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March 30, 2012

Mr. Michael P. Anderson  
Project Director  
New York State Department of Transportation  
4 Burnett Boulevard  
Poughkeepsie, New York 12603

VIA EMAIL AND REGULAR MAIL

Re: Village of Tarrytown Comments on Draft Environmental Impact Statement, Tappan Zee  
Hudson River Crossing Project

Dear Mr. Anderson:

The following should be considered the official submission of the Village of Tarrytown Board of Trustees in regards to the Draft Environmental Impact Statement prepared for the Tappan Zee Hudson River Crossing Project.

1. Reference is made to the Village of Tarrytown comments on the Scoping Document dated November 3, 2011. In that document, the Village states:

The Village of Tarrytown requests that the required hard look be given during the Environmental Review Process to alternatives and/or specific actions that would mitigate the substantial negative impacts the project outlined in the scoping packet ("the preferred alternative") will have on the eighty-nine unit Quay Condominiums.... In particular, since it appears that these impacts of the preferred alternative will render the condominium's common elements nearly valueless, the review must consider measures that will either directly mitigate these effects or enable the private property owners to recover the lost value.

A review of the DEIS evidences the fact that no hard look was provided in regards to the impacts

of the project on The Quay. Specifically, there is no analysis of the economic impact of the proximity of the new bridge on The Quay and the diminution of the value of the units at The Quay based upon the project. There is also nothing in the document regarding the fact that the proximity of the bridge directly adjacent to and above the pool and tennis courts renders these amenities virtually valueless. While the DEIS acknowledges that an easement must be obtained for a 0.05 acre piece of vacant land adjacent to these amenities over which the bridge will pass, the description of that easement in the DEIS makes clear that the value ascribed to it is not nearly equivalent to, and simply does not take into account, the adverse environmental impacts the sheer presence of the massive bridge structure will have on the value of these amenities. Consequently, the DEIS fails completely to mitigate these negative impacts. We request that the DEIS be amended to rectify these shortcomings.

2. Reference is made to the Village of Tarrytown comments on the Scoping Document dated November 3, 2011 requesting that a hard look be given to the alternative concept of constructing one new bridge to the north of the existing bridge (to serve westbound/northbound traffic) and rehabilitating the existing bridge (to serve eastbound/southbound traffic). There is nothing in the DEIS addressing this particular concept, other than the statement that the requirement that there be redundancies serves as one of the primary justifications for the preferred alternative of two new bridges replacing the existing structure. However, as comment number 2 in the November 3, 2011 document explains, the one new bridge/one rehabilitated bridge concept would provide all of the important redundancies noted as a requirement throughout this review process. Moreover, comment number 2 details the concept's additional benefits and demonstrates the reasonable likelihood that if the concept were to be analyzed within the context of the limitations inherent in the preferred alternative, the analysis would demonstrate that there would be substantial additional benefits and mitigation of negative environmental impacts that had not been considered in the DEIS. Consequently, the Village reiterates our request that a hard look be given to this alternative.
3. The DEIS does not include any information in regards to the financing of the preferred alternative. Thus, the DEIS does not address comment number 3 in the November 3, 2011 document concerning the issue that it can be presumed that there will be significantly increased tolls on the bridge to generate funding to pay for the bridge, and further, that these increased tolls will prove detrimental to those least likely to be able to pay for the increase. In the November 3 document, the Village states:

The review must consider that since the preferred alternative eliminates BRT from consideration, there will be no meaningful, less costly alternative mode of transportation provided. In particular, as indicated in the scoping package (Section 3.14-16), the review should "identify and address any disproportionate and adverse impacts (of the project) on minority and lower-income populations" who 1) live on the west side of the Hudson River and must cross the Tappan Zee in order to reach employment destinations throughout Westchester County, Connecticut and areas of New York City not served by

Metro North; and 2) live on the east side of the Hudson River who must cross the Tappan Zee in order to reach employment destinations in Rockland County, Orange County and northern New Jersey.

It is the position of the Village of Tarrytown that the issue of work-related travel and the impact of increased tolls on lower-income populations qualifies under the heading of "Environmental Justice" and that the DEIS fails to address this issue, and therefore should be amended in order to rectify this shortcoming.

The DEIS also does not include any information in regards to the impacts of increased tolls on discretionary travel in the region, especially on Westchester County and Rockland County. Significantly increased tolls may influence decision-making in regards to crossing the bridge in order to shop, dine or recreate in either of the Counties, thereby impacting on the economic activity in Westchester County and Rockland County. The November 3, 2011 document states, "... the negative impact on higher toll charges on discretionary travel, such as that related to tourism and retail activities, should also be considered." There is no reference to this issue in the document, nor would there be an expectation that there would be an answer since the DEIS completely lacks the information needed to make a full and fair review of this impact of the project. The DEIS should be amended to rectify these shortcomings.

4. The DEIS does not include any response to the request made in the November 3, 2011 document (and first raised in other Village submissions as far back as October 2006) that a hard look be given the concept of a Tappan Zee Bridge Bus-Train transfer station being constructed as part of the toll plaza. It is the position of the Village of Tarrytown that such a transfer station would provide, among other benefits, significantly reduced travel times, especially for commuters traveling to New York City for work purposes. Similarly, such a transfer station would also greatly enhance the flexibility of all other inter-county bus routes by allowing every bus crossing the bridge to provide transfer service to the Metro-North trains. The transfer station would also mitigate the negative environmental impacts associated with the continuation of the existing Tappan Zee Express bus service traversing the Village's streets when driving to and from the current Metro North Railroad (MNRR) station, as well as any negative impacts likely to result from future expansions in bus service, including a Bus Rapid Transit system. The transfer station would also provide significant benefits to the multitude of residents who live near the toll plaza, including and especially providing pedestrian access to MNRR. Such access not only would mitigate a portion of the adverse environmental impacts the new bridge will impose directly on those residents, but also would provide the broader environmental benefit of eliminating the need for those residents to utilize automobiles to travel to the current train station. The DEIS is silent in relation to this concept and it is the position of the Village that because of the concept's numerous benefits, in particular its potential to mitigate adverse environmental impacts, a Tappan Zee Bus-Train transfer station must be given a hard look.
5. The DEIS includes a discussion of the Westchester Bridge Staging Area, the Westchester Inland

Staging Area and a roadway between the two areas. The document asserts that the staging areas and the connector road pose no significant adverse environmental impacts. It is highly unlikely that the creation of staging areas that presently do not exist will have no significant adverse impacts on the residential neighborhoods in which they are in close proximity, especially in relation to the noise, vibration and air pollution that will be generated by trucks and equipment utilizing the areas and the road. The Village locations that will be adversely impacted are the Irving neighborhood just south of the bridge, the Quay condominiums, and the Tappan Landing neighborhood just north of the Quay. The Village believes that more specificity must be provided as to the analysis that was utilized in order to generate the no-impact conclusion, and further, that if that analysis proves to be inaccurate, that specific and effective mitigation measures be provided.

