

The Board of County Commissioners of Indian River County, Florida

Comments on Draft Environmental Impact Statement and Section 4(f) Evaluation for the All Aboard Florida, Orlando to Miami, Florida Intercity Passenger Rail Project

The Board of County Commissioners of Indian River County, Florida (the “Board”) respectfully submits these comments to the Federal Railroad Administration (“FRA”) with regard to the Draft Environmental Impact Statement (“DEIS”), and Section 4(f) Evaluation dated September 2014 prepared for All Aboard Florida, Orlando to Miami, Florida Intercity Passenger Rail Project (the “Proposed Project”). The Proposed Project’s sponsor, All Aboard Florida – Operations LLC (“AAF”), has applied for \$1.875 billion dollars in federal funds through the Railroad Rehabilitation and Improvement Financing (“RRIF”) program, which is administered by the FRA.¹

The DEIS was prepared to assist the FRA in satisfying its obligations with respect to the Proposed Project under the National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4321 *et seq.*, and applicable NEPA requirements, including the regulations adopted by the Council on Environmental Quality (“CEQ”), appearing at 40 C.F.R. Parts 1500-1508, FRA’s NEPA regulations appearing at 49 C.F.R. § 260.35, FRA’s “*Procedures for Considering Environmental Impacts*” published at 64 Fed. Reg. 28545 (5/26/99) (“FRA NEPA Procedures”), and Order 5610.1C “*Procedures for Considering Environmental Impacts*” issued by the United States Department of Transportation (“USDOT”) (9/18/1979) (“USDOT NEPA Procedures”).

NEPA requires that “to the fullest extent possible” an environmental impact statement (“EIS”): (i) disclose and assess the impacts of major federal actions significantly affecting the environment; and (ii) consider the reasonable mitigation measures and alternatives to such actions that would avoid or minimize those impacts. *See* 42 U.S.C. § 4332; 40 C.F.R. § 1502.1. The fundamental purpose of these requirements is to ensure that federal decision-makers understand the short and long-term impacts of their actions, and how such impacts might be addressed, before they take action.

For the reasons discussed in detail below, the Board believes that the DEIS does not take a “hard look” at the environmental impacts of the Proposed Project, and fails to provide FRA with the information needed to satisfy its obligations under NEPA. In particular, the Board has identified a number of potentially significant environmental impacts that were not adequately addressed in the DEIS, and others that were not examined at all.

Moreover, the DEIS contains information intended to satisfy Section 106 of the National Historic Preservation Act (“Section 106”), which requires federal agencies to consider the effect of their undertakings on historic resources, through a consultation process that requires that local governments be invited to participate. FRA failed to follow this mandatory process by electing not to invite most local governments, including Indian River County (the “County”), to participate. As a result, the DEIS missed several historic resources within the County, and probably many others in

¹ On March 15, 2013, AAF submitted two RRIF loan applications to FRA for a total of \$1.875 billion.

localities that also were not invited to join in the Section 106 consultation. FRA cannot, therefore, satisfy its Section 106 obligations based on the information presented in the DEIS.

Likewise, the Section 4(f) Evaluation prepared for the Proposed Project is fundamentally flawed. That analysis is supposed to assist FRA in protecting publicly owned parklands, recreation areas, or historic sites of national, State, or local significance. Under Section 4(f) of the Department of Transportation Act of 1966, Pub. L. 89-670 (1966) (now codified at 49 U.S.C. § 303(c)), FRA is prohibited from approving any project that would “use” a Section 4(f) resource unless it finds: (1) there is no prudent and feasible alternative to using that resource; and (2) the program or project includes all possible planning to minimize harm to the resource resulting from the use. 49 U.S.C. § 303(c); FRA NEPA Procedures § 12, 64 Fed. Reg. 28552. As discussed in the comments below, the Board believes the Section 4(f) Evaluation fails to identify or assess the effects of the Proposed Project on significant Section 4(f) resources, and does not provide FRA with a sound basis for issuing findings under Section 4(f).

Similarly, the DEIS does not provide the analysis needed for a consistency determination under the federal Coastal Zone Management Act (“CZMA”), 16 U.S.C. § 1451 *et seq.*

In light of the serious deficiencies the Board has identified in the DEIS and Section 4(f) Evaluation, the Board is deeply concerned that the Proposed Project has already advanced well beyond the preliminary planning stage, and gives the appearance of becoming a *fait accompli*. FRA has allowed AAF to segment the environmental review of the Miami to West Palm Beach component (“Phase I”) from other portions of the Proposed Project, and construction of Phase I has begun without a cumulative analysis of the impacts of the Proposed Project as a whole. Moreover, according to FRA’s “On-Site Engineering Report – Part 2 for All Aboard Florida” (9/23/2014), engineering plans for portions of the Proposed Project running through (at least) Brevard and Indian River Counties are expected to be advanced to 90% by March 2015. Perhaps most alarming are statements within the DEIS itself that FRA has already made key determinations with regard to the Proposed Project at such an early point in the environmental review process that it did not even have the benefit of NEPA documentation to inform its decision-making. For example, the DEIS states “FRA has determined that the significant delays, costs, and risks associated with the use of elevated structures make raising any of the corridor bridges not feasible.” DEIS at 5-27.

The Board notes that NEPA prohibits federal agencies and applicants for federal agency approvals or funding from taking actions that would limit the choice of alternatives or otherwise signal premature approval of the application in advance of completion of the NEPA process. *See* FRA NEPA Procedures § 7(c), 64 Fed. Reg. 28549; 49 C.F.R. § 260.35(e); 40 C.F.R. § 1506.1. Typically, agencies within the USDOT use preliminary design work to prepare relevant NEPA documentation, in recognition of the fact that advancing design beyond that stage could tip the agency towards a commitment to a particular course of action without a fair and balanced consideration of reasonable alternatives.

To summarize the problems identified in these comments, the DEIS is grossly inadequate and precludes a meaningful analysis of the Proposed Project. The Board, therefore, requests that no further action be taken by FRA to advance the Proposed Project, unless and until a supplemental DEIS is prepared, and the subsequent requirements of NEPA, Section 4(f), Section 106 and the CZMA are fully satisfied. *See* 40 C.F.R. § 1502.9(c); FRA NEPA Procedures § 13(e), 64 Fed. Reg. 28554.

Set forth below are the Board's comments on the DEIS and Section 4(f) Evaluation. Also attached, and incorporated into the Board's comments, are the technical comments prepared by CDM Smith, the environmental consultant the Board retained to review the DEIS and Section 4(f) Evaluation.

1. Alternatives: The Alternatives Analysis Provided in the DEIS is So Narrowly Circumscribed by AAF's Financial Interests as to be Meaningless.

The alternatives analysis is supposed to be “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. Accordingly, agencies are directed by the CEQ Regulations to “[r]igorously explore and objectively evaluate all reasonable alternatives” that might avoid or minimize the impacts disclosed in an EIS. *Id.* While every conceivable alternative need not be examined, a “range of reasonable alternatives” meeting the purpose and need of the action must be considered. *Id.*² One example provided by USDOT guidance of the sorts of alternatives to be considered are those “related to different locations ... which would present different environmental impacts.” USDOT NEPA Procedures at 3.

Notwithstanding the significant impacts that operation of a high speed train along the Florida East Coast Railroad (“FECR”) corridor would have on the densely populated east coast of Florida, the DEIS lacks a comparative environmental analysis of even one alternative route. Instead, it short circuits the alternatives analysis by narrowly defining the “purpose and need” for the Proposed Project based on AAF's preferences, and then screening out all the other available routes in a “tiered” approach as failing to meet that sharply circumscribed purpose and need.

Thus, the DEIS states that “AAF identified *its* primary objective for the Proposed Project, which is to provide an intercity rail service that is sustainable as a private enterprise.” DEIS 2-10 (emphasis added). “Sustainable,” according to the document, means that operation of the rail service can “meet revenue projections” and “operate at an acceptable profit level.” *Id.*; *DEIS at 3-1*. Stepping off from the objective of providing a profitable rail service, the DEIS then applied “AAF evaluation criteria” including “six critical determining factors.” Prominent among those factors were those relating to project economics, including the ease with which AAF could acquire property, the ability to “commence construction in the near term to control costs,” and limiting the “costs of

² Likewise, USDOT guidance states that an essential element of an alternatives analysis should be a “rigorous exploration and an objective evaluation of the environmental impacts of all reasonable alternative actions, particularly those that might enhance environmental quality or avoid some or all of the adverse environmental effects.” USDOT NEPA Procedures, Attachment 2 at 3.

development, including cost of land acquisitions, access, construction, and environmental mitigation.” *Id.* at 3-2. The document then applies such “critical determining factors” to other available routes. Given the fact that AAF had already secured from its parent corporation the land interests needed for the Proposed Project, and AAF put forward a wholly unrealistic build year of 2016, it is no surprise that the analysis came to the preordained conclusion that all the other alternatives are so meritless as to not warrant substantive analysis in the DEIS.

By creating a screen that is tilted in one direction only, the DEIS side-stepped the fact that the Florida High Speed Rail Authority in a 2003 alternatives evaluation entitled “*Orlando-Miami Planning Study*” rated every other route as *superior* to the FECR corridor than would be used by the Proposed Project. That study compares the FECR route to three other potentially available north-south corridors in the following table:

Route	Travel Time	Capital Cost	Ridership / Revenue	Environmental
CSX	Fair	Good	Fair	Fair
I-95	Good	Fair	Good	Good
Turnpike	Good	Good	Fair	Good
FECR	Poor	Poor	Good	Poor

Orlando-Miami Planning Study at 7.

Thus, under three of the four criteria applied in that study -- travel time (a factor cited as critical in the DEIS on page 3-5), capital cost and environmental impacts -- the FECR corridor was rated at rock bottom. It is only in terms of revenue that the Proposed Project tied with another alternative and was rated favorably. Thus, if the DEIS were to look beyond the economic interests of AAF, the sponsor of the Proposed Project, to salient issues such as environmental impacts, other routes would certainly merit detailed consideration in the DEIS. However, those routes were ruled to be off limits under self-serving criteria of AAF’s own devising.

The truncated approach utilized in the DEIS does not conform to the requirements of NEPA for one fundamental reason: it is not the project sponsor’s purpose and need that should control the alternatives analysis, but the agency’s purpose and need in taking the action that is the subject of the NEPA review. Thus, AAF’s desire to turn a profit should not dictate the alternatives considered by FRA in determining how it should expend federal rail funds. Guidance issued by CEQ states that “[i]n determining the scope of alternatives to be considered, the emphasis is on what is ‘reasonable’ rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the

technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.” CEQ, “*Forty Most Asked Questions Concerning CEQ’s NEPA Regulations*” Question 2a, 46 Fed. Reg. 18026, 18027 (3/23/1981).

The Board does not dispute that the economic objectives of the Proposed Project sponsor may be taken into account by the agency in defining its purpose and need, and in identifying the alternatives for consideration in an EIS. However, those interests should not be given such weight as to exclude other relevant considerations. This is especially so with respect to high speed rail in Florida, where a number of potentially viable options have been carefully studied in planning documents that have been previously prepared in relation to other projects. According to the *Orlando-Miami Planning Study*, CSX, I-95 and the Florida Turnpike corridors present far fewer environmental impacts and a much sounder basis for public investment than the FECR corridor. However, the referenced alternatives were summarily dismissed in the DEIS without any sort of analysis considering whether the chosen FECR alternative would cause the most negative impacts to: (a) the health and safety of the citizens of the Treasure Coast of Florida, (b) the historical and archeological sites along the Treasure Coast of Florida and (c) the fragile Indian River Lagoon.³ FRA cannot simply ignore other legitimate alternatives simply because AAF, the sponsor of the Proposed Project, would like it to do so.

2. Cumulative and Secondary Impacts: The DEIS Fails to Assess the Cumulative and Secondary Impacts of the Proposed Project, in Combination with Reasonably Foreseeable Future Actions.

Under NEPA, FRA is obligated to examine not only the direct and immediate effects of the Proposed Project, but also its *indirect* or secondary impacts and its *cumulative* impacts, in combination with those of other reasonably foreseeable actions. See CEQ’s NEPA Regulations, 40 C.F.R. §§ 1502.16, 1508.8; FRA NEPA Procedures, 64 Fed. Reg. 28550, 28554; USDOT NEPA Procedures, Attachment 2 at 4; see also CEQ, “*Considering Cumulative Effects under NEPA*” at 11-21 (1/1997). With respect to indirect effects, the CEQ regulations are clear that impacts that are caused by an action, but “are later in time or farther removed in distance, but are still reasonably foreseeable” must be thoroughly considered in an EIS. 40 C.F.R. § 1508.8. More particularly, the growth-inducing impacts of a transportation project must be carefully examined. *Id.* The CEQ regulations are equally clear with respect to cumulative impacts, requiring that the effects of an action must be “added to [those of] other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* § 1508.7; see also *id.* §

³ The Indian River Lagoon is North America’s most diverse, shallow-water estuary. It spans approximately 156 miles along Florida’s east coast. The total estimated annual economic value of the Indian River Lagoon is \$3.7 billion, supporting 15,000 full and part-time jobs and providing recreational opportunities for 11 million people per year. The Proposed Project calls for building a new bridge over the St. Sebastian River. The St. Sebastian River is located in Indian River County. It is one of the Indian River Lagoon’s natural tributaries.

1508.27(b)(7). These principles have been applied by the courts in numerous cases to invalidate EISs for failure to assess indirect and cumulative project impacts.

Inexplicably, the DEIS makes no serious attempt to address the indirect or cumulative impacts that would result from the Proposed Project. For example, indirect or secondary impacts on land use are passed over with the statement that “[t]he project would not result in induced growth; no changes to land use due to induced growth would occur.” DEIS at 5-4. Although the DEIS mentions that the Phase 1 Environmental Assessment (“EA”) addressed “development in the vicinity of” the proposed stations in West Palm Beach, Fort Lauderdale and Miami, *id.* at 5-5, close examination of the information provided in that document, in light of other statements made by AAF, make clear that no meaningful attention has been paid to the secondary development associated with either phase of the Proposed Project.

Thus, according to the DEIS, the EA indicated that “at West Palm Beach and Fort Lauderdale, there will be 10,000 square feet of retail space within the station. At Miami, the Proposed Project would include 30,000 square feet of retail within the station, and additional 75,000 square feet of transit-oriented retail, 300,000 square feet of office space, 400 residential units, and a 200-room hotel.” *Id.* at 5-5. Indeed, the Phase 1 EA does recite the same information, and includes a bare-bones (and inadequate) analysis of the environmental impacts that would result from this development. However, nowhere in either the DEIS or the EA is any meaningful information or analysis provided concerning the *additional* development that would be induced by the Proposed Project and this transit oriented development.

The obligation to address the potential effects of such induced development cannot be avoided on the basis that it is speculative. In a “Preliminary Offering Memorandum” dated June 4, 2014, AAF confirmed that there are *current plans* for construction going well beyond the ancillary development identified in the DEIS and EA, and that sufficient information with respect to such planned development is available for a thorough analysis of its impacts. In particular, that document disclosed that: (i) AAF owns 21 acres in the areas surrounding the proposed stations; (ii) that it anticipates demand for 3.5 million square feet of development on those parcels; and that it expects to build 2 million square feet of that new development *contemporaneously* with the Proposed Project. That initial development is to include 1.3 million square feet in Miami, and 345,000 square feet in both Palm Beach and Fort Lauderdale. AAF also believes there is demand for subsequent future development totaling 1.5 million square feet including a 1.1 million square foot “super tower” for the area adjacent to the Miami station, and an additional 345,000 square feet of residential space in Fort Lauderdale. Thus, the development disclosed in the EA is a fraction of the currently planned and future development resulting from the Proposed Project. Given the specificity of AAF’s articulated intentions, sufficient information is available for a detailed environmental review of the traffic, air pollution, construction, noise and neighborhood character impacts of this reasonably foreseeable future development. The DEIS is deficient in that it failed to include such a review.

