POLICY IMPLEMENT

STATE OF DELAWARE

DEPARTMENT OF TRANSPORTATION

P.I. Number D-03

Transportation Noise Policy

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Primary Responsibility:

Director, Transportation Solutions

Transportation Noise Policy

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I.INTRODUCTION

This document contains the Delaware Department of Transportation (DelDOT) noise policy regarding highway traffic noise and construction noise, and describes how DelDOT will implement the requirements of the Federal Highway Administration (FHWA) Noise Standards, as set out in federal regulations at 23 CFR Part 772. The policy was developed by DelDOT and reviewed and concurred with by the FHWA.

Highway traffic generated noise is typically a combination of noise composed of; (1) tire and pavement interaction, (2) engine operation, and (3) exhaust expulsion. During the rapid expansion of the highway and roadway system in the 20th century, communities began to recognize that highway traffic noise and construction noise had become important environmental impacts, and that this noise could sometimes interfere with normal human activities. This document will provide the guidelines that DelDOT will comply with, in determining how and under what circumstances highway and construction generated noise will be mitigated.

II. PURPOSE

This document describes the manner in which DelDOT will implement and comply with the requirements of the federal regulations at 23 CFR Part 772, in order that federal funds may participate on highway improvement projects. These federal regulations provide parameters within which each State may set guidelines that are most appropriate for that particular State. Additionally, the federal regulations provide guidance on how noise impacts will be modeled, in order that application of noise standards will be generally uniform throughout the United States. This policy is not mandatory for any projects that are 100 percent State funded and where no FHWA approvals are necessary.

III. DEFINITIONS

Benefited Receptor – The recipient of an abatement measure that receives a noise reduction at or above 9 dB(A). A benefited receptor shall be classified as either an impacted receptor or a non-impacted receptor that receives a 9 dB(A) or greater reduction.

Common Noise Environment – A group of receptors within the same Activity Category in Table 1 that are exposed to similar noise sources and levels; traffic volumes, traffic mix, and speed; and topographic features. Generally, common noise environments occur between two secondary noise sources, such as interchanges, intersections, or cross-roads.

Date of Public Knowledge – The date of approval of the NEPA Environmental Document; Categorical Exclusion (CE), Finding of No Significant Impact (FONSI), or Record of Decision (ROD), as defined in 23 CFR Part 771.

Design Year – The future year used to estimate the probable traffic volumes for which a roadway is designed.

Existing Noise Levels – The worst noise hour resulting from the combination of natural and mechanical sources and human activity usually present in a particular area.

Feasibility – The combination of acoustical and engineering factors considered in the evaluation of a noise abatement measure.

Impacted Receptor – The recipient that has a noise impact in accordance with the Noise Abatement Criteria as set out in Table I, or experiences a substantial increase noise impact.

L10 – the sound level that is exceeded 10 percent of the time (the 90^{th} percentile) for the period under consideration, with L10(h) being the hourly value of L10.

Leq – The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same period, with Leq(h) being the hourly value of Leq.

Multifamily Dwelling – A residential structure containing more than one residence. Each residence in a multifamily dwelling shall be counted as one receptor when determining impacted and benefited receptors.

Noise Barrier – A physical obstruction or any other thing that is constructed between the highway noise source and the noise sensitive receptor(s) that lowers the noise level, including stand alone noise walls, noise berms (earth or other material), and combination berm/wall systems.

Noise Reduction Design Goal – The desired noise reduction of 9 dB(A) difference between future build noise levels without abatement and with abatement. .

Permitted – A definite commitment to develop land with an approved specific design of land use activities as evidenced by the issuance of a formal building permit.

Privacy Fence – A barrier, approximately 8 to 12 feet in height, that is normally made of wood boards spaced closely together.

Property Owner – An individual or group of individuals that holds a title, deed, or other legal documentation of ownership of a property or residence.

Reasonableness – The combination of social, economic, and environmental factors considered in the evaluation of a noise abatement measure.