The Village also believes that the analysis of construction impacts did not take into account the following two important factors that should be included: 1) the fact that the existing noise barrier located adjacent to Van Wart Avenue (south of the toll plaza and NYS Thruway work area) is currently inadequate to address the noise issues in the adjacent neighborhood; and 2) the cumulative negative impacts that are likely to occur from the simultaneous development and construction of the 96-acre General Motors site in Sleepy Hollow. In the latter case, the Village of Sleepy Hollow has approved this project and its construction during the Tappan Zee Bridge Replacement Project period is a virtual certainty. The DEIS should be amended to consider the impacts of these two factors, and set forth appropriate mitigation measures for their adverse environmental impacts.

6. The preferred alternative provides for a bike and pedestrian trail on the new crossing; however, the DEIS does not address parking issues associated with access to the new trail. As such, the DEIS also has not properly considered the trail's secondary adverse impacts, namely added traffic and an increased demand for parking, that is likely to result from the public's attempts to utilize that amenity. It is the position of the Village of Tarrytown that the DEIS must address this access issue and provide suitable mitigation for the adverse environmental impacts associated with it.
7. Reference is made to Tarrytown Mayor Drew Fixell's comments at the March 1, 2012 public hearing, in which Mayor Fixell reiterated the statements contained in the November 3 letter concerning the need for mass transit on the new bridge, especially that the inclusion of mass transit will mitigate many of the adverse environmental impacts that the bridge creates for the Village of Tarrytown, the County and the region. While the DEIS asserts that mass transit is beyond the scope of the project and that the new bridge will be constructed in a manner to accommodate mass transit in the future, it remains the position of the Village that mass transit, specifically Bus Rapid Transit (BRT) or other enhanced bus service, must be explicitly committed to and given the requisite hard look now. Absent that, there can be no assurance that the region will ever see mass transit on the Tappan Zee Bridge and, therefore, that there will be

Mr. Michael P. Anderson  
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substantially less mitigation of the significant adverse environmental impacts associated with the new bridge.

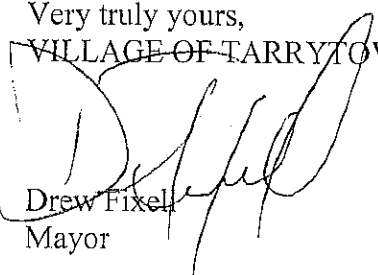
Moreover, given the structural accommodations provided for mass transit, the complete absence of a review of such a system may constitute improper segmentation. In particular, this conclusion is supported by the project's inclusion of the so-called emergency lanes that are distinct from full-size breakdown shoulders and, therefore, can be easily converted for use by a BRT system or other enhanced bus service. The DEIS's contention that mass transit is beyond its scope flies in the face of both the history of this project, including the relatively recent approval of a "tiering" approach that would have allowed for simultaneous but separate environmental reviews of the bridge/highway project and mass transit, and the reasonable expectation that the extra capacity on the bridge will, in fact, be used in the near future for BRT or other enhanced bus service. The failure of the DEIS to review the environmental implications of such systems, including the likely adverse impacts of such related features such as access roads, increased bus traffic and potential station stops, as well as such systems' potential to mitigate adverse impacts, is a significant flaw.

8. The Village has employed the services of a consultant to review the DEIS in regards to noise and to perform an analysis relating thereto. The report is included herewith and should be considered official comments of the Village of Tarrytown.

The Village appreciates the opportunity to provide these comments in regards to the Tappan Zee Hudson River Crossing Project Draft Environmental Impact Statement. It is the hope of the Village that the comments included herewith will be fully evaluated and comments included relating thereto included in subsequent documents issued.

Very truly yours,

~~VILLAGE OF TARRYTOWN~~

  
Drew Fixel  
Mayor

C: Board of Trustees  
Michael Blau, Village Administrator  
Paul Feiner, Supervisor and Members of the Greenburgh Town Council



**MACK**  
**ASSOCIATES, LLC**

**ENGINEERS • SCIENTISTS • PLANNERS**

*a Service Disabled Veteran Owned Small Business*

**MEMORANDUM**

TO: Tappan Zee Hudson River Crossing Project

Attention: Larry Schwartz  
Attention: Michael Anderson  
Attention: Brian Conybeare

FROM: A. Brook Crossan, Ph.D., P.E.

DATE: 4 September 2012

CC: Salisbury Point Cooperative  
Donald Singer, Esq.  
Nat Parish, P.E.  
Mike Blau, Tarrytown Village Administrator

RE: Tappan Zee Bridge FEIS  
Noise Comments on behalf of  
Salisbury Point Cooperative  
Rockland County

At the request of Salisbury Point Cooperative (Salisbury) MACK Associates, LLC (MACK) has reviewed the noise elements of the FEIS for the Tappan Zee Bridge River Crossing Project. We had also reviewed the DEIS and submitted comments to USEPA Region 2 by letter of 26 March 2012 and Michael Anderson of NYSDOT by letter of 30 March 2012. As you are aware we have also been retained by the Village of Tarrytown in Westchester County to perform the same functions.

Some very important additions have occurred between the DEIS and FEIS that will provide enhanced noise mitigation during construction of the new facility. These include:

- Commitments for source and path controls to mitigate noise from individual pieces of equipment to defined noise limits at 50 feet that can be monitored for compliance (Table 18-24 on page 18-59 of the FEIS); and
- Construct noise barriers (variously mentioned as “at least 8-11’ high” and “a minimum of 11’ high”) around all staging areas and along some of the construction access roads.

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However, we are disappointed in the overall responsiveness of the FEIS and Response to Comments to the issues raised by our comment letters, and clarified and expanded upon in subsequent meetings. There were many comments either ignored, or not adequately addressed. On behalf of the Village of Tarrytown and Salisbury we submitted 38 pages of text with more than 100 discrete comments. These were grouped (or ignored) into 15 comments that were approximately 5 ½ pages long. Rather than reiterate past comments, we have focused on making our points by providing new comments on the FEIS, the Response to Comments, and relevant Design Build Project documents. Also, for the DEIS review we generated two letters (one for the Village of Tarrytown, and one for the Salisbury Point Cooperative), with common attachments. This approach appears to have contributed to some of the aforementioned consolidation issues. Therefore, there will be no attachments and all comments will be within the body of the letter or memorandum. Also for the sake of clarity, and future reference and discussions, we have numbered each of our individual comments. While it is unclear as to your intent as to how and when to respond to these comments, we believe that they should be addressed in a Supplemental Environmental Impact Statement (SEIS) as discussed below.

First we present general comments (G-1 through G-91) that relate to the project and analysis in the whole. These comments are essentially identical in this memorandum to you and in a letter to Tarrytown. There are some slight editorial changes in this version, which is later, to try to improve the language to make our points clearer and to also correct a numbering problem (hence there are 91 not 89 numbered general comments). Comments G-1 through G-73 relate to inconsistencies or uncertainties relating to the mitigation commitments that the Authority (which collectively is used to mean the NY State Thruway Authority and NYS Department of Transportation) has made. It is important that all mitigation commitments be clear to all parties (the Contractor, the Authority, local municipalities and agencies, and the public), and easily enforceable.