The DEIS is also lacking in its analysis of cumulative impacts. For example, it fails to address the cumulative impacts of the Proposed Project together with those of the Tri-Rail Coastal Link Project,

another major initiative that is likely to have significant impacts along 85 miles of the FEER corridor. Under that project, 25 or more commuter round trips will be added to the very same tracks to be used for the Proposed Project. Those additional trains will serve 25,000 passengers each day, at 20-25 new stations. The DEIS specifically excludes this important project and its overlapping impacts from the environmental analysis, stating that it is in the “preliminary planning stage.” DEIS at 5-163. Attempting to justify this characterization, the document goes on to state that the “[t]he Tri-Rail Coastal Link Study is being undertaken by FDOT, and is evaluating the use of the FEER Corridor for the Tri-Rail service, which currently operates on the CSX-controlled railroad right-of-way west of the FEER Corridor.” *Id.* One would gather from these statements that the Tri-Rail project is in the very early stages of planning, and that the information required for a cumulative impacts analysis of such a speculative project is not available. But that characterization is wholly inaccurate. An example of the degree to which the Tri-Rail Coastal Link Project has advanced is the Letter Agreement dated April 25, 2014, between AAF and South Florida Regional Transportation Authority (“SFRTA”), the sponsor of Tri-Rail Coastal Link Project, which provides the details for the shared use of the rail corridor between the two entities for the provision of high speed and commuter rail. *See* www.ircgov.com/Public_Notices/Rail/Tri-Rail-Non-Compete.pdf.

In addition, substantial Federal and State resources have been expended in the planning and environmental review of the Tri-Rail Coastal Link project, and there is no informational impediment to a cumulative environmental review. In particular, many studies have already been completed for the Tri-Rail Coastal Link Project, including a *Final Conceptual Alternatives Analysis and Environmental Screening Study* running for 387 pages issued in 2009; a 189 page *Detailed Environmental Screening Report* issued in 2010; and a 168 page *Final Alternatives Analysis Report* issued in 2011. Thus, detailed information has been compiled with respect to that project, its alternatives and environmental impacts as a result of years of exacting analysis. Moreover, a final *Preliminary Project Development Report* for the Tri-Rail Coastal Link was submitted to FRA’s sister agency, the Federal Transit Administration (“FTA”), in April 2014. Clearly, a project to which such an intense, federally supported planning effort has been devoted is “reasonably foreseeable” within the meaning of NEPA. In fact, the website for the Tri-Rail Coastal Link project (http://tri-railcoastallink.com/frequently_asked_questions.html) states that its sponsors have “closely collaborated” with the AAF team, and puts the estimated timeframe for completion of the Tri-Rail Coastal Link project within the same timeframe that would reasonably be expected for the Proposed Project, if it advances. It is also notable that AAF’s June 4, 2014 “Preliminary Offering Memorandum” indicates that use of the FEER corridor by Tri-Rail Coastal Link may cause delays to construction of the Proposed Project, and lead to operational and safety risks that require careful study in a cumulative environmental review.

It is well settled that when several proposals for related actions that will have cumulative or synergistic environmental impacts upon a region are pending concurrently before an agency, their environmental consequences must be considered together. The Tri-Rail Coastal Link project and the Proposed Project are both pending before USDOT agencies, and the Proposed Project has been specifically identified as being related to the Tri-Rail Coastal Link Project. *See* Tri-Rail Coastal Link’s

Preliminary Project Development Report at 1-14. Moreover, this case is not a circumstance where the Tri-Rail Coastal Link project is so speculative as to preclude a meaningful cumulative impact analysis. On the contrary, a wealth of detailed planning and environmental information has been available for years, and that information should have been tapped in assessing the combined impacts of these related projects and whether the Proposed Project, if approved, would adversely affect the operation of the Tri-Rail Coastal Link. The DEIS is fundamentally flawed in that it failed to do so.

3. DEIS Assumptions: The DEIS is Based on an Unrealistic Build Year and Assesses Critical Impacts Only on Opening Day, Thereby Failing to Analyze Projected Full Operational Impacts

The analysis presented by the DEIS is founded upon fundamentally flawed assumptions that provide no basis for an accurate projection of long-term impacts.

First, 2016 is not a proper baseline year for the analysis since that date is a mere two years from today. Given that FRA will be reviewing comments on the DEIS in December 2014, it is wholly unrealistic to believe that all of the following items can be completed by 2016:

- concluding the NEPA review process;
- securing all permits and approvals, including those from the United States Army Corps of Engineers, Federal Aviation Administration, United State Coastal Guard (“USCG”), Federal Highway Administration (“FHWA”), United States Fish and Wildlife Service, National Marine Fishery Service, plus those from multiple state and local agencies;
- finalizing all design documents;
- letting all construction contracts;
- constructing:
 - a new station in Orlando;
 - a new vehicle maintenance facility;
 - dozens of new overpasses, bridges, tunnels, ramps, and related infrastructure and safety features;
 - upgrading/expanding 170 highway-rail grade crossings, including designing and installing safety infrastructure; and
 - hundreds of miles of rail bed and new track; and
- performing diagnostic and system testing of all individual elements and system wide operations for performance and safety.

Nothing in the DEIS gives any indication that extraordinary arrangements have been put into place to accomplish the tasks required for completion of the Proposed Project within such a compressed timetable. In fact, the document does not even call for, or analyze, after-hours work during the construction period. In light of the impossibility of meeting a 2016 opening date, prior to issuing the

DEIS, AAF publicly shifted the opening date to 2017 even though the DEIS was keyed to 2016. *See* Orlando Business Journal, “3 Reasons Why All Aboard Florida in Orlando Was Delayed” (7/9/2014). However, even 2017 seems like a pipedream, given the long list of items that must be satisfied and the sheer magnitude of the construction that must be completed before the system could become operational. *See, e.g., id.* (which notes that approval of new station at the Orlando Airport still has many hurdles to overcome and would take three years to construct from final approval).

Utilization of an unrealistically early baseline year would result in the understatement of certain critical impacts, including and possibly most notably, noise. The reason for this is that the significance criteria set forth in the relevant guidance are based upon a sliding scale that is keyed to ambient noise levels as they are expected to exist in the baseline year. *See* FRA’s “*High-Speed Ground Transportation Noise and Vibration Impact Assessment Guidance Manual*” (the “FRA Noise Manual”) at Chapter 3 (12/2012); FTA’s “*Transit Noise and Vibration Impact Assessment*” at Chapter 3 (5/2006). Under those criteria, the higher the noise levels are during the baseline year, the lower the incremental increase need be to create a significant impact. *Id.* As the DEIS indicates, freight and vehicular traffic are expected to increase along the FECR corridor in the coming years, and other projects (including but not limited to Tri-Rail Coastal Link) can be expected to come on-line in the near future. Accordingly, existing ambient noise will increase and the noise increment that would produce significant impacts will decrease as time goes on. Therefore, noise impacts may be understated if an unrealistically early baseline year is utilized in the analysis. For these reasons, FRA should require AAF to prepare and submit a well-grounded conceptual development schedule for the Proposed Project that either justifies utilization of the 2016 baseline year or provides for a more realistic timetable for completion. In the event a later baseline year is identified, the noise analysis must be revised to reflect background conditions in that year.

In addition, as a result of the illusory 2016 build year the DEIS omitted any real discussion of construction, including its duration, sequencing, staging, techniques and impacts, claiming that the activities and impacts associated with building the Proposed Project would all be extremely short term. As discussed in the comments below, the details regarding the construction of this massive \$1.875 billion dollar project, as well as the impacts that would be experienced during the period of construction, need to be brought to light and analyzed under a realistic construction schedule.

There is a second fundamentally flawed assumption running through the DEIS analyses of noise, vibration and navigation, in that they focus on operations of the Proposed Project as of an opening day, rather than on operating conditions as they will be when the rail line is in full operation. Thus, the DEIS assesses the effects of 16 round trips per day, which reflects the number of trips needed to service passenger demand as of 2016. According to the *All Aboard Florida Ridership Revenue Study Summary Report* prepared by the Louis Berger Group in September 2013 (the “*LBG Study*”), which is attached as Appendix 3.3.F to the DEIS, approximately 1 million riders are expected as of that year. However, the DEIS itself reports that ridership is expected to grow sharply in the first few years of operation, and level off at 3.5 million passengers as of 2019.

Moreover, what the DEIS does not mention is that the *LBG Study* predicts ridership levels for 2019 to range from a *low* of 3.5 million (in what is characterized as the “base case” which ignores developments that are “subject to some uncertainty”), to 4 million (in the “business plan case,” which takes into account AAF’s plan to expand ridership), to a high of 5.1 million in the “management case” (which accounts for more aggressive marketing strategies by AAF). Moreover, even in the “business plan case” the study predicts ridership to rise to approximately 5.5 million by 2030. *LBG Study* at 4-4. Thus, based upon AAF’s own study, ridership is expected to be more than 5 *times* the ridership expected when service begins in 2016.

Most of the operational impacts of rail projects – including but not limited to noise, vibration and navigation delays at draw bridges – are caused by train pass-by incidents. Since the significance of the impacts depends, in important part, upon the number of passbys, the adequacy of the analysis in an EIS for a rail project depends upon the accuracy of the prediction of how many passbys will occur. Under NEPA, an EIS must examine both the short-term impacts of a project, and also the reasonably foreseeable effects of that project over the long-term. Accordingly, the DEIS should have examined the anticipated effects of the Proposed Project not only upon the commencement of service but also over the longer term horizon. There is nothing in the DEIS to indicate that 16 round trips per day would meet ridership demand over the long term, or was properly used as the touchstone for the impacts analysis in the document.⁴

The Board does not dispute the appropriateness of including in the DEIS an analysis of short-term operational impacts of the Proposed Project, utilizing a realistic commencement date baseline year. However, it believes that a second baseline year of 2030 or later must also be assessed to capture the long-term impacts of the Proposed Project, in combination with other projects expected to be on line as of that time. This is particularly important because it can reasonably be anticipated that the new two-track FECR corridor created by the Proposed Project will be much more heavily used at that time for both passenger and freight traffic. The DEIS itself indicates that freight traffic is expected to increase sharply upon completion of the Panama Canal improvements, DEIS at 5-17, and other projects such as Tri-Rail Coastal Link can be reasonably expected to be operational a few years after the Proposed Project comes on line. Since it fails to present such a “horizon year” analysis the DEIS is woefully deficient in its assessment of the long-term cumulative operational impacts of the Proposed Project on noise, vibration and other critical issues.

⁴ The DEIS itself makes no mention of traffic and transportation impacts in any years other than 2016 and 2019. However, buried in Appendix 3.3 C, entitled “Grade Crossing Details,” is a brief description of some limited analyses performed for both 2016 and 2036. As discussed below, that analysis was not only obscured by its placement in an appendix to the DEIS, it also revealed exceptionally significant impacts, the implications of which should have been disclosed and thoroughly examined in the DEIS. It should be noted that the discussion in that appendix indicates that there would be a range of 16-19 passbys per day. *See, e.g.* DEIS App. 3.3C at 4-1.

4. **Climate Change: The DEIS Fails to Satisfy FRA's Legal Obligation to Adequately Analyze the Effects of Climate Change on the Proposed Project**

The Proposed Project sponsors are seeking \$1.875 billion in low interest federal loan funds to facilitate construction of a high speed rail line in a corridor that lies completely within Florida's coastal zone and skirts in and out of the existing flood plain along 128.5 miles of the Atlantic Coast of Florida. Although the DEIS makes passing reference to the sorts of risks posed by climate change in locating a major new transportation facility in that area, it provides no meaningful analysis of such risks or the alternatives or mitigating measures that might minimize or avoid them.

Thus, the DEIS notes that “[t]ransportation systems [such as the Proposed Project] are vulnerable to extreme weather and climate change effects such as ... sea level rise, and more intense storm events ...” DEIS at 5-71. More particularly, the document acknowledges that “[t]he N-S and WPB-M Corridors of the Project are vulnerable to climate change effects in the near future. Both of these corridors are along the Florida coast and cross several coastal water bodies. Bridge structures, particularly those with lower elevation, will have increased vulnerability over time, and potential infrastructure damage may result from flooding, tidal damage and/or storms.” *Id.* at 5-73.

Nevertheless, the DEIS offers only the most cursory examination of the vulnerability of the Proposed Project to sea level rise or the more intense storm surges the document itself acknowledges will occur in the near future. The DEIS subjects only *two* of the 18 bridge crossings required for the N-S corridor to any sea level rise analysis at all, and with respect to those facilities it simply compares their elevations to expected sea levels in 2030 and 2060. From this comparison, the DEIS finds that the bottom chord of one of the bridges would be under water at high tide during a 100 year storm in 2030, with no mention at all of impacts in 2060. *Id.* at 5-75. The vague conclusion drawn from this lackluster analysis is that the “vulnerability [of the Proposed Project bridges] will increase as sea level rises” and “there may be increasing periods of time where the train is out of service during storm events.” *Id.* Nothing is said regarding the nature and extent of the property damage that may be caused to the bridge structures, or whether other components of the Proposed Project located within the substantially expanded future floodplain would also be at risk. Moreover, not a word is mentioned as to whether and how public safety would be put at risk in operating a high speed rail service within the corridor under such conditions, or mitigation opportunities.

The truncated analysis presented in the DEIS with respect to this issue stands at odds with firmly established federal policy on how climate change is to be accounted for in agency planning. In President Obama's 2009 Executive Order (“E.O.”) 13514 “*Federal Leadership in Environmental, Energy, and Economic Performance*,” all federal agencies, including USDOT and FRA, were directed to establish Climate Change Adaptation Plans. *See* 74 Fed. Reg. 52117, 52121, 52124 (10/8/2009). The President subsequently instructed federal agencies to “ensure that climate risk-management considerations are fully integrated into federal infrastructure ... planning” in his “Climate Action Plan” issued in June 2013. Shortly thereafter, the President issued E.O. 13653, “*Preparing the United States for the Impacts of Climate Change*,” which required all federal agencies to “reform policies and

Federal funding programs that may ... increase the vulnerability of natural or built systems, economic sectors, natural resources, or communities to climate change related risks” and to “integrate consideration of climate change into agency operations and overall mission objectives” E.O. 13653, Sections 2 and 5, 78 Fed. Reg. 66819, 66821 (11/6/2013).

USDOT complied with these directives by first issuing a Policy Statement in 2011, requiring integration of climate change adaptation strategies “into [its] core policies, planning, practices and programs.” USDOT, “*Policy Statement on Climate Change Adaptation*” at 2 (6/2011). This policy also requires USDOT to use “best-available science” and apply “risk management methods and tools” in assessing and planning for climate change. *Id.* USDOT then issued a Climate Adaptation Plan which characterized the problem unique to transportation as follows:

Transportation infrastructure is inherently long-lived. Bridges, tunnels, ports and runways may remain in service for decades, while rights-of-way and specific facilities continue to be used for transportation purposes for much longer. In addition to normal deterioration, transportation infrastructure is subject to a range of environmental risks over long time spans, including wildfire, flood, landslide, geologic subsidence, rock falls, snow, ice, extreme temperatures, earthquakes, storms, hurricanes and tornados. Infrastructure designers and operators must decide the magnitude of environmental stress that any particular project will be able to withstand over its lifetime.