Receptor – A discrete or representative location of a noise sensitive area(s), for any of the land uses listed in Table 1.

Residence – A dwelling unit. Either a single family residence or each dwelling unit in a multifamily dwelling.

Statement of Likelihood – A statement provided in the NEPA environmental clearance document based on the feasibility and reasonableness analysis completed at the time the document is being approved.

Substantial Construction – The granting of a building permit, prior to right of way acquisition or construction approval for the project.

Substantial Noise Increase – An increase in noise level of 12 dB(A) in the design year over the existing noise level.

Traffic Noise Impacts – Design year build condition noise levels that approach within 1 dB(A) or exceed the Noise Abatement Criteria (NAC) listed in Table 1 for the future build condition; or design year build condition noise levels that create a defined substantial noise increase over existing noise levels.

Type I Project – (1) The construction of a highway on new location; or,

(2) The physical alteration of an existing highway where there is either:

(i) A substantial horizontal alteration; being a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or,

(ii) A substantial vertical alteration; being a project that removes shielding therefore exposing the line of sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor.

(3) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a High Occupancy Vehicle lane, High Occupancy Toll lane, bus lane, or truck climbing lane; or,

(4) The addition of an auxiliary lane, except for when the auxiliary lane functions as a turn lane; or,

(5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or,

(6) Restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane, except for when the auxiliary lane functions as a turn lane; or,

(7) The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

(8) If a project is determined to be a Type I project under this definition, then the entire project area as defined in the NEPA environmental document is a Type I project.

Type II Project – A Federal or Federal-aid highway project for noise abatement on an existing highway. For a Type II project to be eligible for Federal-aid funding, the highway agency must develop and implement a Type II program in accordance with section 772.7(e).

Type III Project – A federal-aid roadway project that does not meet the classification of a Type I or Type II project. Type III projects do not require a noise analysis.

IV. APPLICABILITY

This policy applies to all federal or federal-aid highway projects authorized under Title 23, United States Code. It applies to any project that requires FHWA approval, regardless of funding source, or is funded with federal-aid highway funds. It also applies to federal projects that are administered by Local Public Agencies, as well as DelDOT. For purposes of this policy, a bicycle lane does not qualify as an auxiliary lane.

Due to the long lead time that is usually necessary to complete a traffic noise study, the need for such a study should be identified as early as possible in the NEPA environmental process. One of the first issues that should be addressed in project scoping is whether or not the project qualifies as a Type I project. If there are any questions about whether a particular project is subject to this policy or the FHWA Noise Standard, the appropriate DelDOT contact would be the DelDOT, Chief Engineer.

V. TRAFFIC NOISE PREDICTION

In an effort to determine what the traffic noise impacts of any project might be, DelDOT will utilize the FHWA Traffic Noise Model (TNM) criteria. This modeling information is contained in the "FHWA Traffic Noise Model" Report No. FHWA-PD-96-010, including Revision No.1, dated April 14, 2004 (TNM 2.5). If appropriate, DelDOT could also utilize any other model determined by the FHWA to be consistent with the methodology of the FHWA TNM.

In preparing a noise impact study, DelDOT will predict and evaluate future noise levels for all of the various build alternatives that are under consideration, and that are defined as reasonable, in the NEPA environmental document. In performing the TNM analysis, DelDOT will utilize the average pavement type unless an alternative pavement type is approved for use by FHWA. Additionally, DelDOT will not utilize presentation of noise contour lines in preparing the study of traffic noise impacts.

FHWA regulations require use of the TNM to determine at what point during the design year would yield the worst traffic noise impacts, and utilize those traffic characteristics in performing the noise impact modeling. This means that the model will not necessarily rely solely on the highest traffic level, but on the traffic level (taking into account the mix of automobile and truck traffic) in the design year that is

most likely to yield the highest and most significant level of noise. Additionally, if traffic levels are seasonal, then that time of season with the greatest traffic would be used in the model.