The remaining general comments (G-74 to G-91) relate to unresolved deficiencies in the baseline data, analysis, or mitigation. In some instances the comments stand on their own, and in other instances they introduce issues that are followed up in greater detail in the Salisbury specific comments (S-1 through S-23). Comments S-14 through S-23 relate to the 26 July 2012 AKRF Memo provided to Salisbury. It should be noted that there are also parallel concerns in Tarrytown as noted in these comments. The memo was received after our review letter had already been submitted to Tarrytown. Thus, follow 112 comments on the noise aspects of the project. These comments focus on construction noise (monitoring, modeling, and mitigation) and the permanent sound barriers as they affect road noise at Salisbury. In total there are 126 discrete comments that address noise concerns at Salisbury and Tarrytown. We urge the Authority to use this version of the General Comments (G-1 to G-91) when responding.

**General Noise Comments**

The following general comments (G-1 through G-39) relate to text in the following document:  
DB Contract Documents Part3  
Project Requirements  
Revision (Addendum No.10)  
July 18, 2012

**Exhibit B Item 2. CONSTRUCTION NOISE AND VIBRATION CONTROL** from pages B-3-3 and B-3-4 has been reproduced in its entirety in *black italics* and numbered comments added in *red italics* throughout. We have **bolded** some of the text for emphasis.

- A. *Where practicable and feasible electric powered equipment rather than diesel powered equipment shall be used.*

*Comment G-1: Who determines what's practicable and feasible?*

*Comment G-2: What are the inspection, reporting, and enforcement mechanisms involved with respect to scheduling and frequency?*

*Comment G-3: Will inspection and compliance reports be posted to the website in a timely fashion? If not, why not?*

- B. *Use of impact devices such as jackhammer, pavement breakers and pneumatic tools shall be limited where practicable and feasible.*

*Comment G-4: Who determines what's practicable and feasible?*

*Comment G-5: What are the inspection, reporting, and enforcement mechanisms involved with respect to scheduling and frequency of equipment use?*

*Comment G-6: Will inspection and compliance reports be posted to the website in a timely fashion? If not, why not?*

- C. *Shrouds shall be utilized to limit noise exposure to the levels stated in Table 3-B-2-1.*

*Comment G-7: Which of the equipment listed will need shrouds to meet the noise levels?*

*Comment G-8: What are the inspection, reporting, and enforcement mechanisms involved with respect to scheduling and frequency of equipment use?*

*Comment G-9: Will inspection and compliance reports be posted to the website in a timely*



*fashion? If not, why not?*

- D.** *Installation of appropriate noise attenuation around construction staging areas, including minimization of backup alarms and other noises.*

**Comment G-10:** *Who determines what's appropriate?*

**Comment G-11:** *The statement uses the word "around" which seem to imply path controls in the form of a wall, but the examples seem to imply source controls. Please clarify.*

**Comment G-12:** *What are the inspection, reporting, and enforcement mechanisms involved with respect to scheduling and frequency of equipment use?*

**Comment G-13:** *Will inspection and compliance reports be posted to the website in a timely fashion? If not, why not?*

- E.** *Proper maintenance and service of all equipment used on Site, including Subcontractors' equipment, including installation of mufflers to limit noise.*

**Comment G-14:** *Will there be an inspection program for all new equipment brought to the Site?*

**Comment G-15:** *If not, how will this provision be enforced?*

- F.** *Use of sound attenuating curtains or shrouds on the pile driving hammers to reduce noise exposure to the levels stated in Table 3-B-2-1.*

**Comment G-16:** *How is this different from Item C?*

**Comment G-17:** *Please clarify that the shroud will enclose all four directions simultaneously. As discussed elsewhere pile driver noise will travel long distances so both shores must be protected simultaneously.*

**Comment G-17:** *How will compliance monitoring be conducted? Ground (or water) level monitoring at 50 feet will not be sufficient. Monitoring must also occur at representative vertical elevations.*

- G.** *Use of movable noise attenuation measures around pumps, trucks, and other noisy equipment when operating in close proximity to residential areas.*

**Comment G-18:** *What does close proximity mean?*

***Comment G-19: Is this more restrictive than Item C? If so, are there additional performance standards and enforcement mechanisms?***

*H. The development and implementation of community outreach activities related to construction noise impacts as outlined in the Environmental Documentation (EIS Chapter 18) and discussed further in Part 3, Project Requirement 8 – Public Involvement*

*I. In addition to the vibration monitoring requirements detailed in Project Requirement 10 – Geotechnics, six noise and vibration monitoring stations that shall continuously record noise and vibration shall be provided by the Design-Builder. These devices shall transmit data to a secure website to be maintained by the Design-Builder and access to the website shall be provided to the Authority or the Authority's designee. Three stations shall be located near the Westchester shoreline and three stations shall be near the Rockland shoreline. The locations of the stations shall be subject to the approval of the Authority, and shall be relocated as directed by the Authority. Faulty stations shall be repaired by the Design-Builder within 48 hours of observing a fault.*

***Comment G-20: Will there be public input on the site selection? If not, why not? If so, how and when?***

***Comment G-21: We presume that the noise monitoring will be conducted to document the general success of construction noise mitigation program to limit noise increases (and impacts) to those increases disclosed in the FEIS. Thus, it will be important to monitor and document pre-construction baseline noise levels for comparison to monitored construction noise levels.***

***Comment G-22: Will the monitoring data be posted on the public website? If not, why not? If so, how quickly can the data be posted?***

*J. To the maximum extent possible, temporary noise walls shall be provided by the Design-Builder to shield residences from construction staging areas, platforms and construction works. A minimum 11 feet high, temporary noise wall shall be installed between the construction staging areas and platforms and the shorelines, and between the construction staging areas and platforms and the south side of the exit ramp (adjacent to Ferris Lane).*

***Comment G-23: What does “to the maximum extent possible” mean? The location and height of the barriers should be presented to the public and feedback obtained as part of the Public Information Program.***

***Comment G-24: What studies or modeling has been done to determine what an appropriate***

*height is? Other major highway construction projects (e.g. the Central Artery in Boston) have used higher barriers with cantilevered tops to provide protection for receptors at higher elevations during construction. The following text was in a paper describing the Central Artery construction noise mitigation:*

*If practical, noise barriers should be tall enough to provide noise reduction for the upper-most stories of nearby sensitive receptors, though this may not always be achievable with abutting multi-story buildings. Indeed the limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In these cases, the barrier/curtain system must either be very tall or have some form of roofed enclosure to protect upper-story receptors.*

***Comment G-25: By saying a minimum 11' high implies that the barrier could or should be higher. Who will evaluate the appropriate height based upon the elevation of adjacent sensitive receptors?***

*K. All construction equipment, including any at-source noise abatement systems, shall not exceed the maximum noise levels shown in Table 3-B-2-1. See Part 2 DB§107-13 for nighttime noise restrictions. In addition, on Saturday mornings until midday and on Sundays all day, no equipment shall be used that emits noise above 70dBA measured at an offset distance of 50 feet if the work is on land and at the nearest point of the shoreline if the work is in the water.*

***Comment G-26: With respect to work on land does this mean that no equipment with a Lmax of 71 dBA (Table 3-B-2-1) of greater can be used during these time periods, including concrete mixer and pump trucks?***

***Comment G-27: With respect to work in or over the water how is this determined? Will the noise monitoring data in Item I be used in any way? If so how?***

*Monitoring, internal reporting, and management of noise levels by the Design-Builder shall be configured to ensure that:*