USDOT, “*Climate Adaptation Plan: Ensuring Transportation Infrastructure and System Resilience*” at 3 (5/2013).

To deal with this problem, USDOT found that “newly constructed infrastructure should be designed and built in recognition of the best current understanding of future environmental risks. In order for this to happen, understanding of projected climate changes would need to be incorporated into infrastructure planning and design processes, across the many public and private builders and operators of transportation infrastructure.” *Id.* at 6. More particularly, the agency committed to “take actions to ensure that Federal transportation investment decisions address potential climate impacts in statewide and metropolitan transportation planning and project development processes as appropriate in order to protect federal investments,” *id.* at 5, and indicates that “FRA will consider potential climate impacts and adaptation during rail planning and corridor program development.” *Id.* at 15.

The short shrift paid by the DEIS to the climate change-related implications of siting a federally funded high speed rail corridor in the coastal zone and flood plains of Florida falls far short of the careful planning envisioned by the President, and the commitments made by USDOT. It also does not conform to the requirement under NEPA that agencies consider thoroughly the “reasonably foreseeable” short- and long-term environmental impacts of their actions. In the event these

deficiencies are not corrected, billions of dollars in federal resources could be poured into a project that would be under an ever-increasing threat from future sea level rise and storm surges, with no serious attention paid to the ensuing consequences to public safety or the investment itself, and with no consideration paid to the measures that could be taken to avoid them. Indeed, according to the DEIS no action would be taken at all to assure that the Proposed Project is designed to withstand the future risks of sea level rise. On the contrary, AAF has announced its intention to build according to a construction design that would “maintain existing elevations where feasible,” DEIS at S-14; and has specifically rejected the USCG request that alternatives be considered to raise the clearance beneath certain low bridges. Additionally, according to the DEIS, FRA has concluded that it would not be feasible to raise the clearance beneath certain bridges due to the significant delay it would cause to the Proposed Project, the overall costs and the risk associated with elevating the structures. *Id.* at 5-27.⁵ One can only assume from this conclusion that the short-term success of the Proposed Project is being given greater weight than the overall safety of the public and of the federal investment. Moreover, since other viable high speed routes were screened out of the analysis, no consideration whatsoever has been given to alternatives, such as the utilization of the interior CSX corridor for high speed rail, that would avoid such risks altogether. The effects of future sea level rise and storm surges on the Proposed Project are “reasonably foreseeable” impacts, and the DEIS was materially deficient in failing to address them.

5. Floodplains: Locating the Proposed Project in Floodplains Is Not Demonstrated to be the Only Practicable Alternative.

The Proposed Project would result in the siting of long stretches of a multi-billion dollar high speed rail line in Florida’s currently mapped floodplains, which can be expected to expand as a result of FEMA’s ongoing “coastal flood risk study” for the East Coast of Central Florida. In addition, the Proposed Project’s encroachment on floodplains would only increase with time as sea level continues to rise. FRA should not approve such a risky endeavor without first taking a hard look at other practicable alternatives, as required by the directives discussed below.

The very real risks of floodplain encroachment to humans and infrastructure were first recognized by President Carter in E.O. 11988, “*Floodplain Management*,” which was intended to “avoid [the federal government’s] direct or indirect support of floodplain development wherever there is a practicable alternative.” 42 Fed. Reg. 26951 (5/24/1977). This order requires federal agencies that propose to support or allow floodplain development to first consider alternatives to such development. *Id.* at 26952. As mandated by E.O. 11988, USDOT issued its own floodplain directive, which sets forth the department’s policy with regard to floodplains. USDOT Order 5650.2 “*Floodplain Management and Protection*,” (4/23/1979). Under that directive, all USDOT agencies, including FRA, must take certain steps before supporting a project that would result in a

⁵ This determination appears to the Board to be premature, since the NEPA process has not yet been completed. Moreover, there is no hard data presented in the DEIS to support the rationale for such a determination.

“significant encroachment” – a term that includes likely future damage to transportation infrastructure in a floodplain that could be substantial in cost or extent. *Id.* at 4, 8.

There can be no doubt that the Proposed Project would result in a “significant encroachment” on floodplains. According to the DEIS, more than three quarters of the Proposed E-W corridor and one third of the N-S corridor would traverse currently mapped floodplains.⁶ Thus, overall at least a third of the total project area (or more than a thousand acres) would be located in floodplains.

For FRA to provide RRIF funding for the Proposed Project it must satisfy certain requirements under USDOT Order 5650.2. First, it must ensure that the EIS “reflects consideration of alternatives to avoid [a significant] encroachment.” *Id.* at 8. Next, the responsible individual at FRA must make a written finding that the proposed significant encroachment is the only practicable alternative. *Id.* Such a finding “requires a careful balancing and application of individual judgment” which should “include the full range of environmental, social, economic, and engineering considerations” where “special weight should be given to floodplain management concerns.” *Id.* In addition, the finding must include a description of why the Proposed Project *must* be located in the flood plain, including the alternatives considered and why they were not practicable. The finding must also include a statement that the action conforms to applicable state and/or local floodplain protection standards. *Id.*⁷

The DEIS is entirely bereft of the information needed to satisfy FRA’s obligations under E.O. 11988 or USDOT Order 5650.2. For example, due to the so-called “tiered” approach that AAF employed to screen out any meaningful alternatives analysis, neither in the few scant pages dedicated to floodplains nor anywhere else in the DEIS is there any detailed consideration of other possible routes.⁸ Moreover, the DEIS does not so much as identify, and certainly does not discuss, applicable state and/or local floodplain protection standards, so FRA would be wholly unable to find that the Proposed Project conforms to such standards. Accordingly, approval of the Proposed Project on the current record would run counter to the letter and spirit of a federal policy aimed at ensuring that federal dollars are not spent on infrastructure projects most vulnerable to the risk of flooding, unless there is no other practicable alternative.

⁶ These percentages are based on project area (corridor lengths and widths provided in DEIS Chapter 2) and the project study area within the 100-year flood plains identified in DEIS Table 4.3.4-1.

⁷ Similar requirements are reflected in FRA’s own NEPA Procedures. *See* 64 Fed. Reg. 28555. Under those procedures, the agency may only facilitate floodplains development if: (i) the head of the agency finds that the only practicable alternative to the project is to site it in the floodplain; (ii) the agency designs or modifies the project to minimize potential harm to or within the floodplain consistent with E.O. 11988, and (iii) the agency prepares and circulates a notice containing an explanation of why the action is proposed to be located in the floodplain. *Id.*

⁸ *See* the Board’s Comment 1, above.

6. **Construction Impacts: The Identification and Discussion of Construction Impacts is Virtually Absent from the DEIS.**

It is well established that a NEPA EIS must discuss and evaluate the construction impacts that would result from a proposed action. *See, e.g., FRA NEPA Procedures*, 64 Fed. Reg. 28556 (an FRA NEPA EIS “should identify and assess the impacts associated with the *construction period* of each alternative” (emphasis added)); USDOT NEPA Procedures, Attachment 2 at 13.

Proceeding from the unrealistic premise that the Proposed Project would be constructed by 2016, the DEIS provides only the most superficial description of the construction-related activities that are anticipated, and little substantive assessment of the “temporary” construction period impacts those activities would cause. Thus, no details whatsoever are provided concerning the schedule for the work, the sequence of activities, the nature of those activities, the number and types of equipment that would be used, the level of truck traffic that would be generated in delivering materials to and disposing of waste from the work sites, the routes such trucks would take, road closures, detours, staging and storage area locations, or other matters critical to a meaningful impacts analysis. As a result, nothing of substance is discussed with respect to the impacts of construction activities on surrounding land uses, traffic, emergency response, or other critical issues.

Thus, the DEIS brushes aside construction-related land use impacts with a few words about “short-term construction easements on privately owned properties,” and the assurance that “pre-construction land use patterns would return once the construction period concludes.” DEIS at 5-5. Not a word is mentioned about the nature and extent of the disruption that would be caused to adjacent homes and businesses during the period that a massive infrastructure project is being constructed through the heart of downtown and residential areas. Indeed, rather than addressing the socioeconomic *impacts* of Proposed Project construction at all, the DEIS merely comes up with a few numbers on the economic benefits and jobs that could be generated by the work. DEIS at 5-130.

Likewise, the DEIS dismisses out of hand the traffic-related impacts of construction activities, stating that “the Project would result in minor, short-term impacts to freight rail transportation, regional highways and local vehicular traffic during construction.” DEIS at 5-14. With respect to freight traffic, the document reaches that conclusion based upon the assurance that “[n]ew track construction ... would be performed according to best management practices” without specifying what those BMPs might be or how they might avoid disruption to freight traffic. *Id.* With respect to vehicular traffic, the document mentions that there would be road closures, but states that “typically,” they would last no more than a week. No discussion appears at all as to whether there are certain roads that would be closed for a longer period; nor does the DEIS address whether police, fire or EMS emergency response would be delayed as a result of the road closures (and if so, what could be done to mitigate that impact). Moreover, no analysis is presented with respect to whether construction-related truck traffic would cause significant congestion on the roadways surrounding work sites and staging areas. Instead of disclosing construction period traffic impacts and identifying the mitigation measures to address them, the DEIS simply waves the issue away with

the assurance that “[p]roper planning and implementation and maintenance of mitigation measures (e.g., maintenance of traffic plans) will be specified and required for construction.” DEIS at 5-15.

Given the magnitude of the effort required to build the Proposed Project, and the failure of the DEIS to include even a conceptual schedule backing up the contention that work would be completed by 2016, one can only assume that Proposed Project construction would extend over a period of many years. While the DEIS provides no information with respect to possible staging areas, it must also be assumed that such areas would be major facilities that are intensely busy over much if not all of that construction period. The potential environmental impacts associated with such activities and facilities should not have been dismissed with platitudes. Rather, they should have been carefully assessed, and specific mitigation measures should have been proposed to minimize them to the extent practicable.

Predictably, the half-hearted analysis included in the DEIS yields only the most amorphous mitigation measures. To provide a few examples, no mitigation at all is proposed to address the land use, socioeconomic and community character impacts of extended construction activities and prolonged conditions of disruption on affected commercial districts and residential areas; equally lacking are mitigation measures addressing vehicular traffic impacts during the construction period; transportation impacts on freight traffic are wished away with unspecified BMPs; and the only air emissions mitigation identified in the document relates to dust control, with no meaningful measures identified to address the effects of equipment and vehicular emissions of particulate matter of less than 2.5 microns (“PM_{2.5}”) or NO₂. Such issues are dismissed with the statement that “[p]otential emissions associated with construction equipment will be kept to a minimum as most equipment will be driven to and kept at affected sites for the duration of construction activities.” DEIS at 7-4. While such a practice may help reduce emissions related to the transport of such equipment, left unaddressed is the considerably more important issue of emissions from such equipment while operating at the work site. That issue cannot be put to rest by describing construction-related air impacts as “temporary,” because the health-related standards issued by the United States Environmental Protection Agency for the relevant pollutants are short term standards (*i.e.*, 24 hours for PM_{2.5} and 1 hour for NO₂).⁹ It is well established that diesel construction equipment emits PM_{2.5} and NO₂ in quantities that may result in serious air quality and public health impacts.

For these reasons, the DEIS does not take the “hard look” at construction period impacts that NEPA demands.

⁹ Although some analysis is presented in the DEIS with respect to Noise and Vibration impacts during construction, that analysis is deficient for the reasons discussed in the Board’s Comment 7.B below, and in the attached comments prepared by CDM Smith.

7. **DEIS Impact Analyses: The DEIS Fails to Properly Evaluate Two of the Most Potentially Significant Impact Areas to Local Communities: Transportation and Noise and Vibration**

A. **Traffic: The DEIS Omits Mention of the Results of its Own Transportation Appendix, Which Predicts Significant Impacts to Local Traffic Conditions Even Though It Is Based on an Inadequate Analysis.**

The N-S Corridor of the Proposed Project would cross 159 roadways at-grade through five counties between Cocoa and West Palm Beach. DEIS at 4-15. The DEIS concludes – after only the briefest discussion of localized traffic impacts – that increased train traffic will “result in minor increased traffic delays at existing roadway crossings.” *Id.* at 5-11. But that conclusion is belied by the information tucked away in an appendix to the DEIS entitled “Grade Crossing Details,” which consists of a report prepared by Amec Environmental & Infrastructure, Inc., in September 2013 entitled “Transportation and Railroad Crossing Analysis for the All Aboard Florida Passenger Rail Project from Cocoa to West Palm Beach, Florida” (the “Amec Report”). DEIS App. 3.3C. Even though the Amec Report is rife with methodological errors and shortcomings, it presents a bleak picture for local traffic conditions if the Proposed Project were to advance. For example, some intersection approaches would experience delays of up to 45 minutes per hour, snarling local traffic, impeding emergency vehicular movement and potentially causing other significant impacts to air quality and the socioeconomic well-being of the affected communities.¹⁰ *See* DEIS App. 3.3C at 3-22. One can only imagine how dark the picture really would be if the analyses were conducted properly and reported accurately in the DEIS.

Close examination of the information presented in the Amec Report reveals that even based on a skewed and incomplete evaluation, there would be very significant impacts to local traffic conditions at the at-grade crossings along the N-S Corridor. For example, at the FECR grade crossing at Oslo Road in Indian River County, the Amec Report estimates that in 2016 there would be a westbound queue of 1299 feet every time a passenger or freight train passes by. *Id.* Notably, there is only 350 feet on Oslo Road between the FECR crossing and US 1. *See id.* at 3-8. Thus, the vast majority of vehicles would be backed up onto or beyond US 1, in queues that would extend hundreds of feet in both the southbound and northbound directions. Moreover, US 1 southbound at Oslo Road has a limited 150 foot right-hand turning lane and northbound US 1 at Oslo Road has two dedicated left-turn lanes each measuring 325 feet, for a total length of 650 feet. Accordingly, a 1299 foot queue is likely to consume the 350 feet on Oslo Road between the FECR crossing and US 1, the 150 foot south bound dedicated US 1 right turn lane, *and* the north-bound left turn capacity on US 1. There is no discussion about how this queue would function, and the Amec Report is devoid of any discussion of impacts on the north and southbound US 1 lanes. In addition, the Amec Report predicts that an *additional* year 2016 westbound queue of 3066 feet (for a passenger train passby, 3072 feet for a freight train passby) would form at the intersection of Oslo Road and US 1. As

¹⁰ For example, eastbound delays at the Oslo Road and US 1 intersection in Indian River County would be 700 second at least three or four times per hour in 2036. DEIS App. 3.3C at 3-22.

noted above, this intersection is 350 feet away from the Oslo Road and FECR crossing, but neither the DEIS nor the Amec Report make any attempt to discuss how this intersection could operate with a combined queue for both intersections that would extend almost 4400 feet.

These impacts are predicted to significantly worsen in 2036. For example, in that year the eastbound queues that are predicted to form at the intersection of Oslo Road and US 1 each time either a passenger or freight train passes by would extend more than 7000 feet -- well over a mile. *Id.* at 3-22. Moreover, impacts of this magnitude would not be confined to Oslo Road, or the handful of other intersections considered in the Amec Report. Rather, they can be expected up and down the entire corridor, as trains come and go more than 50 times a day.