VI. ANALYSIS OF TRAFFIC NOISE IMPACTS

For Type I projects on existing highway expansion projects, DelDOT will determine existing noise levels by modeling. For new alignment projects, DelDOT will take measurements at representative locations to determine existing noise levels. Additionally, for new alignment projects, appropriate and representative existing noise readings will be taken for each alignment that has been selected for detailed study in the NEPA document. Representative noise reading locations will be selected based on an analysis of the quantity and disbursement of the various noise receptors and land uses as described in Activity Table I. DelDOT will assure that the noise monitoring equipment will meet all of the requirements of the American National Standard Specifications for Sound Level Meters, ANSI S 1.4-1983 (R1991), Type I or Type II, and also meet all requirements as may be defined by the FHWA. Measurements will be taken consistent with the methodologies provided in *Measurement of Highway Related Noise* – FHWA-PD-96-046.

When predicting future noise levels, DelDOT will calculate readings using the average pavement type selection from the TNM Model, unless approval for some other pavement type has been obtained from the FHWA. For projects with any unusual or extraordinary circumstances (such as a broad corridor study), DelDOT will consult with the FHWA and other participating agencies as to the most appropriate methodology for noise impact analysis.

The process for traffic noise analysis will first require that plans and maps of the project area be obtained and all potentially noise impacted areas and activities will be identified, whether involving developed or undeveloped land. The project limits will be defined in order to determine the traffic noise impacts for the design year, for each of the build alternatives that have been designated for detailed study.

Measurements of noise levels will be determined, using the appropriate ANSI Type I or Type II integrating sound level meter. Validation of predicted noise levels is required to the greatest extent practicable, and will be obtained by comparison between predicted and measured noise levels. Computer modeling will be considered accurate if computed levels are within 3 dB(A) of the field recordation. Noise levels will be recorded for a period of time (ranging from a minimum of thirty minutes to twenty-four hours) to obtain a representative sample of ambient noise. Classification counts (cars, medium trucks, and heavy trucks) and vehicular speeds will be documented in the field.

In performing traffic noise analysis, DelDOT has determined that the “approach level” for noise abatement criteria will be considered to be 1 dB(A) less than the criteria level for Activity Categories as set out in NAC Table I.

In performing traffic noise analysis, DelDOT has determined that a “substantial noise increase” for noise abatement criteria will be considered to be 12 dB(A) over existing noise levels; with this criterion being independent of the absolute noise level.

A traffic noise analysis will be completed for each category of land use as set out and described in the Noise Abatement Criteria Table I, as discussed below;

Activity Category A –

This activity category includes the exterior impact criteria for lands on which serenity and quiet are of extraordinary significance and serve an important public need, and where preservation of those qualities is essential for the area to continue its intended purpose. In situations where DelDOT believes that such a defined activity will sustain a project noise impact, a justification request will be submitted on a case-by-case basis to the local FHWA Division Office.

Activity Category B –

This activity category includes the exterior impact criteria for single family and multifamily residential land uses. Exterior noise measurement readings will taken and modeling will be performed, as close to the roadway as practical in order to provide an absolute worst case noise level adjacent to the roadway corridor, and allow for minimal influence from background noise sources.

Activity Category C –

This activity category includes the exterior impact to a wide variety land use facilities, as generally described in Table I. As with residential land uses, exterior noise measurement readings will typically be taken, and modeling performed, as close to the roadway as practical. If the circumstances of the activity dictate that some other location is preferable for noise impact readings, DelDOT will submit a request for concurrence on a case-by-case basis to the local FHWA Division Office.

Activity Category D –

This activity category applies to interior noise impacts on those land uses that are generally described in Activity Category C, and which also have interior uses. The application of this type of noise impact analysis will only be conducted after exhausting all outdoor analysis options. DelDOT will only utilize Activity Category D in situations where no exterior activities will be affected by traffic noise, or where exterior activities are so far removed from the traffic noise as to be unaffected. Noise monitoring devices under this category, will be placed in representative locations that are the most sensitive for the

activity purpose. Since noise impact analysis under this category will typically involve unusual situations, DelDOT will request concurrence on a case-by-case basis from the local FHWA Division Office.

