

Memorandum

To: Mark A. McLoughlin, Interim Deputy Director, Environmental Planning,
California High-Speed Rail Authority

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CC: Bryan Porter, PMT; Karin Lilienbecker, CH2M Hill

Date: January 27, 2012 (Revised to Incorporate Earlier EPA/Corps Comments)

Subject: Final Outline for Preparing a Technical Memorandum Evaluating the Western Madera Alternative (A3) and Documenting Screening of A3 Consistent with EPA's Section 404(b)(1) Guidelines

In a Technical Memorandum transmitted to the United States Army Corps of Engineers (USACE) and United States Environmental Protection Agency (EPA) on November 10, 2011, the Federal Railroad Administration (FRA) and the California High-Speed Rail Authority (Authority) outlined the rationale for eliminating A3 from detailed consideration in the environmental impact report/environmental impact statement (EIR/EIS). This document presents an outline intended to guide preparation of an A3 Screening Memorandum to supplement the November memorandum and present additional information, consistent with EPA's Section 404(b)(1) Guidelines, to support the screening of A3 from consideration for detailed analysis in the EIR/EIS. The HST alternatives included in the analysis are the BNSF (A1), UPRR/SR 99 (A2), and Hybrid alternatives.

Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States (WOUS) without a permit from USACE. Section 404(b) directs that EPA to issue regulations to guide USACE's issuance of permits under Section 404. Consistent with this directive, EPA has issued the Section 404(b)(1) Guidelines (40 CFR Part 230), requiring that USACE cannot issue a permit if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant environmental consequences (40 CFR 230.10(a); referred to as the *LEDPA requirement*). Implicit in EPA's directive is the requirement to document that alternatives are screened (in comparison to the proposed action and alternatives carried forward for detailed consideration) in terms of:

- ▶ Impacts to waters of the United States. As described in EPA's 404(b)(1) Guidelines, where a proposed action is not considered water dependent in a special aquatic site, a practicable alternative is presumed to exist that will have less impact on the aquatic ecosystem, unless it is clearly demonstrated otherwise (40 CFR 230.10(a)(3)). Therefore, it is important for the project proponent to demonstrate whether potential alternatives will have more of an impact on waters of the United States (as compared to the proposed project and alternatives carried forward for detailed evaluation) and therefore be screened from further consideration;
- ▶ Practicability. EPA's 404(b)(1) Guidelines state that an alternative is *practicable* "if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purposes" (40 CFR 230.10(a)(2)). Therefore, it is important for the project proponent to demonstrate whether potential alternatives are practicable, consistent with cost, logistical, and technological considerations;

- ▶ Potential impacts on various aspects of the aquatic ecosystem and human use characteristics. According to EPA's 404(b)(1) Guidelines the impacts outlined in subparts C, D, E, and F of the Guidelines "should be considered in making the factual determinations and the findings of compliance or non-compliance with Subpart B [generally the Guidelines' LEDPA requirement]." Therefore, the project proponent should demonstrate the extent to which potential alternatives impact the physical and chemical characteristics of the aquatic ecosystem; biological characteristics of the aquatic ecosystem; special aquatic sites; and human use characteristics; and
- ▶ Other direct, indirect, and cumulative adverse effects. EPA's 404(b)(1) Guidelines direct that the USACE should consider practicable alternatives, "so long as the alternative does not have other significant adverse environmental consequences" (40 CFR 230,10(a)). Although not necessarily weighted with the same focus as the three criteria described above, this fourth factor should be considered by the USACE in view of the broader impacts on the human environment. The project proponent should present the relative impacts of potential alternatives, in comparison to the proposed project and alternatives carried forward for detailed evaluation, to determine if the magnitude of the adverse impacts of the potential alternative justifies elimination from further consideration.

In a meeting with USACE and EPA representatives on December 19, 2011, it was agreed by all parties that the Authority and project consultants would prepare an outline of a technical memorandum containing information on the relevant areas of the Section 404(b)(1) Guidelines described above: waters of the U.S. impacts (Point 1), practicability (Point 2), other significant adverse impacts on environmental factors described in 404(b)(1) Guidelines Subparts C-F (Point 3), and other direct, indirect and cumulative effects (Point 4). The outline would to be used by the consultant team as the basis for preparing a technical memorandum to document the reasons for elimination of A3 from further analysis. As an interim step, the USACE and EPA requested that the Authority and consultant team submit an outline of the memorandum that included the specific approach to addressing the Point 1 criterion related to full analysis of aquatic resources impacts. It was suggested that this interim deliverable be submitted to the agencies approximately two weeks from the December 19 meeting. The agency representatives suggested that if the waters of the U.S. impact analysis clearly demonstrated A3 would have greater impacts on aquatic resource functions and services as compared to the other alternatives, a compelling argument for eliminating the WMA could potentially be made without preparation of the remainder of the memorandum analyzing the other three criteria (Points 2 – 4).

A draft outline was submitted to the agency representatives on December 23, 2011. Comments on the outline were received from the EPA and the Corps on December 27, 2011 and December 30, 2011, respectively. This submittal constitutes the final A3 Screening Memorandum Outline and includes a complete analysis of aquatic resources impacts (Point 1). The Point 1 Memorandum supports the conclusion that, based on the comparison of impacts to waters of the U.S. for all the alternatives for the Merced to Fresno Section High Speed Train Project, A3 does not warrant further consideration for detailed analysis in the EIR/EIS and does not have the potential to be the LEDPA for the Merced to Fresno Section High Speed Train Project. The Authority and consultant team, however, have initiated development of the remaining three criteria analyses. If after reviewing the Point 1 analysis the agencies concur with the above conclusion and determine that the Point 1 analysis alone is sufficient for dismissing A3, the Authority will dispense preparing any additional detail related to Points 2 – 4 for supporting the dismissal of A3. However, if USACE and EPA conclude that the Point 1 analysis, alone, is insufficient to support dismissal of A3, the Authority will submit a complete technical memorandum containing the remaining Point 2, Point 3 and Point 4 analyses, conclusions section and, if warranted, a revised Point 1 analysis incorporating the agencies' comments. The complete memo would be submitted by February 1, 2012.