No hint of these significant traffic impacts appears in the body of the DEIS. In fact, the document as written reports information for 2016 and 2019, and does not address potential traffic impacts in 2036 at all. *See* DEIS at 5-6 to 5-14. Likewise, the ripple effect of the long queues predicted on local intersections -- on the ability of police, fire and EMS vehicles to respond to emergencies; on traffic safety; or on economic conditions in affected business districts -- is not addressed in the DEIS. And nothing is said in the DEIS or its appendices about how such impacts could be mitigated or avoided.

Moreover, the analysis presented in the Amec Report is unsupported by technical data or modeling results, and is deficient in several respects. Set forth below are a few examples of the deficiencies that riddle the Amec Report.

- **The number of intersections evaluated was an inadequate sample population.** The Amec Report examined just 6% of the at-grade intersections along the N-S Corridor (10 out of 159 at grade crossings, or 2 intersections for each of the five counties that would be bisected by the N-S Corridor). DEIS App. 3.3C at 3-1. No justification was given for why so few intersections were considered. Since every intersection is unique, a more reasonable sample size should have been selected.
- **Only half of each intersection was evaluated.** The Amec Report only examined eastbound and westbound movements through intersections, and failed to consider the impacts to the north-south movements in the four-way intersections evaluated. This is an egregious omission given that many of the intersections that would be affected by the Proposed Project involve significant regional north/south arterial roadways and there is little doubt that the predicted eastbound and westbound delays and queues would impact the north/south intersection movements, and perhaps regional mobility in general. It is standard protocol for a traffic impacts analysis to consider all movements in an intersection. Without such a full intersection analysis, it is impossible to understand the true impacts of the Proposed Project on local traffic.
- **Wrong baseline used for impacts evaluation.** The Amec Report failed to generate “no action” traffic operations for 2016 or 2036. The impacts of the Proposed Project should be assessed as compared to a no action condition. An appropriate no action

condition would be normal traffic operations plus freight movements as compared to normal traffic operations, plus freight and passenger train operations. The increment that would be derived by comparing such scenarios should have been generated for both 2016 and 2036. However, the Amec Report presents no comparison to a typical no action condition. Instead, it used a “weighted average” approach, that discounted the impacts of the Proposed Project by averaging the delay and queue lengths that would be created by the Proposed Project with those from typical traffic operations and freight movements.

- **No impacts discussion provided.** The Amec Report contains no discussion of the tables appearing at pages 3-1 to 3-26 within the report. Instead, it discusses the maximum crossing closure time, choosing to ignore the predicted queues and delays that would result from the closures.
- **Only the PM Peak Hour Was Modeled.** The Amec Report confined its analysis to the PM peak hour. However, the AM peak hour (which would include school and commuter traffic) or weekend midday peak hour could well represent a worst case scenario for many intersections. All three peak hours should have been examined.
- **Downtimes based on maximum speeds may be underestimated.** The downtime for each crossing was estimated based on passenger trains from the Proposed Project traveling at maximum predicted speeds. It is unknown if the maximum predicted speeds could be safely achieved and maintained along the entire length of the proposed N-S Corridor, therefore a more realistic speed should have been used that would have resulted in longer down times and a more conservative analysis.
- **Impacts for freight and passenger trains similar.** Even though the Amec Report goes to great lengths to highlight that the proposed passenger trains will be shorter and faster than freight trains, the delay and queue impacts are very similar for a passenger train and a freight train crossing. This is not explained in the Amec Report.

The Proposed Project has the potential to disrupt traffic at intersections along the entire length of the N-S Corridor between Cocoa and Miami. Notwithstanding the flaws in the Amec Report, that study provides some sense of the magnitude of the traffic impacts that can be expected. The Board urges FRA to undertake a careful study of those potential impacts, following standard analytical methodologies, and the socioeconomic, public safety, and other impacts that could also be expected to result. Those analyses should be presented in a supplemental draft environmental impacts statement.

B. Noise and Vibration: The DEIS Failed to Follow FRA’s Own Guidance in Performing Noise and Vibration Impacts Analyses, And as a Result Underestimates Potential Impacts.

The noise analysis appearing in the DEIS does not take the “hard look” that NEPA requires for a major high speed rail project in the final stages of project planning. As noted above, the analysis focuses solely on noise conditions in 2016, the year assumed for the commencement of operations, and gives no consideration to conditions in later years. Moreover, even the 2016 analysis was wholly inadequate. For example, no monitoring was performed of existing noise levels at sensitive receptors affected by the Proposed Project, and no detailed assessment was provided as to how noise levels in the vicinity of such sensitive receptors might change once high speed rail operations begin. The general calculations presented in the document provide no specific indication of whether and where significant noise impacts might occur, or what reasonably might be done to mitigate them.

As noted in the Board’s Comment 3 above, the FRA Noise Manual sets forth the ground rules for the assessment of noise impacts from FRA projects under NEPA. According to that document, a “General Noise Assessment” of the sort appearing in the DEIS is to be performed “commensurate with the level of detail of available data in the early stages of major investment planning and environmental clearance.” FRA Noise Manual at 4-4. In contrast, according to the FRA Noise Manual:

[a] Detailed Noise Analysis is appropriate for assessing noise impacts for high-speed train projects after the preferred alignment and candidate high-speed train technologies have been selected. At this point, the preliminary engineering has been initiated, and the preparation of an environmental document (usually an Environmental Impact Statement) has begun. Information required to perform a Detailed Noise Analysis includes type of vehicle equipment to be used, train schedules, speed profiles, plan and profiles of guideways, locations of access roads, and landform topography, including adjacent terrain and building features.

FRA Noise Manual at 5-1.

All such information should have been readily available at this point in the planning process for Proposed Project, given the fact that AAF is planning to begin construction next year. Thus, instead of the generalized calculations presented in the DEIS, under FRA’s own manual the analysis should have included:

- Identification of noise-sensitive receivers, which depend on the land use in the vicinity of the proposed project.

- Estimation (based upon measurements taken at representative locations) of the existing noise exposure at each noise sensitive receiver or cluster of receivers using the methods presented set forth in the manual.
- Determination of the technology applicable to the project: steel-wheeled high-speed or very high-speed electric (locomotive hauled or EMU), steel-wheeled fossil fuel, or maglev.
- Determination of noise exposure in terms of “sound exposure level” (“SEL”) under reference operating conditions.
- Adjustment of the subsource reference SELs to the anticipated operating conditions of the project (i.e., train consist and speed).
- Development of an SEL-versus-distance relationship for each subsource that includes the effects of shielding along the path.
- Determination of total SEL at each receiver by combining the levels from all subsources.
- Assessment of noise impact at each receiver or cluster of receivers.

The DEIS compounds the deficiencies resulting from use of the wrong methodology by departing from the approach one would expect to see in a DEIS, where project impacts are first identified and all practicable mitigation is then identified to address them. *See* FRA Noise Manual at 6-36 (“In general, mitigation options are chosen from those below, and then portions of the project noise are recomputed and reassessed to account for this mitigation.”). Instead of following this straightforward protocol, the DEIS builds mitigation into its impact analysis and notes that “159 grade crossings where severe, unmitigated impacts would occur” would be “eliminated” by a commitment to install wayside horns, hereby concluding that “the Project would have no permanent noise impacts” as a result of that commitment. DEIS at 5-46, 5-49. That conclusion is not only based upon the use of faulty methodology. It also short-circuits FRA’s obligation to consider mitigation measures other than wayside horns to mitigate the severe impacts that were mentioned in passing. According to the FRA Noise Manual, among the measures that should have been considered are vehicle noise specifications, wheel treatments, vehicle treatments, vehicle body design, guideway support, operational restrictions, path treatments, noise buffers and ground absorption. These alternative and/or additional measures should have been considered by FRA.

8. Section 106 and Historic Resources: Localities were Excluded from the Section 106 Consultation and Significant Historic and Archeological Resources were Ignored by the DEIS.

Under Section 106 of the National Historic Preservation Act, P.L. 89-605, codified at 16 U.S.C. § 470 *et seq.* (“NHPA”), federal agencies must take into account the effect of their undertakings on historic resources that are either listed or eligible for listing on the National Register of Historic Places (the “National Register”). The federal agency must do so in accordance with procedures adopted by the Advisory Council on Historic Preservation (the “Advisory Council”) appearing at 36 C.F.R. Part 800 (the “NHPA Regulations”), unless the agency substitutes the NEPA procedures for those required under the NHPA. *See* 36 C.F.R. § 800.8(c). Here, FRA elected not to substitute

NEPA procedures for those of the Advisory Council. *See* DEIS, App. 4.4.5.A.2, (“M. Hassell stated that FRA has decided not to use the substitution approach for streamlining the NEPA and NHPA Section 106 consultation process.”).¹¹

The NHPA Regulations require a federal agency to engage in a consultation process to identify historic properties potentially affected by the undertaking, assess its effects on those resources, and seek ways to avoid or minimize any adverse effects that are identified. The NHPA Regulations state clearly that “[a] representative of a local government with jurisdiction over an area in which the effects of an undertaking may occur *is entitled to participate as a consulting party.*” 36 C.F.R. § 800.2(b) (emphasis added). Accordingly, the regulations provide that the “[t]he [federal] agency *shall* invite any local governments ...” to join in the consultation. *Id.* § 800.3(f)(1) (emphasis added). Notwithstanding such clear and explicit mandates, FRA did not invite the County to participate in the Section 106 consultation for the Proposed Project. On the contrary, it appears that a conscious decision was made to *not* invite the participation of the County and scores of other affected local governments. Thus, the DEIS states that only “four Certified Local Governments (CLG) and two local informants were ... contacted regarding information on locally designated historic resources.” DEIS at 4-125. The reason for this, according to the minutes of the March 28, 2013 meeting between the State Historic Preservation Office (“SHPO”) and AAF, is that SHPO “felt that ... due to past consultations with affected communities (i.e., West Palm Beach, Fort Lauderdale, Miami) additional separate meetings are unnecessary.”¹² DEIS, App. 4.4.5.A.1 at 2.

Thus, only a handful of “certified” local governments were invited to participate in the consultation, leaving numerous other local jurisdictions (which – like Indian River County – are not certified) out of the discussions. As noted in minutes for a July 8, 2013 SHPO-AAF meeting that included the few consulting parties, including FRA, “[f]or the prior EA, county and local historic preservation staff were invited” to participate in the consultation, but for this phase no such invitation would be extended because the “project will not involve new station locations that would extend into historic districts.” DEIS, App. 4.4.5.A.2 at 1.

The exclusion of virtually all local authorities from the Section 106 consultation was wholly improper. There is no basis in the NHPA regulations to limit participating local governments to those that are “certified.”¹³ Moreover, it cannot be argued that the NEPA scoping process

¹¹ The DEIS states on page 4-124 that “FRA is *coordinating* compliance with Section 106 with preparations of the DEIS” (emphasis added). Under the NHPA Regulations, “coordination” is distinct from “substitution.” When the historic review is coordinated with the NEPA review, the Part 800 NHPA procedural requirements must be satisfied, along with those under NEPA. When the federal agency seeks to streamline its review by substituting NEPA procedures, those procedures are followed “in lieu” of those required under the NHPA Regulations.

¹² The NHPA Regulations require FRA to consult with SHPO *and* representatives of local government with jurisdiction over an area in which the effects of the Proposed Project may occur. 36 C.F.R. § 800.2(c)(1), (3). They do not contemplate cutting localities out of the process because SHPO advises that local consultation is “unnecessary”.

¹³ It should be noted that the NHPA regulations governing consultation do not even mention certified local governments. 36 C.F.R. Part 800. By being “certified” a local government can play a more direct role in nominating resources to the National Register and may be eligible to receive certain historic preservation funds,

provided a hypothetical opportunity for local governments to provide input regarding the effects of the Proposed Project on cultural resources, as scoping is no substitute for active participation in a Section 106 consultation. It should be noted that Indian River County, like most localities without a proposed station, were not directly notified about, or invited to participate in, the scoping process. *See* DEIS, App. 8.1.B at App. B. FRA could not have expected localities to infer from the generic scoping notice that their only opportunity to provide the information on potentially affected resources, adverse effects and mitigation measures would be to attend and testify at the scoping sessions. This is especially so because in Indian River County's case, such sessions were not even convened in the county. The publication of a scoping notice does not satisfy FRA's regulatory obligation to invite local authorities to join in a Section 106 consultation.

Moreover, FRA was not justified in excluding multiple local authorities from the consultation on the basis that the Proposed Project will not affect cultural resources. On the contrary, one of the primary reasons for including local authorities in the process is to assist in the identification of resources that might otherwise be overlooked. That is exactly what happened here: in the absence of input from informed local authorities, the parties failed to identify a number of significant cultural resources or the effects that the Proposed Project would have on those resources. For example, no mention is made in the DEIS of two significant archaeological sites in Indian River County:

The Vero Man site. This site is located along the Main Relief Canal (Van Valkenburg Creek), where project work would be performed to upgrade an existing railroad bridge, and to construct a second track. Archaeologists from Mercyhurst University, the local Old Vero Ice Age Committee, and scientists from the University of Florida have been working at this site over the past few years. Significant artifacts have been uncovered during recent excavations that support the theory that this area was important to a large number of extinct species and the Paleo-Indians that hunted them. The timeline has been established at 12,000 to 14,000 years ago and may be even older. The archaeological activities, research, and continued excavations are providing valuable information about the earliest people to inhabit Florida. The Vero Man site – Florida Master Site File (“FMSF”) #8IR09 - has been determined to be eligible for the National Register by the Florida SHPO. Evidence of the presence of Paleo-Indians, extinct species, possibly hunting weapons, and an authenticated prehistoric art etching may make this site a potential “World Site.”

The Gifford Bones Site. This site is located at the North Relief Canal/Houston Creek, and is recorded as FMSF #8IR07 and #8IR08. FMSF #8IR07 is noted as “inside of drainage ditch” where bones of ground sloth, camel, mastodon and other animals were found. At FMSF #8IR08 a stemmed flint projectile point was “[d]ug out of [the]top of ... brown sand in [the] new canal north of Gifford ...”. Rouse

see 36 C.F.R. § 61.6(f), but whether a locality is certified has no bearing on the Section 106 process and clearly is not a prerequisite to being invited to join in a Section 106 consultation.

(1951) at 171. This narrow canal on both the west and east sides of the railroad bridge and Old Dixie Highway Bridge has yielded fossilized bones for decades.

Since it did not identify these significant historical resources in the course of the Section 106 process, FRA failed to assess whether project construction would affect these resources by disturbing *paleo* artifacts lying beneath the surface; whether vibration from increased freight and new passenger operations could damage those artifacts; and whether the lateral expansion of active rail operations would foreclose or hinder future artifact recovery efforts. Likewise, the DEIS failed to address ways to avoid, minimize or mitigate any adverse effects on these resources.

In addition, the DEIS fails to identify two affected architectural resources within Indian River County. Thus, nothing is said in the document about the Old Town Sebastian Historic District East or Old Town Sebastian Historic District West. There are over 40 contributing sites or buildings in these two districts, both of which are listed on the National Register. By failing to identify these districts, the DEIS neglected to mention that the FECR corridor bisects them, or to account for the contextual effects (such as noise, vibration, safety and visual impacts) that increased rail traffic associated with the Proposed Project would have on them. Nor did it address the measures that could be implemented to address those effects.