Activity Category E –

This activity category applies to exterior locations for developed activities that are generally less sensitive to highway noise, such as; hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in Activity Categories A-D, or F. As with residential land uses, noise monitoring or modeling will occur as close to the roadway as practical.

Activity Category F –

This activity category applies to land uses that are not generally sensitive to highway noise, such as described in NAC Table I. Any land use that falls into this category will be deemed to have no need for noise abatement analysis.

Activity Category G –

This activity category applies to all lands that are undeveloped and also do not have any development plans which have been issued a bona-fide building permit by the effective date of public knowledge for the project. Although noise impact mitigation will not be considered for these lands, representative modeled noise readings will be made in order that local planning officials will be aware of future roadway noise impacts if, and when, they consider permitting future development. The representative noise modeled results will be of an accuracy to allow local planning officials to envision the extent of the noise impacts, by describing the modeled sites in distance relation to the proposed edge of the roadway traveled way.

If undeveloped land has been issued a bona-fide building permit by the date of public knowledge for the project, then the land will be assigned to the appropriate developed land Activity Category. In this situation, the land will be treated and analyzed in the same manner as developed lands in that Category.

VII. ANALYSIS OF NOISE ABATEMENT MEASURES

Whenever traffic noise impacts are identified, DelDOT will consider and evaluate noise abatement for feasibility and reasonableness. This analysis of potential noise abatement measures will take into account the overall social, economic, and environmental effects of roadway noise. In its analysis, DelDOT will give primary consideration to exterior areas where frequent human use occurs. In addition to consideration of noise barriers, DelDOT will also consider other noise abatement measures such as; traffic management measures, alteration of roadway horizontal and vertical alignments, or acquisition of real property for buffer zones. In evaluating noise barrier placement, consideration will be given to a

reasonable variety of noise barrier dimensions, to determine what height and width of barrier provides the greatest overall value, in both economic and social terms.

Placement of vegetation barriers or privacy fences may be considered as an aesthetic type of mitigation factor, but will not be considered as noise reduction barrier. In discussions with project impacted property owners, DelDOT officials will explain the opportunity to place vegetation barriers or privacy fences, which may be more aesthetically appealing than a noise barrier. It will always be pointed out that such vegetation or fences may not reduce roadway noise and do not qualify as a noise abatement measure under this policy. Property owner sentiment will be documented and will always be considered in making a final decision on project noise abatement measures.

Use of experimental quieter pavements will not be considered as a noise abatement measure unless prior approval is received from the FHWA.

VII. FEASIBILITY

In making a determination on feasibility of placement of noise barriers, the entire project will be analyzed for a reasonable breakdown of individual and separate common noise environments. This may result in the feasibility being treated on a total project basis for compact projects, or the project may be broken down into several separate individual common noise environments. In general, each common noise environment, neighborhood, or cluster of close geographic land uses within a project will be evaluated on an individual basis, in terms of feasibility of providing a noise barrier.

For each common noise environment, neighborhood, or defined cluster of land uses, DelDOT will only consider noise abatement to be effective for an individual impacted receptor, if the noise barrier can achieve a minimum noise reduction of at least 5 dB(A). Additionally, noise barrier implementation will only be considered if there are at least 3 (three) impacted receptors in the common noise environment, neighborhood, or cluster of land uses where this 5 dB(A) noise reduction is achievable. This determination is based on the understanding that the costs of noise barrier construction for less than 3 (three) impacted receptors will seldom, if ever, be in the public interest. Accordingly, if noise barrier design cannot achieve at least a 5 dB(A) noise reduction for at least 3 (three) impacted receptors, then the construction of a noise barrier is not deemed to be acoustically feasible.

In considering noise barrier design, DelDOT will take into account a variety of factors that may limit the ability to achieve substantial noise reduction. These factors include but are not limited to the following; safety conditions, barrier height, access requirements for driveways and entrances, maintenance requirements, topography, drainage, utilities, and other noise sources in the area. Design engineers will always consider the various site design requirements as set out in the AASHTO guide "*A Policy on Geometric Design of Highways and Streets*", often and commonly referred to as the "Green Book".