Point 1: Waters of the United States Impacts: See attached Point 1 Technical Memorandum prepared by CH2M HILL and attached memorandum stating our conclusions regarding the "HST Merced to Fresno Section Western Madera (A3) Alternative Screening Memorandum Point 1: Waters of the United States Impacts Analysis."

Point 2: Practicability: Floodplain and out-of-existing right-of-way issues – this section will evaluate the practicability of A3, focusing on factors unique to A3. Some of the factors that may be explored include:

1. A greater distance of the A3 alignment is in the 100-year floodplain as compared to the other alternatives, so there will be design issues, more culverts, more maintenance, etc.
2. A3 has twice as many local street crossings, resulting in a potential increase in relocation of irrigation facilities; greater number of miles travelled by haul trucks, greater maintenance cost associated with greater number of culverts, etc.
3. Installation of additional utility lines and more utility connections to power the train may be required.
4. The need for relocation of irrigation facilities may be greater under A3.
5. Farm equipment access issues may be greater under the WMA, requiring the construction of additional roads and facilities.

The practicability analysis will evaluate A3 in terms of cost, logistics and existing technology. A3 has fewer impacts on existing utilities but may require new trenching and new utility connections to power the trains. Additionally, A3 may require more relocation and re-development of irrigation facilities, including wells.

- ▶ Cost – If A3 is determined to have greater cost than the other alternatives, the cost analysis will evaluate whether the higher cost would render the alternative impracticable.
- ▶ Logistics – Discussion will include evaluation of the relative complexities associated with implementation of A3 due to the greater distance from the existing right-of-way and the location being surrounded by expanses of agricultural land.
- ▶ Existing Technology – Discussion will include evaluation of issues related to powering the trains.

The following paraphrased comments received from the EPA and USACE will be addressed in the Point 2 analysis:

EPA Comments: Regarding Point 2 (Practicability): *As discussed in the meeting on the 19th, clarity on the numbers (acreages/linear distances) is key, but it's kind of a toss-up whether practicability should be equally important (if the Authority wants to argue that A3 is impracticable). This is because if A3 is truly impracticable as a matter of costs, logistics, and/or technology, then there's no need to analyze it for aquatic resource impacts. However, if A3 were impracticable, HSR could have made the case a long time ago; the Corps and EPA have been operating under the (repeated, explicit) assumption on our part that A3 is practicable(reiterated in Corps' 11/23 letter). Therefore, a compelling practicability argument at this point should focus on new information. It should also be emphasized again that laying out greater cost, logistical or technological challenges of a given alternative is insufficient alone -- the increased burden must render the alternative "unavailable" or "incapable of being done" (the draft outline only says this for cost issues).*

USACE Comments: Practicability- Make sure you are equally evaluating the other alternatives. Fully explain 1-5 as it relates to all the alternatives because some of these issues have not been previously raised. Is the FRA still considering 2-mile intervals for farm equipment access to agricultural lands?

Point 3: Other significant adverse impacts on environmental factors described in 404(b)(1) Guidelines Subparts C-F – This section will evaluate the direct and indirect effects of A3 on the applicable environmental factors in Subparts C – F of the 404(b)(1) Guidelines. This analysis will compare these A3 impacts with the relative impacts associated with the other alignment alternatives, and evaluate whether A3 has other significant adverse impacts on the environment that would warrant elimination of this alternative from further analysis.

Subpart C—Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem; Subpart D—Potential Impacts on Biological Characteristics of the Aquatic Ecosystem; Subpart E—Potential Impacts on Special Aquatic Sites – We will evaluate the direct

and indirect effects of A3 on any environmental factors in these subparts that may be adversely affected to a higher degree relative to the alternative alignments.

Subpart F—Potential Effects on Human Use Characteristics

Two particular sections of Subpart F will be explored: § 230.50, Municipal and private water supplies, and § 230.53, Aesthetics. The analysis will evaluate potential impacts on private water supply systems and associated aesthetic impacts.

The following paraphrased comments received from the EPA and USACE will be addressed in the Point 3 and Point 4 analyses:

EPA Comments: Regarding Point 3 (Subparts C-F) and 4 (other impacts): *This is all fine, and appropriately on the lower tier of criteria. These are values and impacts the Guidelines enumerate and say should be "considered" in a finding of compliance with subpart B, but there are no specific prohibitions. Jason's advice on these points is (a) be very clear on how impacts differ to these things depending on the alternative; and (b) these issues are best invoked to support stronger primary arguments on Waters of the U.S. (for example, to argue that relatively small acreage impact differences aren't meaningful, particularly when a marginally greater fill option results in significantly lesser impacts to... [applicable subpart C-F issues]).*

USACE Comments: Subpart F - *Please make sure these are analyzed consistent with the other alternatives.*

Point 4: Other direct, indirect and cumulative effects:— This section will evaluate direct, indirect and cumulative effects not considered in the Point 1, Point 2 or 3 analyses, including potential for growth inducement and secondary impacts such growth would have on the non-aquatic environment. Issue areas that may be explored in this section include wildlife movement corridor impacts and endangered species concerns associated with growth inducement.

Conclusions – This section will summarize the results of the Point 1 – 4 sections, evaluate and 'weigh' the results of the waters of the United States, practicability, other significant adverse impacts on the environment, and other direct, indirect and cumulative effects analyses, and present a recommendation regarding screening A3 from further analysis.