The omissions from the Section 106 Historic Resources analysis noted in these comments provide a few examples of the deficiencies resulting from the exclusion of local authorities from the Section 106 consultation. It is highly likely that additional resources located within other jurisdictions along the corridor were also overlooked as a result of the exclusionary consultation process that was employed. For that reason, FRA should reinstate the Section 106 consultation by extending invitations to all affected local authorities and other parties entitled to participate under the NHPA Regulations.

9. Section 4(f): The Section 4(f) Evaluation Failed to: Identify Significant Resources; Evaluate How the Proposed Project Would Use Those Resources; Whether There are Any Feasible and Prudent Alternatives To Those Uses; and Whether All Possible Planning Has Been Taken to Minimize Harm.

Section 4(f) of the Department of Transportation Act of 1966, prohibits USDOT agencies, including FRA, from approving a project if it “uses” a Section 4(f) Resource¹⁴ unless (i) there is no prudent and feasible alternative to that use, and (ii) the project includes all possible planning to minimize harm to the Section 4(f) Resource. Pub. L. 89-670 (1966) (now codified at 49 U.S.C. § 303(c)). A project’s “use” of a Section 4(f) Resource can either be direct, by physically impacting a resource, or “constructive”, when a project’s proximity impacts are severe enough to impair a

¹⁴ Section 4(f) protects the following resources: publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge or site). 49 U.S.C. § 303(c).

Section 4(f) Resource. Regulations codified at 23 C.F.R. Part 774¹⁵ and the FRA NEPA Guidance establish the process for FRA's compliance with Section 4(f).

As discussed in the Board's Section 106/Historic Resources Comment above, FRA failed to consult with local governments in the Section 106 process, and as a result, failed to identify in the DEIS significant historic resources listed on the National Register. These historic resources are protected Section 4(f) Resources, and the potential for the Proposed Project to "use" them must be assessed in the Section 4(f) Evaluation. *See* 23 C.F.R. § 774.11((e), (f). In particular, the Section 4(f) Evaluation must assess whether there are prudent and feasible alternatives to any use of these resources, and ensure that the Proposed Project includes all possible planning to minimize harm to them. Without correcting these substantial omissions -- and addressing any and all other Section 4(f) Resources that were overlooked in the analyses performed thus far -- FRA may not approve the Section 4(f) Evaluation.

10. Coastal Zone Management Act Consistency: The DEIS does not Provide a Basis for Determining Consistency with the Florida Coastal Zone Management Program.

The Florida Coastal Management Program ("FCMP"), codified in Chapter 380, Part II of the Florida Statutes, has been approved by the U.S. Department of Commerce pursuant to the Federal Coastal Zone Management Act ("CZMA"), 16 U.S.C. § 1451 *et seq.*, in 1982. 7 Fed. Reg. 47056 (Oct. 22, 1982). As a result, under the CZMA all federal activities affecting a coastal use or resource in Florida, including the provision of RRIF funding, must be consistent with the FCMP "to the maximum extent practicable." *Id.*; 16 U.S.C. §§ 1456(c)(1)(A), (c)(2); 15 C.F.R. § 930.50. The Florida Department of Environmental Protection ("FDEP") is responsible for evaluating whether federal activities are consistent with the FCMP, and must either concur or object to a consistency certification submitted for the Proposed Project. 15 C.F.R. §§ 930.62, 930.63. While FRA may intend for FDEP to rely on the information provided in the DEIS in making this determination, it is so lacking in substance as to preclude FDEP from relying upon it.

There is no meaningful discussion in the DEIS of whether and how the Proposed Project is consistent with the 24 statutory programs that comprise the FCMP. Instead, the document presents a "Draft Consistency Determination" consisting of Table 5.2.5-1, DEIS at 5-65, that includes a column with only the most cursory discussion of consistency. One example well illustrates this point. The FCMP identifies Chapter 267, Historical Resources as an "enforceable policy" for purposes of federal consistency. That statute declares that "[t]he rich and unique heritage of historic properties in this state, representing more than 10,000 years of human presence, is an important legacy to be valued and preserved for present and future generations." Accordingly, state agencies are directed to avoid taking or assisting in any action that would substantially alter in a way that

¹⁵ While the Section 4(f) Regulations are promulgated by FHWA and FTA, FRA has recognized them in the DEIS as being applicable to the Proposed Project. *See, e.g.*, DEIS at 6-3.

would adversely affect the character, form, integrity, or other qualities which contribute to [t]he historical, architectural, or archaeological value of [a historic] property” unless there is “no feasible and prudent alternative” and timely steps are taken either to avoid or mitigate the adverse effects, or to undertake an appropriate archaeological salvage excavation” F.S. Sec. 267.061. Table 5.2.5-1 dismisses any concerns with respect to this policy with the statement that “[b]ased on the information available, the Project would have no adverse effect on archaeological sites along the N-S corridor.” DEIS at 5-68. However, as discussed in the Board’s Section 106/Historic Resources Comment above, the cultural resources analysis presented in the DEIS was prepared without any meaningful consultation with local authorities, and entirely missed several significant historic resources in Indian River County alone. Since the conclusion set forth in Table 5.2.5-1 is not backed up by the facts, it provides no basis for a determination that the Proposed Project is consistent with this enforceable policy. The treatment of other enforceable policies in Table 5.2.5-1 is equally conclusory and unsubstantiated. As a result, the consistency analysis presented in the DEIS cannot serve as a basis for a determination of consistency with the FCMP.

11. Consistency with Scoping: The Analyses Committed to in the Scoping Report are Absent from the DEIS

In order to assure that the scope of a DEIS covers all matters of environmental concern identified by an agency in light of comments made by the public, the CEQ regulations clearly require that “[d]raft environmental impact statements ... be prepared in accordance with the scope decided upon in the scoping process.” 40 C.F.R. § 1502.9(a). Contrary to this mandate, the DEIS deviates in critical respects from commitments made by FRA in the scoping report issued on June 28, 2013, (Attachment 8.1.B to the DEIS, the “Scoping Report”).

For example, with respect to alternatives the Scoping Report indicates that “[t]he EIS will consider additional/alternative stations, including locating stations closer to city/government center[s]. This may include stations in Cocoa/Port Canaveral, Fort Pierce, Melbourne, Port Canaveral, Stuart, St. Lucie, and other cities along the Proposed Project corridor. *The EIS will also consider alternative rail alignment locations west of the current corridor, including parallel to the Florida Turnpike.*” Scoping Report at 18 (emphasis added). Notwithstanding these commitments, the DEIS offers no substantive analysis of either topic. The Board assumes that by promising consideration of alternative routes FRA intended to include in the DEIS something more than the application of AAF’s profit-based criteria to screen all alternative routes out of substantive environmental review. Yet as discussed above, such a substantive analysis was omitted from the DEIS. Moreover, no real consideration at all was paid to additional stations along the N-S corridor.

In addition, the Scoping Report commits that “[t]he EIS will assess the primary and secondary (or induced) social and economic impacts of the Proposed Project, which may include relocating residences and businesses, changes in business patterns, employment, local school enrollment, community infrastructure, property values, and tax valuation/revenues. *Both local and regional social*

and economic impacts will be analyzed.” Scoping Report at 20 (emphasis added). Nevertheless, as discussed in the Board’s Comment 6, above, the DEIS failed to include any analysis whatsoever of the *localized* impacts that construction and operation of the Proposed Project would have on the socioeconomic conditions in affected commercial and residential areas. This is a glaring omission in light of: (i) the disruption that will be caused by construction activities associated with a major infrastructure project cutting through vibrant downtown areas and residential neighborhoods; (ii) the permanent barrier that would be created by operation of a highly active rail line separating commercial and residential neighborhoods; and (iii) the potential socioeconomic impacts of traffic congestion on the roadways proximate to the grade crossings.

Another commitment in the Scoping Report is that “[t]he EIS will consider cumulative impacts of all resources, to assess the impacts of the Project in conjunction with other rail projects.” Scoping Report at 21. Yet as discussed in the Board’s Comment 2, above, contrary to that commitment the DEIS explicitly rejects consideration of the cumulative impacts of the Tri-Rail Coastal Link project, notwithstanding the availability of the information needed to do so.

The above examples illustrate how far the DEIS strayed from the scope FRA promised to prepare at the conclusion of the scoping process. The Board urges the agency to now keep those commitments in a supplemental DEIS.



Memorandum

To: Mr. Chris Mora

From: Ms. Jill Grimaldi, BCES

Date: November 14, 2014

Subject: All Aboard Florida

On September 19, 2014, the Federal Railroad Administration (FRA) released the Draft Environmental Impact Statement (DEIS) for the All Aboard Florida (AAF) high-speed rail project's Phase 2 (West Palm Beach to Orlando segment). FRA is serving as the lead Federal Agency for the review of the project. An Environmental Assessment (EA), presumably using similar methodology, was completed for the Miami to West Palm Beach segment (Phase 1) of the project in 2012. The FRA issued a Finding of No Significant Impact (FONSI) for Phase 1. A supplemental EA is under review (concurrently with the DEIS) for the revised location of a maintenance facility. The supplemental EA has no bearing on the DEIS review.

CDM Smith has conducted a thorough review of the DEIS. It should be noted that CDM Smith's review comments focus solely on the information presented in the DEIS that pertains to the portion of the Proposed Project within Indian River County's boundaries (including impacts on municipalities). The detailed summary is provided as **Attachment 1** to this memorandum.

After completing the review of the DEIS, CDM Smith has concluded that the evaluation has significant deficiencies when compared to the requirements of the National Environmental Policy Act, which outlines the requirements for an Environmental Impact Statement. The following presents a summary of the deficiencies. Additional discussion on each item is presented in Attachment 1.

Conclusions

Upon review of the DEIS, CDM Smith concludes that the document is incomplete and lacking in the following primary areas:

1. No impacts outside the FECR ROW were included.
2. As presented, the alternatives analysis appears to be insufficient.
3. Noise and vibration impacts assessment is not complete.
 - a. Vibration data is lacking.
 - b. General methodologies were used instead of the detailed assessment called for under the FRA manual.

- c. Noise levels are underestimated when compared to the existing conditions data collected by CDM Smith.
 - d. Future condition predicts a near doubling of noise levels.
4. Construction/temporary impacts are not addressed (other than minimal construction noise data).
5. Traffic evaluation is insufficient.
 - a. Number of crossings evaluated is not adequate.
 - b. Very significant queuing impacts will result from the Project that were not properly disclosed.
 - c. Traffic projections not based on actual traffic counts kept by Indian River County (updated annually).
 - d. AM peak not included.
 - e. Delay and queuing calculations are unclear.
 - f. RTC model results do not include impacts to at-grade crossings or the results of multiple trains at rail crossings.
 - g. No mention of future greenway plans (for bicycle and pedestrian use).
 - h. No data given on the projected emergency vehicle impacts for at-grade crossings; no indication of the local emergency routes that were input into the RTC model to render a solution on possible delay impacts.
6. Wetlands analysis is incomplete. Evaluation must include potential impacts resulting from improvements made at crossings outside of the existing ROW.
7. Threatened and Endangered Species analysis is incomplete. Evaluation must include potential impacts resulting from improvements made at crossings outside of the existing ROW.
8. EJ requirement for community outreach is insufficient; specifically, outreach to disadvantaged communities was not adequate.
9. Regarding Coastal Zone Management, enforceable policies 553 and 597 were not addressed.
10. Cultural Resource evaluation is grossly lacking.
 - a. No mention was made of the historic districts or dozens of historic sites.
 - b. Local governments/groups/individuals as Section 106 Consulting Parties.
 - c. No archaeological survey appears to have been conducted for portions of the project APE.
 - d. No vibration analysis information provide as it pertains to cultural or archaeological sites.

In conclusion, CDM Smith believes that the evaluation included in the DEIS is incomplete and recommends that a supplemental DEIS be required prior to issuance of a Record of Decision by the FRA.

Mr. Chris Mora
November 14, 2014
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cc: Dylan Reingold
Kate Cotner
Jane Wheeler

Executive Summary

Upon review of the DEIS, CDM Smith concludes that the document is incomplete and lacking in the following primary areas:

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3. Noise and vibration impacts assessment is not complete.
 - a. Vibration data is lacking.
 - b. General methodologies were used instead of the detailed assessment called for under the FRA manual.
 - c. Noise levels are underestimated when compared to the existing conditions data collected by CDM Smith.
 - d. Future condition predicts a near doubling of noise levels.
4. Construction/temporary impacts are not addressed (other than minimal construction noise data).
5. Traffic evaluation is insufficient.
 - a. Number of crossings evaluated is not adequate.
 - b. Very significant queuing impacts will result from the Proposed Project that were not properly disclosed.
 - c. Traffic projections not based on actual traffic counts kept by Indian River County (updated annually).
 - d. AM peak not included.
 - e. Delay and queuing calculations are unclear.
 - f. RTC model results do not include impacts to at-grade crossings or the results of multiple trains at rail crossings.
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6. Wetlands analysis is incomplete. Evaluation must include potential impacts resulting from improvements made at crossings outside of the existing ROW.
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9. Regarding Coastal Zone Management, enforceable policies 553 and 597 were not addressed.

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- a. No mention was made of the historic districts or dozens of historic sites.
- b. Local governments/groups/individuals as Section 106 Consulting Parties.
- c. No archaeological survey appears to have been conducted for portions of the Proposed Project APE.
- d. No vibration analysis information provide as it pertains to cultural or archaeological sites.

In conclusion, CDM Smith believes that the evaluation included in the DEIS is incomplete and recommends that a supplemental DEIS be required prior to issuance of a Record of Decision by the FRA.

DRAFT

Section 1

General Comments

1.1 Background

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970. NEPA establishes “national environmental policy and goals for the protection, maintenance, and enhancement of the environment and provides a process for implementing these goals within the federal agencies.”

From the U.S. Environmental Protection Agency’s (U.S. EPA) NEPA website, “Title I of NEPA contains a Declaration of National Environmental Policy which requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony. Section 102 requires federal agencies to incorporate environmental considerations in their planning and decision-making through a systematic interdisciplinary approach. Specifically, all federal agencies are to prepare detailed statements assessing the environmental impact of and alternatives to major federal actions significantly affecting the environment. These statements are commonly referred to as environmental impact statements (EIS).”

On September 19, 2014, the Federal Railroad Administration (FRA) released the Draft Environmental Impact Statement (DEIS) for the All Aboard Florida (AAF) high-speed rail project’s Phase 2 (“Proposed Project”). FRA is serving as the lead Federal Agency for the review of the Proposed Project. An Environmental Assessment (EA), presumably using similar methodology, was completed for the Miami to West Palm Beach segment (Phase 1) of the project in 2012. The FRA issued a Finding of No Significant Impact (FONSI) for Phase 1. A supplemental EA is under review (concurrently with the DEIS) for the revised location of a maintenance facility. The supplemental EA has no bearing on the DEIS review.

CDM Smith has conducted a thorough review of the DEIS. It should be noted that CDM Smith’s review comments focus solely on the information presented in the DEIS that pertains to the portion of the Proposed Project within Indian River County’s boundaries (including impacts on municipalities).

1.2 General Comments

The DEIS limits the review of impacts to those activities being planned within the existing right-of-way (ROW) for the Florida East Coast Railroad (FECR), when in fact, the more significant local impacts would fall outside of the corridor at the individual roadway crossings (traffic control and signalization improvements) and bridge crossings. In general, FECR maintains a 100 foot ROW throughout Indian River County. CDM Smith was notified during the diagnostic field evaluation that intersection improvements would include the addition of 100 foot long traffic separating medians on each side of the crossing to address safety requirements for high speed rail projects. This adds up to 200 feet of additional impacts at each of the intersections where the median installation is feasible for the given crossing geometry (exit gates/4-quadrant gates will be used where medians cannot be accommodated). The addition of these medians, at many of the crossings, will require road widening, filling of stormwater swales/ditches, relocation of overhead and underground utilities and potential traffic impacts from shortened queue in turn lanes.