IX. REASONABLENESS

DelDOT will evaluate three factors or "tests", when determining whether a noise mitigation measure meets the definition of being reasonable under this policy. Each of the following three tests must be individually met, in order for the construction of a noise barrier to be considered a reasonable expenditure of public funds;

1. Viewpoints of Property Owners and Residents

One of the factors that must be considered is the viewpoints of the property owners and residents that are either impacted or non-impacted "benefited receptors" (those receptors that will receive a reduction of at least 9 dB(A)) of the proposed noise barrier. The viewpoints of the "benefitted receptors" are quite important as many may find the placement of the noise barrier as being more detrimental to their property than the noise impacts themselves. In soliciting receptor opinions regarding the placement of noise barriers, DelDOT will attempt to describe the nature and extent of the barrier, in order that the individuals may best visualize how the barrier will appear to them, once constructed. Depending on the individual circumstance, DelDOT may also include an option for consideration of a vegetation/privacy fence placement, as opposed to a noise barrier.

In soliciting the viewpoints of identified "benefitted receptors", DelDOT will attempt to contact the owners (and residents, if separate) of each of the properties by mail. The mail package will contain information to allow the owner/resident to be able to develop an informed viewpoint regarding the potential construction of the noise barrier. The mail package will also request a response regarding the desirability of having the noise barrier constructed. A similar package will be delivered to any appropriate local government official and to any appropriate community group. The package will provide contact information for DelDOT representatives who can discuss noise barrier issues.

In order to assure that the viewpoints of the "benefitted receptors" are considered, DelDOT will compute the total number of owners and residents in the "benefitted receptor" category, and will not make a decision on reasonableness unless at least 60 (sixty) percent of the total have replied in some manner. In considering the receptor viewpoint, only an explicit "no" to noise barrier construction will be considered as opposing the construction of a noise barrier. If more than 50 (fifty) percent of the total number of responding "benefitting receptors" oppose the construction of the noise barrier, then construction of the barrier will not be considered reasonable. If a reply rate of 60 (sixty) percent is not initially achieved, an additional round of public involvement will be implemented.

The views and opinions of groups and individuals other than "benefitted receptors" will be documented as to opinions on noise barrier construction; however, such opinions will not have an effect on the determination of reasonableness within this policy.

2. Noise Reduction Design Goals

In order for any noise barrier construction to be considered reasonable under this policy, the barrier must provide at least a 9 dB(A) reduction in noise to at least 25 (twenty-five) percent of the "benefited receptors". In establishing this design goal of a 9 dB(A) noise reduction, DelDOT takes into account that this level of noise reduction is noticeable enough to justify construction to even a few "benefited receptors". Therefore, if at least 25 (twenty-five) percent of the "benefited receptors" will receive a noise reduction of at least 9 dB(A), this will constitute a benefit that meets one of this noise policy's three reasonability tests.

3. Cost Effectiveness

In determining whether or not the actual cost of the proposed noise barrier meets the "reasonableness" test for being cost-effective, DelDOT will consider the size in terms of square footage of the barrier that will achieve effective noise abatement. This will typically involve calculating the length times the height of the proposed noise barrier. Often times various lengths and heights of barrier will achieve differing results of noise abatement, which will have to be compared and evaluated against one another. Additionally, different noise barrier material components should be considered, taking into account the cost, effectiveness, and appearance of the various barrier materials. An earth berm noise barrier will always be considered in the analysis, if there is adequate available right of way to construct the earth berm. Depending upon the circumstances of the individual situation, more than one noise barrier configuration may be considered and evaluated for cost-effectiveness. In such circumstances, all relevant analysis of noise wall options will be presented in the noise study report.