*any exceedance of the maximum permitted noise levels shall be identified by the Design-Builder within 30 minutes of the occurrence; and (ii) the activity causing the exceedance is mitigated within 1 hour of the first occurrence such that the exceedance is not repeated. Any exceedance of the maximum noise limits shall be reported to the Authority's Project Manager within 48 hours, with details of the mitigation adopted. Other than exceedance events, reporting of noise measurements shall be weekly.*

*Comment G-28: What noise monitoring other than the six stations in Item I will be required?*

*Comment G-29: Will the Authority undertake any independent verification noise monitoring? If not, why not? If so, what are they?*

*Comment G-30: Who will establish, and who will review and approve the equipment specific noise monitoring protocols?*

*Comment G-31: Will the public or local municipalities be afforded the opportunity to comment on the noise monitoring protocols? If not, why not? If so what will the process be?*

*Comment G-32: Will the professionals hired by interested parties be provided access for verification noise monitoring should conflicts arise? If not, why not?*

*Comment G-33: Will noise measurements and exceedance data be promptly posted on the public website? If not, why not?*

**Table 3-B-2-1 Maximum permitted noise levels from construction equipment**

**Equipment Description - Maximum noise levels L<sub>max</sub> (dBA)(1)**

Compressor (air)	58
Concrete mixer truck	71
Concrete pump truck	71
Crane	70
Drill rig truck	69
Dump truck	69
Excavator	71
Flat-bed truck	66
Front end loader	74
Generator	60
Impact pile driver	90
Man lift	63
Paver	67
Pumps	73

*Comment G-34: The FEIS says 77 dBA for pumps. Which value is correct?*

Roller	70
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Vibratory pile driver	90
Other	70

**Comment G-35:** *We presume that “Other” includes all other pieces of equipment including, but not limited to: chain saw; concrete saw; grader; grapple; jackhammer; hoe ram; and pneumatic tools. Is that correct?*

*(1) A-weighted maximum sound level, measured at a distance of 50 feet from the construction equipment, with the use of relevant at-source noise abatement system controls.*

**Comment G-36:** *Which of these limits can be met by selection of quiet equipment, and which will require shrouds or other enclosures that will require periodic inspection?*

**Comment G-37:** *What are the specific measures to reduce impact pile driving noise from 105 dBA to 90 dBA? Please provide a schematic that identifies the major noise generating portions of the pile driving, the location of the shrouds, and the location (horizontal and vertical) of the compliance noise monitoring.*

**Comment G-38:** *Have these measures been successfully used elsewhere? If so where? If not what confidence do you have that they will work?*

**Comment G-39:** *In the EIS for The San Francisco- Oakland Bay Bridge East Span Replacement (which is currently under construction) CALTRANS made the following statement*

*(<http://www.dot.ca.gov/dist4/sfobb/Environmental%20Consequences.html#4145>):*

*Caltrans has already investigated such measures as selecting a quieter pile driver, placing a shroud around the hammer, using portable shielding, sound blankets, and plywood sheets. These measures were found not to work for a variety of reasons, including not being effective, challenges in implementation due to wind conditions and elevation, and cost.*

*This raises some concerns. Will the Authority allow the Design Build contractor to not meet the noise limits for technological or cost reasons? If so, what will the process be, and will there be an opportunity for public review and comment before implementation of a change.*

The following general comments relate to **Exhibit B Item 7. PILE DRIVING MANAGEMENT** on page B-3-9.

*D. Limiting the periods of pile driving to no more than 12-hours per day, and **predominantly** within daytime hours (for example 7am to 7pm). In rare circumstances, and after notifying the Authority Project Manager, it is possible that piling may extend further than 12 hours depending on the practicality of driving.*

*Comment G-40: We can understand the use of the phrase "predominantly within daytime hours" as it relates to winter and short days (9 hours from sunrise to sunset). However, if applied in the summer time when the days are longer (15 hours from sunrise to sunset) the start time could be before 7am and the end time could be after 7pm. Why can the Authority not just commit to 7am to 7pm?*

*Comment G-41: What is the process that the Authority will use to allow pile driving for more than 12 hours a day? Will there be the opportunity for public input into that process? If not, why not? How will the Authority provide notice to communities (both municipal governments and residents) that they have allowed pile driving for more than 12 hours on a particular day(s)?*

*Comment G-42: What are the schedule, cost and impact factors that the Authority will use in making a determination on such a request? Will complaints or issues relating to 7am to 7pm operations be a factor?*

The following general comments relate to PIP Section 8: Public Involvement during Design-Build Phase from page A-8-11.

i. *Interim Information Updates for Local Officials* – the Authority, in consultation with the Design-Builder, shall provide interested municipal and county elected officials and key agencies with a two-weekly update of (1) **planned construction activities** for the subsequent two-week period, highlighting any potential for noise, dust, safety or other impacts of possible concern to local residents or travelers; (2) any **unusual traffic diversions** or delays due to planned construction activities; and (3) **nighttime or weekend construction activities** (e.g. off-hour deliveries).

*Comment G-43: Why can there not be regular reporting of the ongoing and compliance noise monitoring?*

*A summary of any unusual or important public comments or concerns submitted in writing, posted on the website or received on the Project's phone hotline would also be provided, along with any planned or completed responses to those comments.*

*Comment G-44: Who makes the decisions as to which are "unusual or important"? This concern is less an issue if all comments and responses would be posted on the public website in a timely fashion.*

***Comment G-45: Would not a more transparent way of reporting to track comments by geographically (e.g. Salisbury Point, or the Irving neighborhood) and by technical area (e.g. air quality, or traffic) to provide context? Can this be done? If not, why not?***

*The Authority shall provide this information to involved municipalities and agencies that indicate an interest in receiving these “municipal e-alerts” on a two-weekly basis and at other times as deemed appropriate. Immediate contact shall also be made with local and county officials in potential affected areas connected with emergency-type events, such as accidents, spills of other events of possible public concern.*

***j. Public Information Response Process*** –Based on the recommendation included in the selected Design-Builder’s proposal and finalized in consultation with the Authority, this process will clearly indicate how it will consider and utilize all forms of stakeholder input, including potential actions in consultation with the Agencies to refine the Project’s design or construction activities.

