ATTACHMENT

3.1.H  NYSDOT BASE SCOPE OF SERVICES, VERSION 2000-1
5030 Noise Study  (Version 2000-1)

[This task applies to all Type I projects as defined by 23 CFR 772 (the Regulation) and all NEPA Class I and III or SEQRA Non-Type II projects.]

[To properly customize this task, it is necessary to know whether the project meets the 23 CFR 772 definition of a "Type I Project" or is a NEPA Class I or III, or a SEQRA Non-Type II project. These factors determine which of three noise impact definitions to specify in Subtask 5035, and this in turn could affect whether or not to include a noise abatement analysis (Subtask 5036).]

The Consultant shall perform a noise study and document the findings, as specified below and in accordance with the Environmental Procedures Manual (EPM).

5031 A. The Consultant shall identify existing activities, developed lands, and undeveloped lands for which development is planned, designed, and programmed, which may be affected by noise from the highway. The Consultant shall determine existing land use along both sides of all roads within the project limits and assign each land use area (rather than each site or set of points) to a corresponding Activity Category listed in Table 1 of the Regulation.

B. Within each area delineated above, the Consultant shall identify each particularly sensitive individual noise receptor, such as a school, church, hospital, library, auditorium, park, or preserved natural area.

[Choose EITHER Subtask 5032 OR Subtask 5033 below:]

5032 [EITHER: For nearly all projects, especially a larger scale, more complex project or a project in an urban or suburban area:] The Consultant shall determine the existing noise levels throughout the project study area by field measuring noise levels using the procedures specified in the NYSDOT manual Field Measurement of Existing Noise Levels. The Consultant shall propose appropriate measurement locations to the State for approval prior to measurement. The Consultant shall compile the measurement results and existing noise levels in a format acceptable to the State.

5033 [OR: Where noise impacts and abatement are clearly not anticipated (rarely, on a very small project or a project in a rural area), and the Department determines in advance that existing noise levels may be calculated instead of measured:] The Consultant shall calculate existing noise levels throughout the project study area in accordance with the FHWA Highway Traffic Noise Prediction Model (Report No. FHWA-RD-77-108) and its software STAMINA 2.0 or the FHWA Traffic Noise Model Version 1.1 (FHWA TNM 1.1) and compile this information in a format acceptable to the State. (Note that STAMINA 2.0 cannot be used after December 2002).

5034 The Consultant shall calculate future traffic noise levels within the project study area for each design alternative and the null alternative. These predictions shall be consistent with the FHWA Highway Traffic Noise Prediction Model (Report No. FHWA-RD-77 -
108) and shall use the STAMINA 2.0 computer program or the FHWA Traffic Noise Model Version 1.1. (Note that STAMINA 2.0 cannot be used after December 2002). In predicting noise levels and assessing noise impacts, traffic characteristics which will yield the worst-case hourly traffic noise impact on a regular basis for the design year shall be used. Traffic volumes, speeds, and classifications (will be provided by the State.) (will be provided by the Consultant under Subtask 1183 of this scope of services [be sure to include a Subsection 1100 containing this Subtask.].) The Consultant shall compile the results of these predictions in a format acceptable to the State, either graphically (i.e., noise contours) or numerically in tabular form.

5035 The Consultant shall determine the traffic noise impacts for each design alternative and the null alternative. The Consultant shall quantify this determination to include both the type (e.g., residential, nonresidential, other) and number or extent of receptors impacted by each design alternative and the null alternative.

For this project a noise impact occurs wherever and whenever [Of the following three impact definitions, choose only the one that applies.]

[EITHER: on a Type I Project as defined by 23 CFR 772, including a 100% State funded project meeting this definition] the predicted design year traffic noise level approaches within 1 dBA of the Noise Abatement Criteria or exceeds the existing noise level by 6 dBA or more.

[OR: on a NEPA/SEQRA project not defined as a Type I project in 23CFR772 that contains highway work, substitute] "the predicted design year traffic noise level exceeds the existing noise level by 6 dBA or more."

[OR: on a NEPA/SEQRA project not defined as a Type I in 23CFR772 that contains no highway work (e.g., park and ride lot, bus stop or bridge rehab, substitute] "the project itself causes an increase in noise level equal to or greater than 3 dBA."

It is tentatively assumed that a noise abatement analysis (will) (will not) be required.

5036 [Include this Subtask only if assuming that an abatement analysis will be required. Abatement consideration is necessary only where frequent human use occurs and a lowered noise level would be of benefit.] For the impacted areas the Consultant shall examine and evaluate alternative noise abatement measures to reduce or eliminate the noise impact.

In accordance with the FHWA Noise Regulation 23 CFR 772 and the NYSDOT Noise Analysis Policy in the EPM, the Consultant shall analyze the acoustical and cost effectiveness of the various abatement measures and determine which measures are feasible and reasonable. The consultant shall recommend those specific measures that are feasible and reasonable at specific locations. In addition, for those noise impacts for which no apparent solution is available, the Consultant shall discuss why abatement will not be recommended.
Analysis of traffic noise abatement shall consider the feasibility and reasonableness of each of the following:

[All of the following items must always be addressed, even in those instances where most or all abatement measures are not feasible and only minimal analysis and documentation is required.]

- Traffic management measures (e.g., prohibiting certain vehicle types, restricting time use for certain vehicle types, modifying the speed limit, or designating an exclusive lane)
- Alteration of horizontal or vertical alignments
- Acquisition of (predominantly unimproved) real property or interests therein to create a buffer zone pre-empting development that would be adversely impacted by traffic noise
- [Include this item only on a project where potential receptors include a public school.] Noise insulation of a publicly owned school building
- Noise barriers, including associated landscaping and ROW acquisition

[Include the following paragraph only if barrier analysis is being assumed. Noise barrier analysis is typically only necessary on a more complex project where access control is possible.] The Consultant shall use the FHWA Traffic Noise Model (TNM) and its current software TNM 1.1 to determine noise barrier heights and lengths. During Design Phase IV, the Consultant shall establish specific geometric parameters (i.e., height, length, location, etc.) to determine which locations will be further examined in detailed design.

The abatement analysis shall include every reasonable effort to achieve a substantial noise reduction of 10 dBA or more. However, a minimum reduction of 7 dBA at the most benefitted receptor must be achieved.

All evaluation, recommendation, and (Subtask 5039) documentation of abatement measures shall be as specified by the NYSDOT Noise Analysis Policy (NAP) in the EPM.

5037 In accordance with the NAP, the Consultant shall analyze construction noise caused by the project and recommend specific appropriate construction noise abatement measures for the plans and specifications.

5038 [Include this Subtask only if necessary before distributing the Design Approval Document to outside agencies.] In accordance with the NAP, the Consultant shall prepare informational material, useful in preventing future impacts, to be submitted to local officials having jurisdiction in the project area.
A. The Consultant shall document this study in a Noise Study Report, to be presented as a technical appendix to the DAD as well as a narrative text for the noise portions of the environmental document.

B. The Consultant shall submit this report in draft form to the State for preliminary review and revise it per comments received before it is distributed to the public [if Subtask 5038 is included add:] and before the Subtask 5038 informational material is distributed.