For each relevant noise wall configuration that meets the "noise reduction design goal" as stated in test number 2 (two) above, a cost effective calculation will be made. The calculation will consider the number of benefited receptors who also meet the definition of being impacted, and divide that number into the total cost of the proposed noise barrier. The cost of proposed noise barrier will be based on the most current and available construction cost figures. If the cost of the barrier is calculated to be less than $25,000 per impacted and also benefited receptor, then the cost of the noise barrier will be considered to meet the cost reasonableness test. If more than one wall configuration will meet the cost reasonableness test, then each option will be considered and DelDOT will select the one option that appears to be in the best public interest.

If the cost effectiveness test is not met for the total number of impacted and also benefited receptors at any particular location, DelDOT will modify the calculation formula to take into consideration any benefited receptors that do not qualify as impacted receptors. Each of these benefited receptors that do

not meet the definition of being impacted will be given a weighted value equal to 25 (twenty-five) percent of a benefited and impacted receptor.

After the date of issuance of the DelDOT Noise Policy, the cost reasonableness test will be reevaluated for inflation and other factors, at an interval not to exceed five years.

X. DATA COLLECTION

In accordance with 772.13(f), DelDOT will maintain individual noise barrier inventory statistics which include the following;

1. Type of individual noise abatement structure (earth berm, precast concrete, cast in place concrete, block, brick, metal, wood, fiberglass, combination, transparent plastic, opaque plastic, or other).
2. Height and length of the structure
3. Average insertion loss/noise reduction as reported by the model in the noise analysis
4. Noise Abatement Criteria (NAC) category(s) protected
5. Foundation – ground mounted or on structure
6. Location of the noise barrier structure (County, Route, and Milepost)
7. Year of construction
8. Project Type – typically Type I
9. Features – such as absorptive, reflective, surface texture, etc.
10. Cost – in terms of overall cost and unit cost per square foot

XI. NOISE CONSIDERATIONS IN NEPA DOCUMENTATION AND PROJECT DEVELOPMENT

Before a NEPA environmental document for any Type I project can be approved, DelDOT will identify any noise abatement measures which are feasible and reasonable, and which are likely to be included in the project. Those noise impacts for which no noise abatement measures are feasible and reasonable will also be identified.

Any noise study referenced or contained in the NEPA environmental document that identifies noise impacts, along with feasible and reasonable alternatives, shall be completed to the extent that design information on the alternative(s) under study is available at that point in time. The NEPA document will contain a statement of likelihood, stating that feasibility and reasonableness determinations are subject to change due to alterations in project design after approval of the environmental document. This statement of likelihood will include the preliminary location and physical description of noise abatement measures determined feasible and reasonable in the preliminary analysis. The statement will also indicate that final determination of abatement measures will occur during the project's final design and the public involvement processes.

For projects that are being undertaken in a design-build format, the preliminary technical noise study will document all considered and proposed noise abatement measures for inclusion in the NEPA document. Final design of design-build noise abatement measures will be based on the preliminary noise abatement design developed in the technical noise analysis. Noise abatement measures will be considered, developed, and constructed in accordance with this Noise Policy, and in conformance with the provisions of federal regulations at 40 CFR1506.5(c) and 23 CFR 636.109.

The contribution of additional funds from a third party will not be allowed if such contribution is needed to bring the cost of construction of the noise abatement measure up to meet the definition of feasible and/or reasonable, in accordance with the definitions as stated in this Noise Policy. Third party funding would only be acceptable in order to make functional enhancements, such as absorptive treatment and access doors or aesthetic enhancements, to a noise abatement measure already determined to be feasible and reasonable.

XII. FEDERAL PARTICIPATION IN NOISE MITIGATION

In accordance with the provisions in federal regulations as set out at 23 CFR Part 772, federal funds will participate in Type I projects when; (1) traffic noise impacts have been identified, and (2) when abatement measures have been determined to be feasible and reasonable in accordance with the provision of this Noise Policy. As DelDOT has not requested approval of a Type II noise abatement program from the FHWA, federal funds will not participate in any such defined Type II projects.