The diagnostic report provided via email by Indian River County staff outlines some of the intersection improvements being proposed; however, this information is not presented in the DEIS. Therefore, the DEIS should be considered incomplete due to the lack of information addressing impacts outside of the ROW.

The DEIS is also silent on the potential impacts from construction activities. The document does not identify construction lay-down or staging areas, information on construction sequencing or duration, dust control measures, or the potential noise and vibration impacts to archaeological or historical sites along the corridor within the Area of Potential Effects (APE).

In addition to the missing construction and intersection improvement impacts, the following general comments were noted during CDM Smith's review:

1. The presentation of the Miami to West Palm Beach segment (Phase 1) separate from the remaining segments appears to be a clear case of segmentation (i.e. Phase 1 was reviewed and approved independently of and ahead of Phase 2). For a project to be segmented under NEPA, AAF would have had to demonstrate "Independent Utility" in order for project components to be reviewed and considered separately. CDM Smith is not convinced AAF has demonstrated "Independent Utility," and would request further documentation from FRA that this process was undertaken in accordance with NEPA requirements.
2. AAF applied for federal funds from FRA through the Railroad Rehabilitation and Improvement Financing (RRIF) program. Compliance with the NEPA is a prerequisite for approval of the RRIF loan application. CDM Smith also reviewed the RRIF loan application for the purpose of confirming consistency between the documents.
3. The Proposed Project as analyzed in the DEIS is assumed to include 5 additional passenger train sets; 16 round-trip trips (32 one-way trips). The DEIS does not account for the increase in freight traffic that is noted in the RRIF loan application or the potential for increased passenger rail traffic over time.
4. The U.S. Coast Guard (USCG) cooperating agency acceptance and jurisdiction determination are included but the U.S. Army Corps of Engineers (USACE) and Federal Aviation Administration (FAA) documents are not included.
5. The DEIS draws conclusions throughout without adequate justification. For example, the document concludes that no significant localized traffic impacts would result from operation of the Proposed Project; however, Appendix 3.3 C indicates that queues stretching for more than a mile would occur at least 4 times an hour at certain area intersections. Such impacts, which could occur all along the corridor of the Proposed Project, were not appropriately addressed.

1.3 Indirect and Secondary Impacts

The DEIS concludes that there will be "no induced growth" as a result of the Proposed Project; however, there are direct statements to the contrary within the DEIS. For example, Table 5.2.5-1 states that, "The project would provide linkages between regional and statewide multi-modal transportation networks and promote commercial development within the vicinity of transit systems" and "The Project would have an indirect beneficial effect on future business opportunities and would likely promote tourism in the region." Section 5.1.2.3 states "The three proposed stations for the WPB-M Corridor (in West Palm Beach, Fort

Lauderdale and Miami) may result in secondary effects such as creating potential for development and redevelopment outside the development directly associated with the stations. This additional development may also create impacts such as induced traffic generated by those developments.” This statement contradicts Section 5.2.1.3, which states “The areas surrounding the proposed stations are already developed; the Project is not anticipated to result in induced growth or development that could generate additional emissions of criteria pollutants, and would not result in indirect or secondary effects to air quality.”

1.3 Permitting and Regulatory Reviews

The DEIS fails to include documentation that USACE and FAA agreed to act as cooperating agencies for purposes of reviewing the Proposed Project. The NEPA-required cover page of the DEIS lists USACE, USCG and FAA as cooperating agencies. A “cooperating agency” is an agency that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) and will typically will have some responsibilities for the analysis related to its jurisdiction or special expertise (See 40 CFR 1501.6 and 40 CFR 1508.5). Page 1-5 of the DEIS indicates that USACE was asked to participate as a cooperating agency and USACE agreed; there is a similar statement regarding FAA’s involvement on page 1-6. No cooperating agency documentation was provided for either the USACE or the FAA.

An EIS should include detailed statements concerning the environmental impacts of the proposed project; not bypass this obligation to other permitting processes. On October 7, 2014, the USACE issued a notice stating that, “The applicant has estimated that the north/south component of the proposed railway would occur within the existing FECR ROW and would only require minor impacts to waters of the United States (wetlands and surface waters) at various locations along the corridor. The Corps has initially determined these minor improvements could be verified in accordance with the Corps’ Nationwide Permit (NWP) program. Verification by NWP would not require further public coordination.” The notice further stated that USACE will use the final EIS as the NEPA document for issuance of the NWP.

Additional discussions with the USACE Project Manager indicated that authority for review of the proposed bridge improvements and replacements along the North-South (N-S) segment would be delegated to the USCG, in accordance with Section 9 of the Rivers and Harbors Act. Section 9 states that a USACE permit may still be required pursuant to Section 404 of the Clean Water Act if the construction of a bridge over a navigable waterway requires the discharge of dredged and/or fill material into waters of the United States. Without preliminary design plans for the Proposed Project, it is difficult to evaluate the extent of required dredge and fill activities, and therefore to what extent USACE involvement is required.

In addition to USACE and USCG authority, local permits will be required for the proposed bridge replacements and expansions. The Indian River Farms Water Control District (IRFWCD) maintains the North, Main and South Relief Canals. The referenced canals are listed in Appendix 5.3.6-B6 of the DEIS (ESA Section 7 Consultation 20140129) to be upgraded (not replaced). CDM Smith spoke with the superintendent of the IRFWCD, who indicated that there has been no contact or coordination to date between the AAF project team and IRFWCD regarding permit or maintenance requirements. IRFWCD further indicated that the existing support for the North Relief Canal Bridge is in a state of disrepair with significant washouts and undermining being observed on the southern support.

Section 2

Affected Environment and Environmental Consequences

The majority of the existing environmental conditions and impacts are summarized in Sections 4 and 5 of the DEIS, and CDM Smith's review of those two sections is presented below.

2.1 Traffic and Transportation Impacts

2.1.1 Railroad Crossings Selected

The DEIS failed to consider a representative sample of railroad crossings in Indian River County and thus the impact has not adequately been analyzed or addressed. Two out of 30 crossings in Indian River County were selected based on the largest 2012 Average Annual Daily Traffic (AADT) on roads crossing the rail line. Oslo Road had a 2012 AADT of 14,400 and 19th Place an AADT of 11,500. Although these roads have the largest AADT, they may not necessarily have the longest delay and queue caused by train activity. Two out of 30 intersections represents an inadequate sample size.

2.1.2 Traffic Projections

The DEIS failed to follow FDOT guidance by not conducting actual intersection turning movement counts and not conducting an analysis using those actual counts. The DEIS estimated peak hour intersection traffic at the two Indian River County crossings by applying a K (daily traffic occurring in the peak hour) and D (directional distribution) factor to the AADT values. AAF then applied a turning movement volume distribution (left, through, and right) to the PM peak hour traffic to estimate intersection traffic. The DEIS failed to calculate AM peak hour conditions completely. This methodology, according to the Railroad Crossing Analysis report for All Aboard Florida, is found in the 2009 Florida Department of Transportation (FDOT) Quality/Level of Service Handbook. CDM Smith's concern with this methodology is that the estimated peak hour intersection traffic volumes could be significantly different than actual traffic, and that the differences are compounded when a growth rate is applied. It would be more appropriate to conduct actual intersection turning movement counts and conduct analysis using those actual counts (see FDOT 2014 Project Traffic Forecasting Handbook Ch.6, Section 6.5 paragraph).

Year 2016 and 2036 traffic projections were based on a one percent annual growth rate. The report states this was based on historical traffic data and is conservative because much of the corridor has seen negative growth over the last several years. It would be more appropriate to utilize the regional Travel Demand Model to project future traffic conditions.

2.1.3 Delay and Queuing Analysis

The DEIS does not properly analyze the delay and queuing calculations. Table 3-10 in the rail crossing report presents some confusing information. First, the automobile delay and queue calculations caused by a passenger and freight train are almost the same, but CDM Smith understands that a freight train is much longer and will create a longer "gate down" condition. Second, CDM Smith is not sure how the delay and queue calculations are done. At Oslo Road and US 1 the eastbound delay and queue at the intersection is

much longer than at the railroad crossing. For example, the year 2036 eastbound delay at the intersection is projected to be 656.2 seconds (10 minutes 56 seconds) (passenger train) versus 87.5 seconds at the railroad crossing. It seems that eastbound traffic would be delayed a similar amount of time whether it is due to the rail gate down condition or the traffic signal at US 1 being preempted by the train. Furthermore, the northbound left and southbound right turn delays and queues for traffic turning from US 1 onto Oslo Road are not shown. It is assumed that the northbound and southbound through movements on US 1 will have a green indication while a train is crossing Oslo Road, but all other movements at the US 1 and Oslo Road intersection oriented towards westbound Oslo Road will be prohibited. This could be substantial and create safety problems at the intersection. For example, the northbound US 1 dual left turn lane will likely reach its capacity of 26 vehicles or approximately 650 feet while a train is crossing Oslo Road such that excess vehicles are blocking the inside through lane. As the left turn lane demand increases, motorists may maneuver unsafely in and out of it as they attempt to travel westbound. Additionally, the southbound US 1 right turn lane at Oslo Road is approximately 150 feet long and can store approximately six vehicles. While a train is crossing Oslo Road, this right turn lane will likely reach its capacity. Finally, it is not clear where the westbound projected queue at the Oslo Road and US 1 intersection would be. For example, at that intersection, the westbound queue is projected to be 4,099 feet in 2036. At the FEC railroad crossing the westbound queue is projected to be 1,594 feet. If the 4,099 foot queue would consume the US 1 lanes feeding westbound Oslo Road, the impact on US 1 would be significant.

As the results appear flawed, the FRA should review the Synchro output to determine assumptions and more details about their methodology. It is not clear where or if the consultant got the actual traffic signal splits and offsets (traffic signal cycle lengths and timing).

The DEIS fails to give an adequate delay and queuing analysis for two trains crossing simultaneously. The results of the delay analysis shown in Table 3-10 and 3-11 seem to represent one train crossing. CDM Smith understands that two trains could cross a road consecutively and that would lengthen the delay and queue. In effect, back-to-back trains crossing would compound the impact even more because queues from the first train would not have a chance to dissipate before the second train arrived.

CDM Smith believes that FRA must reexamine the appropriateness of the weighted average shown in these tables. The weighted average of delay, queue, and LOS does not provide meaningful information.

The DEIS failed to provide any mitigation for the long delays created by the rail crossing delays. The mitigation could include improvements to US 1 or the perpendicular crossing streets in the form of additional turn lanes, additional through lanes, or improved traffic signal equipment. Other potential mitigation could include improvements to the overall street network to relieve congestion caused by train crossings, or grade separating some of the railroad crossing to provide relief.

2.1.4 Local Traffic Impacts

The frequency projections of freight and passenger trains along the N-S Corridor identified in the DEIS would be anticipated to cause delays at one or multiple at-grade crossings simultaneously through Indian River County, however the DEIS states that there may be minor increased traffic delays at existing at-grade crossings. The report also states there may be delays to trains on a "shared use" environment (both passenger and freight service) which will be controlled by the Train Dispatcher as shown on pages 3-4 and 3-5. There is mention of installing additional passing tracks and from our understanding there are no existing passing tracks within Indian River County. With both the frequency projections of freight and passenger trains along the N-S Corridor it is safe to assume delays could increase at one or multiple at-

grade crossings simultaneously through Indian River county. The train speeds as shown on Tables 5.1.3-1 & 5.1.2-4 for both passenger and freight appear to assume the speeds will be constant throughout the N-S Corridor and/or counties. This assumes all the existing and proposed track length through the counties can accommodate the stated speed and that no trains will require crossing over to the adjacent track or stopping within Indian River County.

The DEIS fails to use the proper model for impacts to at-grade crossings or the results of multiple trains at rail crossings and fails to adequately address mitigation for such impacts. The DEIS does state using Rail Traffic Controller (RTC) model is an acceptable method to predict train movements; however, the report stated results of this model for bridge closures over navigable waterways but not for impacts to at-grade crossings or the results of multiple trains at rail crossings. The software will provide time-table and track occupancy results and animation (see www.berkelysimulation.com) and take into account speed. The report does mention the addition of passing tracks and or universal crossovers (pg 3-37) to accommodate trains passing each other; however, there are no indications where these may occur. The DEIS does not present design plans to identify passing options. The DEIS does state there will be adverse environmental effects to at-grade crossings and that each crossing will be reviewed and mitigation measures installed to reduce these impacts (DEIS S-8). Again there are no design plans showing these mitigation measures or what the impact will be to the local authorities for the capital investment or additional maintenance costs. In addition, it is anticipated that there will be possible footprint increases to the existing roadway at intersections and possible additional traffic pre-emption signal heads.

2.1.5 Pedestrian and Bicycle Impacts

The DEIS overlooks impacts on bicycle and pedestrian traffic. Many of the railroad crossings are located in heavily populated and densely developed areas that generate a substantial amount of bicycle and pedestrian traffic. The impact to this growing segment of the traveling population has not been addressed. The DEIS does state (section 3.3.1) that "pedestrian at-grade crossings would be upgraded to enhance safety." The DEIS does not address additional risks to pedestrians crossing the tracks outside of grade crossings as a result of increased freight and new passenger rail traffic traveling at high speeds on two tracks. There are no future projections of greenways stated or statements that discussions have been made to local Transportation/Metropolitan Planning Organizations about their projections for bicycle/pedestrian volumes and about their future plans for greenways.

2.1.6 Emergency Vehicle Mobility

Without the appropriate data, the DEIS does not adequately address the impact on emergency response vehicles. Indian River County has a significant number of hospitals and fire stations that will be impacted by additional railroad crossing blockages. Fire truck and ambulance movements are anticipated to be more inhibited when trains are moving through the grade crossings due to increase rail freight and passenger trains. As stated earlier, the DEIS does state the applicant used an RTC model (see section 4.3.4 on what the software will provide) for projected train movements; however, there is no data given on the projected impacts to at-grade crossings. In addition, there was no indication the local emergency routes were input into the RTC model to render a solution on possible delay impacts.

2.2 Noise and Vibration Impacts

The DEIS failed to include an in-depth assessment of the noise and vibration impacts caused by the Proposed Project. High Speed Ground Transportation Noise and Vibration Impact Assessment

(DOT/FRA/ORD-12/15, September, 2012) provides the basic guidance and procedures for the assessment of potential noise and vibration impacts from proposed high-speed ground transportation projects. This manual is intended for projects with train speeds of 90 to 250 mph. The manual is similar to the FTA Transit Noise and Vibration Impact Assessment manual (which is intended for projects with train speeds up to 90 mph). An important characteristic of the noise from high-speed trains that is absent from the DEIS noise analysis is analysis of the onset rate of the sound signature. Onset rate is the average rate of change of increasing sound pressure level in decibels per second during a single noise event. The rapid approach of a high-speed train is accompanied by a sudden increase in noise for a receiver near the tracks. Based on the absence of discussion of onset rate and use of the FTA manual figure showing typical A-weighted maximum sound levels instead of the FRA manual showing typical A-weighted levels of high-speed train sources, indicates that the noise analysis relies more on the FTA manual than the more pertinent FRA high-speed train noise manual.