***Comment G-46: Will the Authority solicit feedback from the public on the Public Involvement Plan before it is adopted? If not, why not?***

The following general comments (G-47 to G-53) relate to  
DB Contract Documents Part2  
DB Sections 100  
General Provisions  
Revision (Addendum No.10)  
July 18, 2012

Section **DB 107-13 NOISE ABATEMENT** on pages 151 – 152 states:

*In urban or populated rural areas where quiet conditions normally prevail, no equipment that emits noise above 70 DBA measured at an offset distance of 50 feet, if the work is on land, and at the nearest point of the shoreline, if the work is in the water, shall be operated during nighttime hours unless such Work is otherwise specified in the Contract Documents. The Authority’s Project Manager may authorize nighttime Work under special circumstances or emergency conditions.*

***Comment G-47: This language is similar to, but not identical to, language in Part 3. Why not make the language identical?***

***Comment G-48: Does “noise above 70 dBA” mean an Lmax of 70 dBA?***

*Comment G-48: Nighttime should be defined.*

*Comment G-49: This clause does not address different work hours on the weekend. It should be modified to so address.*

*Comment G-48: The first part of the statement indicates that work can occur at night if it less than 70 dBA, yet the final sentence states that nighttime work may be authorized. Does that mean that any nighttime work needs to be authorized? Or does it mean that nighttime work over 70 dBA needs to be authorized?*

Every earlier version of the document also contained the following statement:

*County or municipal ordinances shall apply if they are more stringent than the requirements of the Contract Documents.*

*Comment G-49: Why was this deletion made?*

*Comment G-50: We presume that this sentence has been used in other contract documents in the State. Where else has it stayed in the contract?*

*Comment G-51: The deletion of this sentence appears to directly contravene NYSDOT procedures <https://www.dot.ny.gov/divisions/engineering/environmental-analysis/manuals-and-guidance/epm>*

*4.4.18 Noise Analysis Policy and Procedures*

*In some cases there may be local laws or ordinances that govern construction noise levels or hours. New York City has a local law that is quite restrictive in many areas. The Department is not generally subject to local noise control ordinances; nevertheless, the existence of those laws should be investigated during project development and every reasonable effort made to comply with their provisions during construction following the procedures provided above.*

*Please comply with NYSDOT procedures. We recommend that the Authority coordinate with each affected municipality with respect to the conditions in their noise ordinances.*

*Comment G-52: The FEIS Response to Comment 18-98 states:*

*The NYSTA is a state authority and is not required to comply with local codes and regulations. However, it is NYSTA's practice to comply with local codes and regulations where and when compliance would not result in substantial delays,*



*require incurring additional costs, or interfere with achieving project goals.*

*This is NOT what the procedures say. There was no discussion of what the various noise codes say in the affected municipalities and how and why the project is deviating from them. The phrase “every reasonable effort” in the procedures certainly seems clear. The Authority and their consultants should have “investigated” the local noise codes during NEPA/SEQRA and assessed their ability to comply. Compliance with those parts of the noise codes that could be complied with should have been summarized. Specific reasons for non-compliance of other portions should have been documented. Any additional cost, as the response implies, should not a reason for non-compliance. Because of the sensitivity of construction noise as an issue public dialogue on what constitutes “every reasonable effort” should have been part of the NEPA/SEQRA process. This must be addressed in a SEIS.*

*Comment G-53: Since the FEIS has not properly addressed the “every reasonable effort” issue and the noise mitigation measures are only vaguely defined there are many more details to be finalized. How will this be accomplished moving forward? It will be important for all municipalities and affected residents to have their voices heard.*

In addition to discussions regarding construction noise in the Design Build Documents there are also discussions in the FEIS on pages 18-58 and 18-59. General comments C-54 to C-71 relate to those pages, the relevant text of which is reproduced below.

*Two significant noise abatement measures that NTSTA/NYS DOT will implement would be: (1) the use of noise barriers to reduce truck noise along the south and north sides of the ramp leading to River Road in Rockland County and on the south side of the access road leading to the staging area in Westchester County;*

*Comment G-54: This commitment includes more construction road noise barriers. See text relating to Comments G-23 to G-25. The Record of Decision/Findings Statement should include all barriers.*

*Comment G-55: The barriers along construction roads should be installed before the access roads are constructed, and dismantled only after the access roads are demolished.*

*Comment G-56: The barriers at staging areas should be installed as early in the construction sequence as possible.*

*and (2) the use of quiet equipment and path control measures. Specifically contractors will be required to construct noise barriers at least 8-11 feet high in the areas described above, and around all inland*

*and pier staging areas.*

***Comment G-57: The Design Build documents say a minimum of 11 feet. See Comment G-25. We presume that barriers will be a minimum of 11 feet tall. Is that correct?***

*With regard to the use of quiet equipment and path control measures, Table 18-24 shows Lmax noise levels at 50 feet for selected typical construction equipment and the Lmax noise levels at 50 feet for the same equipment that contractors would be required to achieve (using quiet equipment and/or path controls [shrouds, barriers, etc.]).*

*In addition to the noise barriers and equipment with reduced noise levels specified above NYSTA and NYSDOT are committed to implementing the following generalized source control, site control, and community awareness measures to minimize and reduce potential noise concerns relating to construction activities:*

***Comment G-58: These general items are either not mentioned in the Design Build documents or are worded differently. This needs to be clarified.***

- *Source Control Measures:*
  - *Use of properly designed and well-maintained mufflers in all internal combustion engines, engine enclosures, and intake silencers;*

***Comment G-59: Who will inspect? Who will enforce?***

- *Require contractors to perform regular periodic equipment maintenance; and*

***Comment G-60: Will contractors be required to have maintenance logs for Authority inspection? If not, how will requirement be met?***

- *Use of new equipment with reduced noise levels where feasible and practicable.*

***Comment G-61: Is this requirement any more restrictive (i.e. protective of the residents) than Table 18-24?***

- *Site Control Measures:*
  - *Place stationary equipment as far away as feasible and practicable from sensitive receptor locations;*

***Comment G-62: Who determines what is feasible and practicable?***

***Comment G-63: Will the Authority inspect equipment locations and require changes if necessary?***

*- Strategically select waste disposal sites to minimize potential noise concerns;*

***Comment G-64: Will the Authority approve waste disposal sites?***

***Comment G-65: Will the Authority inspect waste disposal sites and require changes if necessary?***

*- Where feasible, coordinate work operations to coincide with time periods when people would be least likely to be affected by construction-related noise;*

***Comment G-66: Who determines what is feasible?***

***Comment G-67: What time periods would people be least likely to be affected by construction noise?***

*- Where feasible eliminate nighttime operations (in particular no pile driving will be scheduled for nighttime, Saturday morning and all day Sunday);*

***Comment G-68: The commitment is vague and inconstant with the Design Build documents. Please clarify.***

*- Eliminate "tail gate banging";*

***Comment G-69: How will this be done?***

***Comment G-70: Who will inspect?***

*- Reduce backing-up procedures for equipment with backup alarms, and replace backup alarms with strobes where acceptable per Occupational Safety and Health Administration (OSHA) and other regulations; and*

***Comment G-71: How will back-up procedures be reduced?***

***Comment G-72: There are also variable loudness back-up beepers that meet OSHA requirements. Alternate (i.e. quieter than standard) backup beepers should be required on all equipment. If not, why not?***

- *Where feasible, prior to construction operations commencing, construct noise barriers described in Chapter 12 to mitigate post construction conditions.*
- *Community Awareness Measures:*
  - *Notify the public of construction activities that may be perceived of as noisy and intrusive prior to starting construction; and*
  - *Establish means for the public to contact the engineer-in-charge (i.e., provide telephone number, email, etc.) and methods to handle complaints.*
  - *Implement a noise and vibration monitoring program.*

***Comment G-73: Many other items should be posted on the public website including, but limited to: (1) on-going noise monitoring data; (2) noise mitigation compliance reports; and (3) complaints and responses. The responses should be clear as to how individual complaints are addressed.***

There are other items of general concern that are discussed in the FEIS or in the Response to Comments. These topics are: (1) whether a SEIS should have been prepared; (2) the acquisition and use of noise data during and from the PIDP; (3) the lack of adequate baseline noise monitoring including L10 and Lmax data and analyses; (4) construction noise modeling using Cadna/A; (5) enhanced noise transmission over water bodies; and (6) the appropriateness of receptor controls. Specific comments are below.

