvale	0.02	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially greater impact to 1 tree (up to 1")	1		No

Appendix A-1: Pole Relocation Areas Proposed to be Included in the PCEP

#	MP Start	MP End	Length (mi.)	City	OCS Shift (Max.)	Moving to ROW edge?	ESZ within ROW?	Wetlands in ESZ?	Habitats in ESZ	Parks in ESZ?	Cultural Res. in ESZ?	CEQA Addendum Candidate?	Notes on Environmental Impact	Change in Tree Impact?	Greater Tree Impacts	Less Tree Impacts	Change in ROW Impact?
NB-39	38.55	38.63	0.08	Sunnyvale	0.01	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially less impacts to 5 trees		5	No
NB-40	38.66	38.89	0.23	Sunnyvale	2.02	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	Elongated 2-track cantilever can work for existing alignment and future HSR alignment	potentially greater impacts to 33 trees (up to 24")	33		No
NB-41	38.95	39.16	0.21	Sunnyvale	0.15	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		No			No
SB-39	38.95	39.17	0.23	Sunnyvale	0.40	No	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	See NB-21	Potentially less impacts to 18 trees		18	No
NB-42B	39.36	39.63	0.27	Sunnyvale	0.57	Yes	Yes	Yes	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***	Design can avoid any effect to waters/wetlands	Potentially greater impacts to 13 trees (up to 7")	13		No
SB-40B	39.38	39.63	0.25	Sunnyvale	0.84	No	Yes	Yes	Riverine, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		Potentially less impacts to 23 trees		23	No
NB-42C	40.31	40.56	0.25	Sunnyvale	0.10	Yes	No	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	ROW shift is only 0.1 foot in area that already has acquisition in back area of commercial lot.	Potentially greater impacts to 15 trees	15		More
SB-40C	40.33	40.58	0.25	Sunnyvale	0.10	No	No	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	Curve would move inward into ROW thus reducing acquisition by 0.1 foot.	Potentially less impacts to 23 trees		23	Less
NB-43	40.77	41.11	0.34	Sunnyvale	0.43	Yes	No	No	Engineered Channel, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	Area outside ROW is existing Caltrain parking lot owned by SCVTA; no displacement would occur.	Potentially greater impacts to 18 trees (up to 5"); Potentially less impacts to 13 trees	18	13	More
SB-41	40.75	40.90	0.15	Sunnyvale	0.42	No	No	No	Engineered Channel, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-out ROW***	While ESZ may reach outside ROW; the pole shift would be inward and thus less than PCEP.	Potentially less impacts to 3 trees		3	Less
SB-42	40.92	41.01	0.09	Sunnyvale	0.10	No	Yes	No	Engineered Channel, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-in ROW***		No			No
SB-43	41.01	41.11	0.09	Sunnyvale	0.09	Yes	Yes	No	Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-In ROW***		No			No

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#	**MP Start**	**MP End**	**Length (mi.)**	**City**	**OCS Shift (Max.)**	**Moving to ROW edge?**	**ESZ within ROW?**	**Wetlands in ESZ?**	**Habitats in ESZ**	**Parks in ESZ?**	**Cultural Res. in ESZ?**	**CEQA Addendum Candidate?**	**Notes on Environmental Impact**	**Change in Tree Impact?**	**Greater Tree Impacts**	**Less Tree Impacts**	**Change in ROW Impact?**
NB-44	41.50	42.07	0.57	Santa Clara	0.74	No	Yes	No	Ruderal, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-In ROW***		Less impacts to 10 trees		10	
SB-44	41.49	42.09	0.61	Santa Clara	-2.52	No	Yes	No	Ruderal, Urban/Developed, Disturbed/Barren, Urban Landscaping	No	No	***Yes-In ROW***	Elongated 2-track cantilever can work for existing alignment and future HSR alignment	No. No trees.			