The DEIS lacks calculation details and quantitative support for its impact assessment as required by the Federal Railroad Administration manual. In general, the impact assessments are lacking calculation details and quantitative support. The Proposed Project is well beyond the initial planning stages. Therefore, these calculations and support documentation should be required as part of the DEIS analysis.

The DEIS fails to include an evaluation of noise and vibration impacts on subterranean archaeological sites and vertical historical sites along the N-S Corridor. The FRA manual references Section 106 and states with regard to historic and archaeological sites, "Special protection provided by law. Section 4(f) of the DOT Act and Section 106 of the National Historic Preservation Act come into play frequently during the environmental review of transit projects. Section 4(f) protects historic sites and publicly-owned parks, recreation areas and wildlife refuges. Section 106 protects historic and archaeological resources." The DEIS does not include a complete list of the subterranean archaeological sites and vertical historical sites along the N-S Corridor. It therefore does not evaluate the Proposed Project's noise and vibration impacts on the subterranean archaeological sites and vertical historical sites along the N-S Corridor.

Moreover, AAF made no attempt to collect representative noise data at a representative sampling of intersections along the corridor, as is required by Section 106 of the NHPA.

Specifically, CDM Smith noted the following deficiencies:

1. The DEIS relied on an inaccurate methodology for determining existing noise levels. The FRA manual recommends that noise be considered in terms of divergence, absorption/diffusion and/or shielding at a distance of 50 feet from the source. Existing noise levels at 50 feet were not monitored in the field, but rather estimated based on the FTA Guidance Manual based on population density or proximity to an interstate highway, airport, or an existing rail line. No figures are presented to show the existing ambient noise levels in the Project Study Area derived from these different estimated noise levels. Existing ambient noise levels would be helpful in comparing existing and future build impacts at sensitive land uses and historic properties. Measurements of existing ambient noise levels, especially at sensitive land uses and historic properties, should have been used as the combination of various transportation and urban noise sources can be complex. See Appendix B of the FRA manual which discusses options for determination of existing noise levels ranging from full measurement (more accurate) to tabular lookup (less accurate).

- a. Outdoor measurements were collected by CDM Smith using a Type 1 SoundPro DL sound level meter in October 2014. The noise meter was placed 5 feet above the ground level. Noise levels were measured at each location and the equivalent steady-state sound level (L_{eq}) was collected for each site logged in one minute intervals. One minute data log is important to determine any aberrant noise events at each site. Noise levels were measured at six locations within the Project Study Area, as shown in **Table 2-1**. The purpose of the ambient noise level measurement was to quantify the existing acoustic environment and provide a baseline for assessing the impact of future noise levels on the receptors in the vicinity of the proposed action resulting from the Proposed Project. No documentation of field measurements collected by AAF were presented in the DEIS.

Table 2-1 October 2014 Noise Data Collected by CDM Smith

Crossing Location	Measured (various time periods)			Ambient Leq	Train Event Leq	Train Horn Lmax
	Lmax	Leq	Lmin			
Sebastian Roseland Rd	107	79	48	71	88	107
Sebastian Schumann Dr	104	74	42	64	88	104
Vero Beach 45th St	101	71	47	64	83	101
Vero Beach 23rd St	105	78	52	64	86	105
Vero Beach 4th St	98	76	53	68	86	98
Vero Beach Highland Dr	106	80	52	67	89	106

- b. People generally perceive a 10 A-weighted decibel (dBA) increase in a noise level as a doubling of loudness. For example, a 70-dBA sound will be perceived by an average person as twice as loud as a 60-dBA sound. People generally cannot detect differences of 1 dBA to 2 dBA. Differences of 3 dBA can be detected by most people with average hearing abilities. A 5-dBA change would likely be perceived by most people under normal listening conditions.
- c. The DEIS underestimates the noise impacts from the Proposed Project. Table 5.2.2-9 of the DEIS, indicates that the Proposed Project would result in daytime noise levels (Leq) ranging from 62.1 to 63.9 dBA close to at-grade crossings (average 62.5 dBA) and ranging from 61.4 to 63.5 dBA along the mainline tracks. The 2014 ambient noise levels (L_{eq}) collected by CDM Smith in the field ranged from 61 to 71 dBA and 83 to 89 dBA during a train event for the existing condition. These values are higher than the projected background conditions used in the DEIS. The DEIS does not address different noise sources and combining of noise sources such as traffic noise, freight noise, and passenger train noise to calculate the increase in the noise levels from the Proposed Project **which results in underestimation of noise levels from the project.**
- d. The L_{dn} ranged from 62.2 to 64.1 at-grade crossings and 61.6 to 63.6 along the mainline. The future noise levels listed in Table 5.2.2-10 shows the existing L_{dn} noise levels are 75 dBA with the project noise at 64 dBA in Indian River County. Comparing existing L_{dn} from the existing levels of 62.2 to 64.1 to future levels of 75 dBA, **there is a 10 dBA increase which equates to doubling of loudness.**
2. The DEIS fails to include existing vibration levels in the Project Study Area to compare to future vibration levels. Similarly, generic vibration levels at various distances are only shown for rubber-tired vehicles traveling at 30 miles per hour (mph), light rail traveling at 50 mph, and heavy rail traveling at 50 mph. As suggested by the DEIS, the vibration source in the E-W Corridor is SR 528, where vehicles in the Project Study Area will be traveling at speeds exceeding 30 mph. According to a later reference on

page 5-43, freight trains observed for the Amtrak EA had speeds ranging from 30 to 49 mph. No figures are presented to show the existing vibration levels in the Project Study Area that were used to compare against the future vibration levels.

3. The estimated noise levels for SR528 presented in the DEIS are based on an incorrect classification. The DEIS shows that FRA used FTA noise levels for interstate highways to estimate noise levels near SR 528; however, SR 528 is a state road, not an interstate highway.
4. The DEIS fails to give a detailed explanation of the noise levels associated with both idling locomotives and moving locomotives. The DEIS mentions noise from idling locomotives and moving trains; however, it does not explain what these noise levels are and how the Ldn from moving and idling trains at the VMF were calculated to be 68.8 dBA at 50 feet.
5. The DEIS fails to provide a basis for its declared correction factors for the Proposed Project. On page 5-41, the DEIS states that there is a correction factor for passenger trains of 4 dBA. Moreover, on page 5-50, the DEIS states that there is a correction factor for passenger trains of 10 VdB. These figures, however, are referenced for passenger trains on elevated tracks. No basis is provided for these factors.
6. The DEIS did not adequately account for the noise and vibrations of the construction equipment or the noise and vibrations that occur when you use two pieces of equipment simultaneously. Construction noise is evaluated for the two loudest pieces of equipment. It is not clear whether it was assumed that both pieces of equipment will be operating concurrently. Numerous pieces of equipment operating concurrently may contribute substantially to the overall construction noise, even if the individual equipment may not be as loud as the two selected equipment. The DEIS should have described the other typical construction equipment and the number of various equipment operating simultaneously, and based the analysis on the combined noise from that equipment.
7. The DEIS fails to address the increase in future traffic noise along the Proposed Project corridor. The DEIS references existing noise from SR 528 and other roadways as the dominant existing noise source; however, the increase of traffic along these corridors that will occur by the time the Proposed Project is in full operation (future condition) is not documented. In the DEIS, the total future noise level is calculated by adding the Proposed Project noise level to the existing highway noise level, failing to account for the fact that population growth will result in increased traffic noise in the Project Study Area in the horizon year when the Proposed Project is fully operational. Increases in future traffic noise along Project Study Area travel corridors are not addressed in the DEIS. See the FRA manual, Chapter 3, Noise Impact Criteria, which discusses relationship of project noise impacts to ambient noise levels (the higher the ambient noise level, the lower the noise level increase before onset of impact). The document also does not discuss the freight and passenger rail growth and long term impacts.
8. The DEIS fails to analyze the increase in freight traffic in the alternatives analysis. The DEIS analyzes the increase in freight operation for the No-Action Alternative only. The change in freight operation should have been addressed for the Project Alternatives, as required by NEPA for an EIS.
9. The DEIS failed to discuss the quantitative effects of speed and type of locomotive on the noise and vibration levels. The DEIS indicates that noise and vibration levels were calculated for different train speeds. The document should have discussed the effect of the referenced speed and type of locomotive (i.e., freight vs. high speed passenger train) on noise and vibration levels, such as calculating high speed train onset rate (startle effect) and aerodynamic noise (see FRA Manual).

10. The DEIS did not properly analyze the noise and vibration impacts to land uses, historical structures or archeological resources that are within 600 feet of the Proposed Project's Rail Corridor. Page 4-37 of the DEIS specifically states that the Project Study Area for vibration extends approximately 600 feet from the rail corridor; however, on page 4-122, the DEIS deviates from the 600 feet boundary and presented a vibration analysis for archaeological resources that was limited to the footprint of subsurface activities within the existing approximately 100-foot wide FECR ROW for the N-S Corridor.
11. The DEIS fails to disclose the total number of land uses that are sensitive to noise or vibration (a.k.a. sensitive receptors) currently being affected by existing noise levels. In Section 5.2.2.2, numbers of impacted sensitive receptors are presented for various project components. AAF should discuss the total number of sensitive receptors and ones that may already be impacted without the Proposed Project in the Affected Environment section (refer to FRA Manual).
12. The DEIS fails to adequately describe the noise and vibration mitigation. Section 7.2.4 indicates that AAF will implement mitigation measures as part of the project design; however, it is unclear what that mitigation would be, or what its effectiveness would be in addressing significant impacts.
13. The DEIS fails to include a documented mitigation analysis. Moderate and Severe impacts are identified in the DEIS, however, mitigation analysis is not documented. Noise barrier analysis or horn noise assessment using the FTA and FRA noise assessment manuals is not included in the DEIS. The FRA manual for high-speed rail projects is designed to complement the FTA manual. The High-Speed Ground Transportation Noise Spreadsheet Model has been developed in conjunction with the FRA manual for calculating noise from high-speed rail projects.

2.3 Air Impacts

The DEIS did not use the correct methodology to analyze the increase in vehicular emissions caused by the Proposed Project. The Methodology section on page 5-34 of the DEIS states that for vehicular emissions modeling, "all vehicles were assumed to be gasoline burning vehicles." The assumption is not used by the Federal Highway Administration (FHWA) and is not a U.S. EPA-recommended methodology for NEPA analyses [U.S. EPA, "Policy Guidance on the Use of MOVES2014 for State Implementation Plan Development, Transportation Conformity, and Other Purposes" (EPA-420-B-14-008, July 2014)]. The DEIS should analyze the vehicular emissions using the latest version of the U.S. EPA's Motor Vehicle Emissions Simulator (MOVES), MOVES2014 [Note that the older version, MOVES2010, is also acceptable. (79 FR 60343)]. The FRA should have obtained MOVES2014 input files from the Florida Department of Environmental Protection or FDOT for Florida vehicle fleet distributions, by geographic area, and run these to obtain accurate, up-to-date, and defensible emissions inventories for a representative mix of vehicle types and ages.

The DEIS fails to examine the negative localized impacts of air emission rates due to the Proposed Project. Tables 5.2-1 and 5.2.2 show the overall regional net benefit in annual mass air emissions due to the induced modal switch from passenger cars to train use. The text suggests that this benefit is not uniformly distributed across the state. The Miami to West Palm section of the project will receive most of the benefit, because that is where train stations are available to travelers; however, it is likely that Indian River County will suffer detriment because the Proposed Project will INCREASE annual mass air emission rates in its area. This is because Indian River County will have no train stations to remove on-road vehicle trips, but will have

increased emissions from passenger trains, induced additional freight trains, and greater idling at at-grade crossings. The Proposed Project's air emissions impacts specific to Indian River County should be modeled and disclosed. The public should have complete information about impacts the Proposed Project will cause in some portions of the state so that other portions of the state can receive benefits.

The DEIS fails to address the Proposed Project impacts to the localized air quality. Potentially significant localized impacts would be expected to be associated with maintenance yards, terminals, and park-to-ride lots. The Proposed Project plans to have third-rail siding at three locations in Indian River County. If the purpose of the third track siding is to hold idling freight trains while the high-speed passenger trains passes, the DEIS should include modeling for these emissions, especially diesel particulate matter emissions. The DEIS should also address potential effects to sensitive receptors nearest these locations.

The intersection carbon monoxide analysis has been generalized from the 2012 Phase 1 studies. An up-to-date analysis with the latest traffic and emissions data is recommended to determine if a microscale dispersion models should be run for carbon monoxide concentrations at the worst-case at-grade crossing in Indian River County (FHWA Technical Advisory T 6640.8A). An analysis for the new one-hour nitrogen dioxide National Ambient Air Quality Standard (NAAQS) should be included. Although quantitative modeling is not required by FHWA Technical Advisory T 6640.8A, this new stringent NAAQS is a possible issue at congested intersections.

Section 5.2.1.4 Construction-Period Impacts evaluation lacks the detail required for an adequate DEIS. Among other things, the analysis should include a discussion of the length of the construction period along each segment, identification of areas where contaminated soils would be disturbed (and specific mitigation measures), identification of construction staging areas and their activities, description of and commitment to specific dust control measures, and an evaluation of exposure to diesel particulate matter emissions from construction equipment (FHWA Technical Advisory T 6640.8A).

Regarding DEIS Section 7.2.3 – Mitigation Measures, Air Quality, the discussion of mitigation for fugitive dust control is generic, and there is no mention of mitigation for diesel particulate matter emissions. Mitigation discussion is required under 40 CFR 1502.16(h). The section should identify the Best Management Practices that would be employed at staging areas and at construction sites. CDM Smith recommends also that AAF commit to use of construction equipment meeting U.S. EPA Tier 4 emissions standards, or to retrofitting equipment not meeting these standards with diesel particulate matter filters.

2.4 Coastal Zone Management

The DEIS speaks to the applicable coastal zone management statutes (Table 5.2.5-1) and concludes that the Proposed Project is consistent, but there is very little back-up for this conclusion. Additionally, Table 5.2.5-1 omits applicable, enforceable policies 553 (Building and Construction Standards) and 597 (Aquaculture). As in the rest of the DEIS, the assumption is made that all work will occur within the existing FECR corridor, which does not take into account intersection improvements, staging, noise barriers, stormwater management, etc.

The following excerpts from Table 5.2.5-1 are examples of unsupported statements:

1. "Chapter 163, Part II *Growth Policy; County and Municipal Planning; Land Development Regulation*: The Proposed Project would be consistent with local, regional, and state comprehensive plans.

Consistency with these plans has been included in the purpose and need criteria matrix used to develop the Action Alternatives.”

Comment: The DEIS fails to adequately address the Proposed Project’s consistency with Indian River County’s local Coastal Zone Element Plan. Under the Florida Coastal Management Program Guide, Chapter 163, Part II, Florida Statutes is an enforceable policy incorporated in the federally-approved FCMP. Chapter 163.3194 provides the legal status of comprehensive plans that have been adopted in conformity with the Coastal Zone Management Act. Therefore, Proposed Project must be consistent with the Indian River County 2030 Comprehensive Plan. There is no information provided in the DEIS specifying how the Proposed Project is consistent with this Comprehensive Plan. Also, the only planning consistency criterion used in the alternatives screening is “Consistency with plans of transportation agencies and landowners.” There is no reference to consistency with local plans in the discussion of purpose and need or alternatives.