***Comment G-74: Numerous commenters on the DEIS raised the issue that a SEIS needed to be prepared and not a FEIS. Part of Response R 3-18 states:***

*Partly in response to comments made with respect to the claimed need for an SDEIS, FHWA prepared a Re-evaluation to assess whether, after the completion of the DEIS, there were any changes to the proposed action or new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts that would result in significant environmental impacts not evaluated in the DEIS. The Re-evaluation, which appears in Appendix A to this FEIS, reflects the agency's determination that an SDEIS was not required.*

***This Re-evaluation (Appendix A-7) is a 607 page document with no table of contents to permit an easy review. In scanning every page we concluded that NONE of the SEIS points raised in the comments on the DEIS by anyone had been addressed. Thus, the claim that there is a link between the comments on the DEIS and the Re-evaluation is unsupported by the available information. The issue of the need for a SEIS should have been discussed globally in the Re-evaluation rather than piecemeal in Responses to Comments. The piecemeal response allowed comments to be restated with important issues missing, and to be addressed separately and narrowly, rather than in a large comprehensive way.***

*Comment G-75: We and others had raised issues about incorporating the results of the PIDP in the SEIS (or in this case the FEIS). Fisheries work relating to noise and other issues was summarized in a 181 page technical appendix (Appendix F). The only report on ambient noise monitoring was to say that the impact pile driver was 106 dBA at 50 feet. There was no discussion of any important details, for example, methodology, location and height of monitoring, monitoring at multiple distances, how many occasions the monitoring was conducted, or whether attenuation rates over the water varied. This information is crucial to the conclusions in the FEIS should be provided. The impact pile driver is the noisiest piece of equipment by far and is the controlling factor as far as peak noise levels.*

*Comment G-76: We had raised the issue that L10 and Lmax should also have been addressed (Comment 18-96). The response, R 18-96, misses the point. The Leq descriptor, which was used in the DEIS and FEIS, may indeed be the single most utilized descriptor, but it is not the only important or relevant descriptor. It is the easiest to calculate because of RCNM. However, Lmax, which is indicative of how loud the loudest, most intrusive and disruptive noises are, is also easy to calculate. Presentation and discussion of Lmax levels would have assisted the reader in understanding exactly how intrusive the construction activities would be in their daily lives. It will likely be the peak noises (Lmax) that generate the most complaints from the adjacent residences. Because of that the Lmax levels that correspond to the modeled Leq values should be calculated and disclosed. In this way monitored Lma values can also be used to document the success of the noise mitigation program.*

*Comment G-77: L10 is also an important descriptor in that at 45 dBA L10 is a commonly used interior standard, which is used in New York City. The L10 issue will be further discussed in Comment T-1.*

*Comment G-78: An important aspect of an EIS is to "bound" the potential impacts. Bounding means to describe and disclose the worst case impacts. With noise that is related to maximum loudness and duration. The FEIS discusses worst case impacts (for a period of up to 6 months), but does not duration further. For example the NYC CEQR Technical Manual defines construction impacts of less than two years as short term and greater than two years as long term. The FEIS did not address the noise increases that would exist throughout the long term construction. For example, Table 18-25 reports a maximum increase in Leq of 10 dBA at 5 Edgewater Lane. This is described as a unmitigated noise impact that could occur for up to 6 months. The FEIS is silent on what happens beyond 6 months. We can only assume, therefore,*

*that at all locations noise increases will be 3 dBA or less except for one six month period. Any increases more than 3 dBA outside the 6 month window are not analyzed or disclosed in the FEIS, and therefore not covered by the bounding. Any unmitigated noise impacts longer than 6 months would require additional mitigation and analysis in a Supplemental EIS.*

*Comment G-79: The issue of inadequate baseline noise monitoring raises additional issues. It is reported on page 18-61 of the FEIS that:*

*construction-related activities would be expected to produce noise levels at these five receptor sites (Sites 2, 3, 5, 6, and 7), and at locations near these receptor sites, which would be intrusive and noisy, and result in unmitigated noise impacts.*

*Site # 2, which is somewhere on Thruway property between The Quay and the Thruway, has a maximum noise increase of 10 dBA. Site # 1, which is somewhere in the Tappan Landing development, has a maximum increase of 3 dBA, which is barely perceptible and not an unmitigated impact. The Quay lies between these two receptors. Can those residents expect increases of 3 dBA, which would not be an impact, or can they expect increases of 10 dBA which would be an impact?*

*Comment G-80: If The Quay or Salisbury, for example, wanted to independently verify during construction that the mitigation measures were working as represented in the FEIS there are no accepted (by the Authority) baseline values in the Quay or Salisbury to which to compare. In fact, no independent observer could do monitoring at any of the sites because we do not know the location at which the measurements were taken and the modeling performed.*

*Comment G-81: In fact, if the Authority were to attempt to do noise monitoring during construction in response to complaints there is not sufficient baseline noise monitoring. The noise and vibration monitoring at the 6 sites (3 in Westchester County and 3 in Rockland County) discussed in the Design Build Contract (see Comments G-20 to G-22) could partially solve this problem if noise monitoring were to start prior to construction. Will that be required to occur?*

*Comment G-82: Even if it does occur at those 6 sites how will the Authority respond to complaints from residents not adjacent to those 6 monitoring locations?*

*Comment G-83: It would seem appropriate for the Authority, in consultation with the affected municipalities, to establish a more comprehensive set of baseline monitoring data to which future compliance is compared. More detailed examples of the lack of sufficient site specific baseline noise monitoring is presented in both the Tarrytown*

*and Salisbury comments. We recommend that the Authority and interested parties agree to monitoring protocols that could be followed by any interested party to confirm that mitigation measures are being implemented and mitigate noise levels as represented in the FEIS.*

***Comment G-84: If compliance noise monitoring at 50' is within the limits specified, but the ambient monitoring shows unmitigated impacts that are greater in intensity or duration than disclosed in the FEIS, what will the Authority's response be? Enhanced mitigation? A Supplemental EIS? How quickly will the response be implemented?***

***Comment G-85: We previously commented that Cadna/A would have been a more appropriate construction noise model than RCNM (Comment C 18-92). The response was:***

*The RCNM 1.1 model used for the construction noise analysis is the model recommended and approved by FHWA and NYSDOT for this type of analysis. The Cadna A model is not a model that has been approved by FHWA and NYSDOT for this use.*

***The response is not totally correct. Yes RCNM 1.1 is used and approved by FHWA and NYSDOT, but it not exclusive. As per FHWA's Construction Noise Handbook [http://www.fhwa.dot.gov/environment/noise/construction\\_noise/handbook/handbook06.cfm](http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook06.cfm)***