DelDOT will proceed with project development with the understanding that the FHWA will not approve the project plans, specifications, and estimates unless appropriate noise impact analysis has been performed, along with incorporation of feasible and reasonable noise abatement. The FHWA, upon approval of this noise policy, has agreed to allow participation of federal funds in all noise abatement

measures that are deemed to be feasible and reasonable within the definition of this Noise Policy pursuant to 772.15(a).

The costs of noise abatement measures will be eligible for federal-aid participation in the same pro rata share as that for the system on which the project is located. Any of the following measures may be considered to be an eligible item of cost;

1. Construction of noise barriers, including acquisition of property rights, either within or outside the highway right-of-way.

2. Traffic management measures including, but not limited to traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.

3. Alteration of horizontal or vertical alignments.

4. Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise.

5. Noise insulation of Activity Category D land use facilities listed in Table 1. (Post-installation maintenance and operational costs for noise insulation would not be eligible for federal-aid funding participation).

XIII. INFORMATION FOR LOCAL OFFICIALS

For all Type I projects, if at the time that the noise study is being prepared there are properties adjacent to the project that are defined as undeveloped, estimates will be made to demonstrate the projected noise levels at various distances from the edge of the nearest travel lane. Based on these estimates, the noise study will describe those land areas that are projected to fall within the various noise levels for all property use activities as described in Table I. This information will be provided to local planning officials so that they may utilize this data in approving future property development. The intent of this exercise is to provide the local officials adequate information to hopefully minimize future traffic noise impacts on currently undeveloped lands.

In conjunction with this noise study effort on Type I projects, DelDOT Project Development staff will make arrangements to meet with appropriate local officials to explain the meaning of the noise impact

study, and to explain the DelDOT philosophy on noise compatible planning concepts. Additionally, the DelDOT staff will explain the difference between Type I and Type II projects, so that there is no misunderstanding as to DelDOT's future obligations related to noise impacts on currently undeveloped land.

DelDOT staff will notify planning officials in each County of the revised noise policy and offer to present a summary of the DelDOT noise policy at an appropriate venue. Additionally, DelDOT will contact each of the Metropolitan Planning Organizations (MPO's) and make them aware of the availability of DelDOT staff to discuss noise issues at any of their meetings, as appropriate. County and MPO officials will also be advised that the DelDOT Noise Policy is posted on the DelDOT website.

XIV. CONSTRUCTION NOISE

During the various activities in the project development process, including the NEPA process, the project managers will consider all of the activities that occur on property adjacent to the project. If any of the activities would fit into Activity Category A in Table 1, then special noise considerations will be given to all project construction actions. In those circumstances, project managers will meet with representatives of the impacted property and discuss ways in which noise impacts may be mitigated. These actions may include items such as; construction time restrictions, temporary noise mitigation features, noise dampening equipment, etc.

In accordance with existing fiscal year Bond Bill epilogue language, or as may be superseded by future updates to the Delaware Code, if road construction activities are being considered for time periods past 9:00 PM, or before 7:00 AM in areas immediately adjacent to a residential neighborhood, then DelDOT representatives will first insure that residents of the neighborhood are notified in a timely manner of the DOT's desire to undertake such work. DelDOT will explain the benefits and costs of the extended work hour activity, along with an explanation of how the extended work activity will be implemented. The explanation will include a description of the proposed work to be conducted, and the proposed use of any equipment that may cause noise, vibration, or odor disruptions to the neighborhood, and an estimate of the time required to complete the project. DelDOT may proceed with its extended hours of work if it does not receive a significant number of objections from the notified residents. Additionally, and pursuant to the provisions of the Delaware Code, DelDOT will offer temporary relocation to any residents who request such relocation.

DelDOT may proceed with its extended hours of work so long as jack hammering or other high noise activities do not impose an excessive nuisance to residents within the designated work zone.

Regardless of the time that construction is underway, if DelDOT determines that the project construction noise will exceed any applicable noise ordinances of the appropriate jurisdiction, DelDOT will ensure that it seeks and receives a waiver from that jurisdiction before commencing work.