2. “Chapter 252 *Emergency Management*: The Proposed Project would include the development of a passenger rail system within an existing rail corridor and along an existing highway ROW. The E-W Corridor would be located outside of the defined storm surge zones and hurricane evacuation areas for Brevard and Orange counties. Within the N-S Corridor the rail line would be located within Florida Division of Emergency Management-defined storm surge zones; however the development would occur entirely within the FECR Corridor and would be consistent with the existing transportation uses. While the proposed rail system would encourage regional connection as well as growth in the vicinity of the supporting stations, growth would be focused in previously developed areas and would be consistent with existing commercial and industrial land uses. Consequently, the Proposed Project would not affect the state’s vulnerability to natural disasters and would not affect emergency response and evacuation procedures. Further the Proposed Project would be consistent with the emergency preparedness policies within the East Central Florida and Treasure Coast SRPPs.”

Comment: The DEIS does not present any information regarding how the Proposed Project will affect emergency response and evacuation procedures. Under the Florida Coastal Management Program Guide, Chapter 252, Florida Statutes is an enforceable policy incorporated in the federally-approved FCMP. The statement that the Proposed Project would encourage growth contradicts other statements throughout the DEIS that the Proposed Project will not result in induced growth/development. Furthermore, the conclusion that because growth would occur in developed areas, vulnerability to natural disasters would not be affected is not true. Increased development, even in developed areas, can certainly affect emergency response and evacuation procedures by increasing response times and making evacuation more difficult.

3. “Chapter 259 *Land Acquisition for Conservation or Recreation*: The Proposed Project would likely result in beneficial impacts; compensatory mitigation would be required including the potential acquisition of environmentally endangered lands. Impacts to delineated wetlands would require mitigation as required by Section 404 Individual Permits. Consequently, while the implementation of the Proposed Project would remove wetlands from the N-S and E-W Corridors, compensatory mitigation would include the potential acquisition of environmentally sensitive habitat types.”

Comment: The DEIS does not acknowledge the potential negative impacts to Indian River County that could result from mitigation activities and loss of environmentally sensitive lands. There is no

explanation of what compensatory mitigation and/or acquisition of environmentally sensitive habitat types is envisioned elsewhere in the DEIS (should be included under “Mitigation Measures and Project Commitments” in Section 7). Furthermore, it’s not accurate to say that the Proposed Project would result in beneficial impacts. The Proposed Project would result in negative impacts, thereby requiring mitigation.

4. “Chapter 288 Commercial Development and Capital Improvements: The Proposed Project would have an indirect beneficial effect on future business opportunities and would likely promote tourism in the region.”

Comment: Again, this statement in the DEIS contradicts other statements in the DEIS that there will be no induced growth/development.

5. In addition to the unsupported statements, the DEIS states that the Clearinghouse determined that a positive consistency determination from a “similar project” would be valid for the Proposed Project (see below from Section 5.2.5):

“As stated in the 2013 FONSI for the WPB-M Corridor, the Florida State Clearinghouse has reviewed the South Florida East Coast Corridor Transit Analysis, a similar project to the Phase I to the WPB M Corridor described in the 2012 EA. The South Florida project was determined to be consistent with the FCMP, and the State Clearinghouse determined that this consistency determination would be valid for the AAF project because the AAF Project Study Area is fully encompassed within the South Florida East Coast Corridor Transit Analysis area which was found to be consistent in 2006 and there have been no relevant changes in the CZMA or FCMP criteria that would affect that determination.”

Comment: The Florida State Clearinghouse made a consistency determination without input from all of the Florida Coastal Management Plan agencies. In Florida, under Section 380.23, Florida Statutes, a project can only be found consistent if all commenting agencies (under the FCMP agency umbrella) with relevant statutory responsibilities concur. In this case, the FCMP agencies were not given an opportunity to comment on the project by the Florida State Clearinghouse. Rather the Florida State Clearinghouse made the determination without agency input. Per the Florida State Clearinghouse manual (<http://www.dep.state.fl.us/secretary/oip/manual/manual.htm>), the Clearinghouse sends the document or application to OIP for coordination of DEP review. The appropriate DEP division or district contacts distribute the project to appropriate division bureaus and satellite offices. Based on the information provided in the DEIS, this process was never conducted. Additionally, the South Florida East Coast Corridor Transit Analysis is cited as similar to Phase I, so the consistency determination for this project would not be valid for Phase II of AAF.

2.5 Environmental Justice (EJ)

The DEIS overlooks the negative impacts to minority and low income communities in those areas of the Proposed Project that do not have proposed stops. The EJ analysis indicates, under Indirect and Secondary Impacts, that the Proposed Project would have a beneficial effect on minority and low income populations in Orlando, West Palm Beach, Fort Lauderdale and Miami by providing an alternative transportation option that would improve access and mobility between Orlando, West Palm Beach, Fort Lauderdale and Miami. There however is no discussion of what type of beneficial effect the Proposed Project would have upon other EJ populations along the rail line. This is also connected to early comments received on the Proposed

Project concerning areas without a station that would be adversely affected, but would not receive any economic or social benefits.

Additionally, AAF failed to conduct significant public outreach to affected minority communities located along the FECR corridor. AAF received a comment during early scoping for the Proposed Project to include significant public outreach to minority communities that are located along the FECR Corridor; however, there is no discussion within the DEIS of such an outreach occurring within Indian River County. Indian River County has confirmed with Freddie L. Woolfork, an Executive Board Member of the Gifford Progressive Community League, that AAF held a meeting at the Gifford Youth Activity Center for local citizens. The required meeting, however, was described as a “generic, shortened version of a previous (non-Gifford-specific) public meeting.” There was no specific information pertaining to the impacts the Proposed Project would have on the Gifford community. In fact, Mr. Woolfork described the meeting with AAF as “more of a discussion to let [the Gifford Community] know that there would be a new passenger project in Florida and that there would be 32 round trips per day going through Indian River County at 120 MPH and that it is a great economic benefit to all of Florida...” It is therefore obvious that AAF held a meeting in the Gifford Community to satisfy a NEPA requirement without any intention of taking into consideration the comments, concerns and issues brought forth by those local residents.

2.6 Natural Resources Impacts

CDM Smith notes the following comments/concerns with regards to natural resources impacts:

2.6.1 General Comment

The DEIS does not fully address the environmental impacts to the natural resources located within Indian River County. For example, Sections 7.2.6 and 7.2.10 state that the relative mitigation activities will be identified in the various permit requirements (once issued), rather than identifying the impacts and stating what the mitigation activities will entail. NEPA requires that the environmental impacts be addressed in the DEIS, and not deferred to the permitting process. Moreover, on pages 4-54 and 7-8, the DEIS states that the USACE permitting process will rely on the DEIS as the required NEPA document to complete the Section 404(b) (1) analysis. It is therefore necessary that the issues be sufficiently addressed within DEIS document. Thus the analysis of the impacts is inadequate.

2.6.2 Water Resources

The following are examples from the DEIS demonstrating the lack of sufficient information necessary to adequately address impacts to water resources:

- Section 5 of the DEIS says stormwater Best Management Practices will be installed but gives no specifics on what type of Best Management Practices they intend to use or the location.
- Page 3-35 of the DEIS states that the Proposed Project will include installing a third rail at various locations (3 within Indian River County). On page 5-79 of the DEIS, it states “The Project would include improvements to the existing mainline and reconstruction of the second tracks on the existing track beds. Constructing the Project in the N-S Corridor would not create new impervious surface.”
- The DEIS does not take into account that there will be new impervious surface due to road construction outside the existing corridor. For example, The DEIS fails to address the

environmental impacts of the new impervious surfaces that AAF is required to install outside the existing corridor to qualify as a sealed corridor. On page 5-79, the DEIS states that constructing the Proposed Project in the N-S corridor will not create new impervious surfaces. This statement is contradicted in several areas throughout the DEIS. Page 3-33 of the DEIS states that the existing railroad system was built and is maintained to FRA Class IV track standards. On page 3-36, the DEIS states that the Proposed Project intends to operate at a speed of up to 110 miles per hour, which, according to the Railroad-Highway Grade Crossing Handbook –Revised Second Edition (2007), would require track improvements to achieve Class VI standards. Specifically, Class VI tracks (high speed rail) requires a sealed corridor, which includes the installation of a 100 foot median on each side of the road crossing (where feasible; 4-quadrant gates can be used as an alternative if crossing geometry does not support the installation of the median)(see Section 3 of the above-referenced handbook). These necessary improvements will cause new impervious surfaces that fall outside of the FECR ROW. The DEIS should address the additional impacts from these impervious surfaces.

2.6.3 Construction

The DEIS does not address staging or equipment laydown locations or temporary/permanent impacts on the natural environment. Under NEPA, the DEIS is required to address both construction and post-construction impacts of the proposed action. See Federal Register (volume 64, No. 101 dated May 26, 1999). This has not been done.

2.6.4 Mitigation

The DEIS fails to identify specific mitigation measures for the adverse effects the Proposed Project will cause on the natural environment. For example, page 7-10 of the DEIS states: “AAF will obtain an appropriate Section 404 permit from USACE prior to construction, and implement mitigation as required by the wetland permit conditions.” NEPA requires that the specific impact be identified and corresponding planned mitigation presented.

The DEIS appears to claim the benefits of mitigation in several instances, without specifically describing the mitigation activity. Under NEPA, the impacts must be analyzed first before mitigation can be considered. According to Table 5.2.5-1 regarding land acquisition for conservation and recreation: “The Project would likely result in beneficial impacts, compensatory mitigation would be required including the potential acquisition of environmentally endangered lands. Impacts to delineated wetlands would require mitigation as required by Section 404 Individual Permits. Consequently, while the implementation of the Project would remove wetlands from the N-S and E-W Corridors, compensatory mitigation would include the potential acquisition of environmentally sensitive habitat types.” There is no explanation of what compensatory mitigation and/or acquisition of environmentally sensitive habitat types would be required in the DEIS. Furthermore, it’s not accurate to say that the Proposed Project would result in beneficial impacts. The Proposed Project would result in negative impacts, thereby requiring mitigation. That mitigation should have been addressed and described in detail in the DEIS.

2.7 Wetland Impacts

The wetlands discussion in Sections 4 and 5 of the DEIS is inadequate. No figures showing wetland locations relative to the Proposed Project area appear in the DEIS text or appendices. The DEIS does, however, include approximate acreages for impacts. IRFWCD staff has indicated that they do not believe

that inclusion of the banks of the North, Main or South Relief canals as wetlands is appropriate. Background information is required to confirm the accuracy of these estimates.

The following are specific examples from Sections 4 and 5 of the DEIS deficiencies:

1. There is a statement in Section 4.3 that “Wetlands were identified and characterized for areas in which the Project would require ground disturbing activities.” Those areas should be specifically identified and include all planned activities (roads, utilities, noise barriers and other mitigation, etc.) as well as staging and equipment laydown locations.
2. Section 4 states that field delineations were conducted for the FECR corridor but there are no figures showing wetland boundaries for that corridor. The text references the land use figures in Appendix 4.1.1-A, which do not show wetlands. The only wetlands figures in the appendices are for the E-W corridor.
3. USACE jurisdictional determination should be included in the DEIS/EIS.

2.8 Threatened and Endangered Species Impacts

The limited geographic scope of the DEIS prevents CDM Smith from fully analyzing the impact of the Proposed Project on threatened and endangered species. As is noted consistently throughout CDM Smith’s review of the DEIS, impacts to threatened and endangered species are addressed only within the railroad ROW. The USACE, U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) determinations that the Proposed Project will have no adverse effect on threatened and endangered species are based on the assumption that all work will occur within the existing ROW (reference Sep. 18, 2013 letter from USACE to the National Oceanic and Atmospheric Administration; September 24, 2013 letter from USACE to USFWS; Oct. 28 letter from NMFS to USACE; AMEC notes from Sep. 6, 2013 meeting with USFWS, USACE and NMFS). The determination needs to take into account any activity outside the ROW. AAF needs to present information about these activities to the agencies and include their feedback in the DEIS.

Section 3

Section 4(f) Evaluation and Cultural Resources

As properly stated in Section 6 of the DEIS, Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 requires DOT agencies to avoid using certain public resources when undertaking transportation projects unless there is no prudent alternative and all necessary action is taken to minimize harm. Section 4(f) resources include publicly owned parks, recreation areas, wildlife and/or waterfowl refuges and historical properties of National, State or local significance.

The DEIS includes Section 4(f) comments in both Section 5 and Section 6; however, there are inconsistencies between the two sections. For example, Section 5 does not include historical properties (it should), while Section 6 does. Section 6 refers only to the St. Sebastian River Bridge within Indian River County.

3.1 Cultural Resources

Upon review of the Cultural Resources section of the DEIS it appears that the Section 106 process implemented can best be characterized as minimalistic. FRA's decision that "...consultation with local entities was not required for Phase II," is perplexing due to the overall size and nature of the Proposed Project which can affect such a vast array of resources (DEIS 4-124).

In the NHS Section 106 minutes contained in the appendix of the DEIS, it is clear that the SHPO advised AAF to use the 106 process; however, SHPO also determined that AAF did not need to fully engage local governments/groups/individuals as Section 106 Consulting Parties to fulfill the NEPA public input requirements of the National Historic Preservation Act (NHPA). This is simply not appropriate. CDM Smith feels strongly that this approach does not properly allow the local communities an opportunity to voice their concerns in a forum that is adequate to the important resources within the Project Study Area.

The DEIS in regards to the identification, evaluation and effect determinations of historic properties is again minimal in its content with notable absences of known National Register listed and determined eligible resources. Several known archaeological sites that fall within the Proposed Project APE appear to not have been surveyed and evaluated for National Register eligibility and effects. At the very least they are not properly addressed. In addition, it is not clear if an adequate archaeological survey was conducted for portions of the Proposed Project APE. No subsurface testing was done in the N-S FECR Corridor per a letter dated Oct 31, 2013.

According to the DEIS, the FECR, a National Register Historic District, falls within the Proposed Project APE and has contributing resources adversely affected (St. Sebastian Bridge), yet the DEIS states that this same district has a no adverse effect determination as a result of the Proposed Project. If a district loses a contributing resource, then the district itself experiences an adverse effect. It is also apparent that not all known historic resources were identified and evaluated within the Proposed Project APE as several National Register Historic Districts are absent from the discussion within the DEIS.

The DEIS either completely omitted or inadequately addressed numerous historical and archeological sites in Indian River County.

Two other areas of concern relating to cultural resources are:

1. The DEIS does not indicate that vibration studies were conducted in relation to historic structures and archaeological sites.
2. The DEIS does not examine the construction impacts in relation to historic or archaeological resources (overall construction activities and staging areas are not addressed).

While the development of the Proposed Project's APE and methodology appear to have been developed with the input of SHPO, the DEIS's lack of information, and omission of important resources that clearly fall within the Proposed Project's APE are very concerning and raise the question whether the methodology was properly executed. Couple this with the substitutive process used that minimally consulted with local entities results in a DEIS that is lacking in these critical areas.

CDM Smith has worked closely with the Indian River County Historian and other local resources to identify a substantial number of properties missing from the DEIS that appear on either the State of Florida's Master Site File system or in the National Register of Historic Places. As stated above, Section 4(f) requires that consideration be given to "historic properties of National, State or local significance." Aside from those properties listed on the NRHP, there are a significant number of properties alongside the corridor that that are of local significance and importance.

CDM Smith believes that the Cultural Resources evaluation included in the DEIS is incomplete and recommends that a supplemental DEIS be required prior to issuance of a Record of Decision by the FRA.