*More recently there have been very sophisticated noise prediction model programs commercially available such as SoundPLAN (by SoundPLAN LLC of Shelton, WA), Cadna/A (by DataKustik of Munich, Germany), and the Environmental Noise Model (ENM by RTA Technology of Australia). These programs are able to display the predicted noise levels in formats that **provide much more information**, when compared to spreadsheet models, by **graphically displaying results as equivalent noise contour lines**. In doing so, noise levels at any receptor location of interest can quickly be estimated by interpolating the results between adjacent noise contour lines. Moreover, the construction equipment types and working locations can be changed fairly easily in these models, and new noise results can be computed much more quickly than could be done with discrete receptor point models. These sophisticated models also allow for some evaluation of noise reduction effects from various mitigation measures and/or man-made or natural barriers.*

***There is a clear acknowledgement by FHWA that Cadna/A is a more sophisticated model for use in more complex environments. In fact, we question whether Figures 18-13 and 18-14 in the FEIS were developed with Cadna/A. Since RCNM 1.1 could not have been used to generate the contours to develop those figures, the model, methodology, assumptions and input parameters should be disclosed and discussed in***

*a SEIS.*

*Comment G-86: There were several comments on the DEIS on the enhanced transmission of sound over water and at multiple meetings with the Authority. The response that the models account for that is not correct.*

*A recent (2010) noise study by DOE reported that modeled noise levels at a distance of 4.83 km (3.0 mi) modeled over water are 16 dBA higher than modeled at that distance over land. The report citation is:*

*USDOE Report PNNL- 20015  
Offshore Wind Turbines  
Estimated Noise from Offshore Wind Turbine,  
Monhegan Island, Maine  
Environmental Effects of Offshore Wind Energy Development  
November 2010*

*The explanation in the report is quoted as follows:*

*The noise level calculated using the Swedish overwater model is much larger than that calculated with the two land-based models. This is due to the manner in which the model treats the geometric divergence of the acoustic signal. While both land models assume spherical wave spreading throughout the entire region, the Swedish overwater model assumes spherical wave spreading for the first 200 m and then transitions to cylindrical spreading. For spherical wave spreading the sound pressure levels decrease 6 dB with every doubling in distance, while with cylindrical spreading there is a 3 dB reduction with every doubling in distance.*

*The approximate width of the Hudson River at the crossing is 3 mi. This means that pile driving on the Westchester side of the river will be about 16 dBA louder on the Rockland side than the FEIS acknowledges. This also means that pile driving in the center of the River would be about 11 dBA higher on both shores than the FEIS represents in its modeling. Thus, the potential for unmitigated noise impacts extending for greater than 6 months is great and must be addressed. This supports the reasonableness and need for receptor controls to mitigate construction and operation noise.*

*Comment G-87: We raised the issue of receptor controls (Comment C 18-101). The Response (R 18-101) stated:*

*It is not FHWA and NYSDOT policy to fund receptor abatement measures (i.e., building envelope improvements, such as soundproofing or the installation of*



*better quality windows to reduce noise impacts for residents), and NYSTA has no plans to install a bubble over the pool for noise abatement.*

*To say that it is not FHWA policy to fund receptor abatement measures is confusing at best and wrong at worst. It is FHWA's Construction Noise Handbook (2006) that specifically discusses receptor noise abatement measures. Also, other FHWA projects (e.g. the Boston Central Artery) have included receptor noise abatement measures such as replacement windows.*

*A direct quote from the following paper supports and explains this point.*

**Construction noise control program and mitigation strategy at the Central Artery/Tunnel Project** (Received 1999 December 15; revised 2000 July 21; accepted 2000 August 04) Erich Thalheimer

*Acoustical window treatments to improve the noise reduction qualities of residential window openings represents a proven successful means to implement receptor noise control. In general, window openings are the weak link in a structure's external facade allowing noise infiltration into the building. When properly specified and installed, window treatments can provide for a significantly quieter interior noise environment, particularly in multi-story buildings with upperfloors that may not benefit from typical noise barriers.*

*Because (1) construction noise impacts have been understated in duration and (2) difficulties with respect to compliance monitoring and enforcement, there must be consideration of receptor controls as an appropriate means of noise mitigation.*

**Comment G-88:** *It is insufficient and inadequate to say that it is not NYSDOT to fund receptor abatement measures. Policies are developed on the basis of past practice and must be re-evaluated as new information becomes available. It was likely Massachusetts DPW's old policy not to fund receptor abatement, as construction was started on the Central Artery without such a program. The policy was obviously amended to permit it, and it was successfully incorporated into the project. NYSDOT should re-evaluate their policy.*

**Comment G-89:** *A very important question, to which we did not see answered in the Design Build documents, or explained in the FEIS is: what are the consequences to the contractor of non-compliance with the noise mitigation plan?*

**Comment G-90:** *The FHWA Construction Noise Handbook speaks to this point in Section 7.8: On those projects where construction noise impacts require a significant level of physical and operational mitigation, the ability to successfully monitor*

*construction noise is closely tied to the commitment to meet the requirements detailed in the contract specifications and special provisions.*

*To be able to successfully enforce any project's construction noise requirements, it is essential that the project's specifications and special provisions embody the following:*

- Empowerment of staff;*
- Clearly defined consequences; and*
- Dispute resolution mechanism.*

*We believe that these points should be explicitly addressed in the contract documents.*

***Comment G-91: Another recommendation in the FHWA Construction Noise Handbook, Section 7.3.4 is:***

*Another technique worthy of consideration involves the inclusion of incentives and/or disincentives in the contract specifications to encourage contractors to participate in the mitigation program and to make the contractors more accountable for impacts.*

***Can incentives and disincentives be included in the contract? If not, why not?***

#### **Salisbury Point Cooperative Noise Comments**

***Comment S-1: There are no noise monitoring sites in Salisbury. There are two adjacent sites, Site 5, a residential property to the north, and Site 6, on NYS Thruway Authority immediately adjacent to the Thruway. Site 5 is projected to have a maximum construction noise increase of 5-10 dBA, which is a significant adverse impact that could occur for up to six months. Site 6 is projected to have a maximum construction noise increase of 5-9 dBA, which is a significant adverse impact that could occur for up to six months. However, neither of these sites are at all representative of the either the existing conditions at Salisbury, or the potential exposure to construction noise impacts. This deficiency was pointed out in our comments on the DEIS, but was rectified in the FEIS.***

***Comment S-2: One important aspect that the FEIS has not acknowledged in the construction noise analysis is the fact that the different floors, different buildings and different facades at Salisbury will be exposed to different construction noise impacts. With respect to different floors, it is a well documented fact that the various path controls are less effective when the receptors are a higher elevation. For example, Chapter 12 of the FEIS on page 12-20 discusses the reductions at Salisbury due to the new Wall 3. The reductions will be 7 dBA or more at the ground floor, 6 dBA at the 4<sup>th</sup> floor and***

*only 1-4 dBA at the 7<sup>th</sup> floor. We expect that similar effects would be observed with construction noise. This needs to be further analyzed in a Supplemental EIS.*

*Comment S-3: The FEIS does not discuss the different buildings and facades at Salisbury and the different noise environments present. Two of the four buildings have two facades that face the Thruway. They are approximately 300' from the Thruway now, and 200' in the future. The other two buildings are approximately 500' from the Thruway now, and 400' in the future, and are partially shielded by the two intervening buildings. The facades that face the river (and the Rockland staging area, and pile driving will be subject to the greatest construction noise, while the facades facing the Thruway have the highest existing noise levels. The understanding of noise levels at various units throughout all 4 buildings and 7 floors is crucial to any construction and operation noise impact and mitigation assessment. This must be included in the SEIS.*