XV. Effective Date

This Policy shall become effective 30 days after signature by the Secretary, or if applicable upon compliance with the regulatory process required by the Administrative Procedures Act (29Del.C. Ch.101.)

TABLE 1 TO PART 772-NOISE ABATEMENT CRITERIA
(Hourly A-Weighted Sound Level_decibels (dB(A))[1]]

Activity Category	Activity Leq(h)	Criteria[2] L10(h)	Evaluation Location	Activity Description
A…….	57	60	Exterior…….	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[3]……..	67	70	Exterior…….	Residential.
C[3]	67	70	Exterior…….	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	55	Interior…….	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radios studios, recording studios, schools, and television studios.
E[3]	72	75	Exterior…….	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	…….	…….	…….	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, ship yards, utilities (water resources, water treatment, electrical), and warehousing.
G	…….	…….	…….	Undeveloped lands that are not permitted.

[1]Either Leq(h) or L10(h) (but not both) may be used on a project.

[2]The Leq(h) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

[3]Includes undeveloped lands permitted for this activity category.

SAMPLE EXTENDED WORK HOURS LETTER

Dear Delaware Resident,

Delaware Department of Transportation (DelDOT) procedures require that potentially impacted residents have the opportunity to comment whenever DelDOT is contemplating extended time construction work along their street or roadway. Residents immediately adjacent to the proposed work area can inform DelDOT whether or not they believe it would be beneficial to have extended time work performed.

You are receiving this letter and attached survey because PROJECT has been selected as a situation that would benefit from construction activities being performed with extended hours between AM and PM. The work is scheduled to begin around DATE , and the construction should last about TIMEFRAME. DelDOT is proposing this extended work time construction activity for several reasons, including shorter overall construction duration and less impact to the traveling public. Historic data indicates that there is typically a 50% increase in project duration when work is performed during restricted daytime versus extended hours, due to less available hours to perform the work during the day. For example, a project that would normally take about four weeks to complete with extended time work operations, would take about six weeks to complete if limited to work during the typical daytime hours only.

The work on this project will vary, and proceed in an orderly manner. The nature of road construction is that it is a moving operation, and the construction activity will not be in front of any one home for the entire duration of the project.

Attached you will find a survey regarding extended time work in your area. DelDOT asks that you please take the time to complete the survey. You may return the survey either by mail, fax, or e-mail to the number or address as set out on the survey form. ANY SURVEY NOT RETURNED BY DATE WILL BE CONSIDERED AN ACCEPTANCE OF DELDOT'S PERFERRED WORK HOURS OF AM TO PM.

If you have any additional questions or would like more information, please feel free to contact NAME at NUMBER.

Thank you in advance for your cooperation,

DelDOT

DELAWARE DEPARTMENT OF TRANSPORTATION – EXTENDED TIME CONSTRUCTION SURVEY

Contract Number:

Project Description:

Project Duration:

1. If constructed utilizing extended hours, the work at this location is expected to take approximately TIME calendar days. This timeframe is dependent upon weather conditions to some extent.
2. If constructed during restricted daytime hours only, the work at this location is expected to take approximately TIME calendar days, also being dependent on weather conditions.

If working extended hours would mean that the construction project would be completed in a shorter amount of time with less traffic impacts, would you prefer extended hour work to occur on this project?

YES _____ NO _____

Comments:

Name:

Address:

Phone Number:

Your Comments and opinions are very important. All information you provide on this form will be carefully reviewed by DelDOT. Under State law this survey form is public domain, and if requested, a copy must be provided to the public or media. Thank you for your participation and contributions to this important transportation project. PLEASE REMEMBER THAT ALL SURVEYS NOT RETURNED BY DATE WILL BE CONSIDERED AN ACCEPTANCE OF DELDOT'S PREFERRED WORK HOURS OF AM to PM.

FAX to:

E-Mail to:

Mail to: Delaware Department of Transportation, PO Box 778, Dover, DE 19903-0778