*Comment S-4: In our comments on the DEIS we requested performance standards based on noise increases at the receptors. We had proposed using the Central Artery as a model which limited increases to 5 dBA over background. The Authority declined and proposed performance standards at 50' from the noise source. The FEIS also presented modeled construction noise increases to bound the potential impacts. It should be noted that none of the residences in Tarrytown are currently projected not to have ANY adverse construction noise impacts, with increases being 3 dBA or less, which is reasonable with respect to the Central Artery limits.*

*Comment S-5: Yet the residential Rockland sites are projected to have significant adverse noise impacts: Site 5 up to 10 dBA; Site 7 up to 7 dBA; and Site 8 up to 4 dBA. It is unfair and unacceptable that mitigation measures have been designed to eliminate adverse impacts in Westchester County, while allowing potential adverse impacts in Rockland County that far exceed any reasonable performance standard. Thus, all Rockland County residential properties, including Salisbury, should be evaluated for receptor controls.*

*Comment S-6: The temporary access road exit from the Rockland Bridge Staging Area in the River is to be constructed immediately to the south of Salisbury. How this road can be constructed, used, and demolished all while not increasing noise levels Salisbury needs to be clarified. To the extent that these clarification needs to be postponed until the Design Build contractor is selected, a Supplemental Noise Analysis needs to be conducted and released for public review. If new noise impacts are identified this should be circulated as a focused SEIS that considers additional mitigation measures.*

*Comment S-7: Response to comment R 12-30 stated that at Salisbury “the terraces are windowed areas and not typical receptor locations”. It should be noted that six of the terraces are not enclosed in any way. In addition, the vast majority of the “windowed” terraces are unheated, un-airconditioned, and separated from the living area by a sliding glass door, so they really function as an outside porch.*

*Comment S-8: None the less the FEIS did add Wall 3, which mitigates noise at ground level receptors at Salisbury. There is a discussion on page 12-20 that discusses the noise reductions at various floors at Salisbury. However, the discussion is not complete in that it does not compare existing and proposed noise levels and is not specific to each build and each building face. Nor does it discuss the additional benefits and costs of constructing a taller wall. These details need to be addressed in a SEIS.*

*Comment S-9: Response to Comment R 12-26 states: “If design studies indicate that reflected noise is a concern, in accordance with NYSTA and NYSDOT practice, barriers with absorptive properties will be recommended.” What is meant by design studies? Who does them? When in the process?*

*Comment S-10: Why could such a study not have been done as part of the FEIS?*

*Comment S-11: Will public review and comment on the design studies be permitted? If not, why not? If so, how will public comment be incorporated?*

*Comment S-12: What is NYSTA and NYSDOT practice? Is in a formal memo that can be shared, or is it an informal practice?*

*Comment S-13: In our comments on the DEIS we reported interior noise levels of 51 to 55 dBA. These values far exceed USEPA’s recommended limit of 45 dBA. That 45 dBA level has been adopted by the City of New York as being protective of the health and welfare of the residents. Given that interior noise levels far exceed a reasonable limit that is protective of health and welfare, and they will be subject to additional construction noise, and traffic noise increases from a roadway moving closer that cannot be fully mitigated, that receptor controls in the form of replacement windows be added.*

*Comment S-14: We received (on 30 August 2012) a 4 page noise memo dated 26 July 2012. It is based on monitoring conducted at Salisbury on 27 April (Fri), 2 May (Wed), 3 May (Thurs), and 5 May (Sat), and at The Quay on 14 May (Mon) and 12 July (Thur). Why was this not an Appendix to the FEIS?*

*Comment S-15: The monitoring data included in the report raises many issues with respect to*

*claims and representations made in the DEIS and FEIS. Figure 12-3 in the FEIS shows a dBA variation in noise levels from 7 am to 6 pm. The data at Salisbury shows a range of 5 dBA on 27 April, 4 dBA on 2 May, and 2 dBA on 3 May. The data at The Quay shows a range of 8 dBA on 12 July. The reasons and significance of this high variability are not discussed in the 26 July memo. We believe that one of the reasons for these wide differences is the fact that the noise transmission over water is dramatically influenced by meteorological conditions. The reasons for these large ranges need to be explained based up a technical analysis. This should be part of the SEIS.*

*Comment S-16: The wide variation of the 7am Leq at Salisbury (varies from 63 to 66 dBA) raises issues as to the accuracy of the modeling of the noise at sites that are along the River. We do not believe that the TNM model can be validated using the Salisbury monitoring data. An attempt should be made to validate it in the SEIS.*

*Comment S-17: If TNM cannot be verified using the Salisbury data we believe that all the noise modeling (both TNM and construction noise) at Salisbury, as well as the Tarrytown riverfront neighborhoods (Irving, The Quay, and Tappan Landing) cannot be considered valid. The issue of enhanced noise transmission over water and the effect of meteorological conditions would need to be explored further.*

*Comment S-18: The fact that the calculated Lmax at 50' was 107 dBA at Salisbury and 100 dBA at The Quay is totally unexplained. Just to be clear on this point – the 107 dBA is the result of a source that is 5 times louder than the one that generated 100 dBA. This is a massive difference that needs to be explained.*

*Comment S-19: This raises several unanswered questions:*

- a. Were there operational or equipment differences that caused or contributed to this variation?*
- b. Were there meteorological differences that caused or contributed to it?*
- c. Did AKRF have observers on or near the pile driving to verify the operational activities?*

*Comment S-20: The fact that with only two data points and such a wide variation (107 vs 100 dBA) that is totally unexplained raises the very real concern that 107 dBA Lmax at 50' may not be the worst case as was represented in the memo and FEIS. If there were two more data points maybe the worst case is really 114 is totally unexplained raises the very real concern that 107 dBA Lmax at 50' may not be the worst case as was represented in the memo and FEIS. If there were two more data points maybe the worst case is really 114 dBA. This point needs to be addressed.*

*Comment S-21: There was no attempt in the memo to develop and implement a monitoring protocol for actually measuring noise levels at 50'. A monitoring protocol at 50' for the pile driving should be developed and described in the SEIS.*

*Comment S-22: Because of the wide variability in the monitoring data at Salisbury, compliance with the 50 dBA limits must be determined by monitoring at 50', not by monitoring at remote receptors and then calculating what the values at 50' likely were. The Authority needs to develop and publically release their compliance noise monitoring protocols and data.*

*Comment S-23: The fact that an important opportunity was lost to concurrently monitor pile driving at 50' and at longer distances (to be able to calculate actual attenuation rates) was missed raises serious questions as to whether the Authority takes the issue of noise attenuation over water, and mitigation compliance seriously. We have previously brought these issues up in comments on the DEIS and at subsequent meetings with AKRF and the Authority. The wide range of monitored data and modeling calculations presented in the 26 July memo demonstrate conclusively the Authority needs to address these concerns on a technical basis in a SEIS. Ignoring the concerns that we raise when your own unexplained data supports these concerns is no longer a viable option.*

Should you have any questions please do not hesitate to contact me at 732-616-4557 or via email at [brooke@mackassociatesllc.com](mailto:brooke@mackassociatesllc.com).